

# **The International College of Economics and Finance**

## **Syllabus for Microeconomics - 2**

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### **Course description**

Microeconomics-2 is a two-semester course for third year students divided into two parts. The first part covers all topics of the syllabus and the second part is devoted to supporting lectures. In the course of Microeconomics-2 students are expected to deepen their understanding of basic concepts, add further tools of analysis and develop their skills in applying theory to economic problems. The course pays special attention to problems of uncertainty, inter-temporal choice, general equilibrium and efficiency, asymmetric information and public choice.

Intermediate Microeconomics is a core discipline under world standards. It forms the basis of further economic studies in applied disciplines such as: industrial organisation, public sector economics, labour economics, international economics, corporate finance, development economics, etc. The course is taught in English. The students are also studying for Russian degree in Economics, and knowing Russian terminology through reading in Russian is also required.

### **Course prerequisites**

Students are supposed to be competent in basic economic analysis up to the level of the Introductory Microeconomics and in calculus taught in the first year of studies. Students are also expected to be familiar with constrained optimisation studied in the course of Mathematics for Economists during the second year.

The course itself provides a basis (and so serve as a prerequisite) for such courses as Industrial Economics, Public Sector Economics, International Trade, Labour Economics.

### **Course Objectives.**

The objectives of the course are:

⇒ to expand the students' knowledge in the field of microeconomics and to make them ready to analyze real economic situations;

⇒ to provide students with the knowledge of basic microeconomic models' assumptions, internal logic and predictions, grounding the explanations on intuitive, graphical and analytical approaches;

⇒ to develop the students' ability to apply the knowledge acquired to the analysis of specific economic cases, recognising the proper framework of analysis and constructing the adequate economic models within this framework.

By the end of the course students are expected to have necessary skills for writing essays and reading economic literature.

## **Forms of control and grades determination**

Control takes the following forms:

- ⇒ written home assignments (6-8);
- ⇒ essay;
- ⇒ midterm exam in the middle of Fall semester,
- ⇒ mock exam (in the University of London examination format) in the middle of the Spring semester;
- ⇒ written exam at the end of the Fall semester,
- ⇒ University of London exam by the end of the Spring semester.

The Fall semester grade will be determined by the following activities:

- ⇒ Home assignments (15%);
- ⇒ Fall semester midterm exam (25%);
- ⇒ Winter exam (60%).

Course grade is determined by

- ⇒ University of London exam grade (50%),
- ⇒ Fall semester grade (25%),
- ⇒ Essay (5%);
- ⇒ Mock exam grade (20%).

## **Literature**

### **Main Reading**

1. Microeconomics. Subject Guide. University of London, 2012. (available online via VLE system <http://my.londoninternational.ac.uk> )
2. Morgan W, Katz M.L. and Rosen H.S., Microeconomics, Boston, Irwin/McGraw-Hill, 2009. [MKR]

### **Supplementary Reading**

#### Textbooks

- Eaton B. C., Eaton D.F., Allen D.W., Microeconomics, 7th edition, Toronto: Prentice Hall/Pearson, 2009.
- Perloff, J.M. Microeconomics: theory and applications with calculus. Pearson, Prentice Hall, 2011.
- Pindyck R.S. and Rubinfeld D.L., Microeconomics. 7th edition, Pearson Higher Education, 2009. (available in Russian translation: Р.С.Пиндайк и Д.Л.Рубинфельд, Микроэкономика. Пер. с англ. 3-ого изд. - М.: “Дело”, 2000.)
- Varian H.R., Intermediate Microeconomics. A modern approach. 8th edition. W.W. Norton and Company, 2011 (available in Russian translation: Хэл Р.Вэриан. Микроэкономика. Промежуточный уровень. Современный подход. Пер. с англ. 4-ого изд. - М.: “ЮНИТИ”, 1997.)

#### More advanced texts

Gravelle H. and Rees R., *Microeconomics*. 3rd edition, Financial Time Press, 2004.  
F.A.Cowell *Microeconomics: Principles and Analysis*, Oxford University Press 2005.  
<http://darp.lse.ac.uk/Frankweb/courses/EC202> (available in Russian translation: Фрэнк Коуэлл. Микроэкономика. Принципы и анализ. Пер. с англ. М.: “Дело”, 2011.)

#### Books and papers:

##### *On consumer theory*

Chipman J. and J. Moore, Compensating variation, consumer's surplus and welfare, *American Economic Review*, 70, 933-948, 1980.

Hausman J., Exact consumer surplus and deadweight loss, *American Economic Review*, 71, 662-676, 1981.

Vives X., Small income effects: A Marshallian theory of consumer surplus and downward sloping demand. *Review of Economic Studies*, 54, 87-103, 1987.

##### *On the theory of firm*

A.Alchian, H.Demsetz, Production, Information costs and economic organization, *American Economic Review*, 62, 777-795, 1972.

G.Calvo and S.Wellisz, Supervision, Loss of Control, and the Optimal Size of the Firm, *Journal of Political Economy*, 86, 943-952, 1978.

R.H. Coase, The nature of the firm, pp. 37-57 in S. Estrin, A. Marin, *Essential Readings in Economics*, 1995.

