

## **Advanced Microeconomics (5 ECTS)**

# **Syllabus**

**Instructors' names:** Ilia Krasikov (module 1), Danisz Okulicz (module 2)

**Email:** [krasikovis.main@gmail.com](mailto:krasikovis.main@gmail.com), [d.okulicz@gmail.com](mailto:d.okulicz@gmail.com)

**Phone** (local): I. Krasikov – 00000, D. Okulicz – 00000

**Office:** I. Krasikov – room XXXX, D. Okulicz – room XXXX

**Office hours:** by appointment

### **Section 1. General information about the course**

The course explores classical tools of microeconomic analysis. It examines how economic decisions are made by households and firms, and how they interact to determine quantities and prices of goods and the allocation of resources.

Prerequisites:

- Multivariable calculus, constraint optimization (method of Lagrange multipliers and Karush-Khun-Tucker conditions);
- Basic algebra.

### **Section 2. Course goals, learning objectives, expected learning outcomes**

The objectives of the course are:

- to provide students with the knowledge of core concepts and models in the field of microeconomics;
- to provide students with the knowledge of basic microeconomic models' assumptions, internal logic and predictions;
- to develop students' ability to apply the knowledge acquired to the analysis of specific economic cases

By the end of the course a successful student should:

- be familiar with the main elements and techniques of microeconomic theory at intermediate level;
- be able to solve and interpret stylized problems based on microeconomic models;
- be able to use these models to analyze real-world microeconomic phenomena and to evaluate

issues of microeconomic policy.

**Section 3. Course Outline**

№	Topic/Focus/Activity	Week	Course format			Readings
			lectures	classes	self-study	
1	<ul style="list-style-type: none"> <li>• preferences</li> <li>• utility representation</li> <li>• consumer's problem</li> <li>• revealed preferences</li> </ul>	1	4	2	6	JR 1.2, 1.3, 2.3 MWG 2A-2D, 2F, 3A-3C
2	<ul style="list-style-type: none"> <li>• utility maximization</li> <li>• expenditure minimization</li> <li>• duality in consumption</li> <li>• income and substitution effects</li> </ul>	2-3	8	4	12	JR 1.4, 1.5, 2.1 MWG 3D-3J
3	<ul style="list-style-type: none"> <li>• preferences over lotteries</li> <li>• expected utility representation</li> <li>• risk aversion</li> <li>• stochastic dominance</li> </ul>	4	4	2	6	JR 2.4 MWG 6A-6D
4	<ul style="list-style-type: none"> <li>• technologies</li> <li>• returns to scale</li> <li>• competitive firm problem</li> </ul>	5	4	2	6	JR 3.1, 3.2, 3.5 MWG 5A-5C

5	<ul style="list-style-type