##### *Choice under uncertainty*

Machina M., Choice under uncertainty: problems solved and unsolved. *The Journal of Perspectives*, 1, 121-154, 1987.

Rothschild M., J.Stiglitz, Increasing risk I: A definition, *Journal of Economic Theory*, 2, 225-243, 1970.

##### *Market structures*

Adams W. and J.Yellen, Commodity Bundling and the Burden of Monopoly, *Quarterly Journal of Economics*, Vol.90, 1976.

Averch H., L.Johnson, Behaviour of the firm under regulatory constraint, *American Economic Review*, Vol.52, N5, pp.1052-1069, 1962.

Baron D., R. Myerson, Regulating a Monopolist with Unknown Costs, *Econometrica*, 50, pp.911-930, 1983.

Harberger, Monopoly and resource allocation, pp. 77-91 in S. Estrin, A.Marin, *Essential Readings in Economics*, 1995.

Loeb M., W.Magat, A decentralized method for utility regulation, *Journal of Law and Economics*, Vol.22, N2, pp.399-404, 1979.

##### *Market failures*

Akerlof G., The market for lemons: Quality uncertainty and the market mechanism, *Quarterly Journal of Economics*, 89, 488-500, 1970.

Coase R., The problem of social cost, *Journal of Law and Economics*, 3, 1-44, 1960.

Spence, M. -Job Market Signaling-, *Quarterly Journal of Economics*, 87, pp. 355-374, 1973.

Rothschild, M. and Stiglitz, J. E. -Equilibrium in competitive insurance markets; An essay on the economics of imperfect information.- Quarterly Journal of Economics, 1976. Vol.90. pp.629-649.

### **Internet resources**

University of London Exam papers and Examiners reports, subject guide, video tutorials and other UOL materials are posted at VLE system <http://my.londoninternational.ac.uk>

Current course materials are posted at the ICEF information system <http://mief.hse.ru>

Teaching materials for the LSE course Microeconomics EC202  
<http://darp.lse.ac.uk/Frankweb/courses/EC202/default.htm>

Students' resources to accompany Morgan W, Katz M.L. and Rosen H.S., Microeconomics Boston, Irwin/McGraw-Hill, 2009 [http://highered.mcgraw-hill.com/sites/0077121775/information\\_center\\_view0/](http://highered.mcgraw-hill.com/sites/0077121775/information_center_view0/)

Students' resources to accompany Perloff, J.M. Microeconomics: theory and applications with calculus. Pearson, Prentice Hall, 2011.  
[http://wps.aw.com/aw\\_perloff\\_microcalc\\_2/](http://wps.aw.com/aw_perloff_microcalc_2/)

Students' resources to accompany Eaton B. C., Eaton D.F., Allen D.W., Microeconomics, 7th edition, 2009. [http://wps.prenhall.com/ca\\_ph\\_eaton\\_microecon\\_6/](http://wps.prenhall.com/ca_ph_eaton_microecon_6/)

## **Course outline**

### **Part I. Individual choice under certainty and uncertainty**

#### **1. Consumer Behaviour Under Certainty**

Assumptions underlying indifference curves. Budget constraints (including cases of kinked budget constraints). Composite commodity. Optimal choice (interior and corner solutions). Utility maximisation and expenditure minimisation problems. Marshallian and Hicksian (compensated) demand functions. Measuring changes in consumer's welfare. Compensating variation, equivalent variation and consumer surplus: definitions and graphical representation. Relationships between the three measures for different types of commodities (normal and inferior goods). Change in the cost of living and price indexes: Laspeyres and Paasche. . Slutsky equation for the case of in-kind income. Sign of wealth effect. The individual's supply of labour. Comparison of overtime premium with an increase in the basic wage rate. The effect of taxes on labour supply.

(MKR Chs.2-4, 5.1).

#### **2. Intertemporal Choice**

Intertemporal budget constraint. Intertemporal preferences. Saving and borrowing. Comparative statics. Present value concept and its application to investment choice.

(MKR Ch.5)

#### **3. Choice Under Uncertainty**

Contingent commodities model. States of nature, concept of contingent commodities, budget constraint with contingent commodities (slope and position). Probability of a given state of the world, expected value and fair odds line. Attitude to risk and preferences over contingent commodities. Certainty line and marginal rate of substitution along the certainty line. Graphical representation of the model. Example: optimal bet in a flipping-coin game (case of fair and unfair game). Application of the model: demand for insurance (fair and unfair insurance).

Expected utility model (von Neumann-Morgenstern expected utility function). Attitude to risk and shape of the Bernoulli utility function. Applications (optimal portfolio problem, demand for insurance, value of additional information).

*(MKR. Ch.6)*

#### 4. The Firm

Objectives of the firm: principal-agent problem (contradiction between the objectives of owners and managers). Possible solutions: internal mechanisms (corporate governance scheme, performance-based compensation scheme), external mechanisms (discipline from capital suppliers, market for corporate control, highly competitive product market). Review: cost functions, cost curves and relationship between different cost curves.

*(MKR Chs.7-9)*

## **Part II. Partial equilibrium**

#### 5. Competition and Monopoly

Perfect competition when firms have identical costs. Perfect competition with heterogeneous firms. Benefits of exchange in a competitive market and the effects of government policies: total surplus and deadweight losses.

Inefficiency of pure monopoly: dead weight losses and losses from rent seeking activity. Regulatory responses to monopoly.

Welfare implications of perfect price discrimination, multi-part pricing and market segmentation.

*(MKR Chs.10.1,11,13)*

#### 6. Strategic Behaviour and Oligopoly

Static games. Solution concepts: dominant strategies equilibrium, Nash equilibrium (pure and mixed strategies). Dynamic games. Backward induction and Subgame perfect Nash equilibrium.

Cournot model. Bertrand model. The Stackelberg model: first mover advantage.

Repeated games. Collusion: credible punishment. Market structure and collusion.

Entry, market structure and Strategic Entry Deterrence.

*(MKR Chs.15-16)*

### **Part III. General equilibrium, efficiency and market failures**

#### 7. General Equilibrium and Welfare Economics

Competitive general equilibrium. Equilibrium in exchange economy. Pareto efficient allocation of resources: efficiency in consumption, efficiency in production, efficiency in product mix. Pareto efficiency and competitive general equilibrium. First fundamental theorem of welfare economics. Proof based on the first order conditions. Second fundamental theorem of welfare economics. Market failure and theory of second-best.

General equilibrium under uncertainty: Arrow Debreu equilibrium in a model with contingent commodities.

*(MKR Ch.12)*

#### 8. Asymmetric Information: Basic Ideas

Classification of the models: situation with hidden characteristics and situation of hidden action.

Adverse selection problem. Examples: market for lemons, labour market, insurance market. Possible responses of informed side of the market: market signaling (brand reputation, guarantees, acquiring education). Possible responses of uninformed side of the market: screening via designing self selective menu of contracts, group insurance plan, government intervention in form of setting quality standards, compulsory insurance, mandatory disclosure of certain facts.

Moral hazard problem. Examples: insurance market, principal-agent problem in labour market (shirking model), product market. Possible responses: co-insurance and deductibles, performance-based compensation, brand reputation.

*(MKR Ch.17)*

#### 9. Externalities and Public Goods

Externalities: positive and negative. Inefficient allocation of resources in presence of positive and negative externalities. Regulatory solutions: direct control, assignment of property rights, marketable pollution permits, bargaining (Coase theorem), internalization, Pigouvian taxes/subsidies. Comparison of the solutions. Problems with bargaining: free-rider and hold-out problems.

Public goods, non-rival and non-excludable goods. Efficiency condition in presence of public goods (Samuelson equation). Equilibrium with non-cooperative financing of public good: free-rider problem. Possible solution: personalised Lindahl prices.

*(MKR. Ch.18)*

#### 10. Government and Public Choice

Equity and distribution: utility possibility frontier, social welfare function (utilitarian and egalitarian). Arrow's impossibility theorem.

Preferences, voting and decisions. Majority voting rule, voting paradox. Single-peaked preferences and median voter theorem.

*(MKR. Ch.12.4 and additional reading on voting Perloff Ch.10 or Varian Ch.36)*

## Essay requirements

Each student is expected to write an essay in Microeconomics. This should be done as a group assignment. The groups are assigned by the class teacher.

Essay should be on one of the topics considered in the course. Group has to produce a case study that illustrates the model/models we looked at. This case study can not be copied from the books/papers.

The idea is to take the model (approach) presented in the course and illustrate how it can be applied. One of the examples is presented in chapter 6 of Morgan, Katz and Rosen textbooks, where tax evasion problem is analysed in the framework of contingent commodities model. All sources used have to be cited in the essay; otherwise it would be treated as a plagiarism.

Group is expected to write a short essay (about 1000 words), make 5-10 minutes presentation and answer questions. Every member of the team (unless he/she officially refuses from participation and gets 0 for the essay) is expected to demonstrate his/her involvement in the project.

You may use additional materials as necessary but all these materials should be mentioned in references and handed in together with the essay.

## Distribution of hours by topics and types of work

<b>Nº</b>	<b>Topic</b>	<b>Total</b>	<b>Lectures</b>	<b>Classes</b>	<b>Selfstudy</b>
<b>Part I. Individual choice under certainty and uncertainty</b>					
1.	Individual Behaviour Under Certainty	32	7	5	20
2.	Intertemporal choice	15	3	2	10
3.	Choice Under Uncertainty	31	6	5	20
4.	The Firm	15	3	2	10
<b>Part II. Partial equilibrium</b>					
5.	Competition and Monopoly	30	6	4	20
6.	Strategic Behavior and Oligopoly	37	7	5	25
<b>Part III. General equilibrium, efficiency and market failures</b>					
7.	General Equilibrium and Welfare Economics	35	6	4	25
8.	Asymmetric Information: Basic Ideas	37	7	5	25
9.	Externalities and Public Goods	21	4	2	15
10.	Government and Public Choice	17	3	2	12
<b>Total:</b>		<b>270</b>	<b>52</b>	<b>36</b>	<b>182</b>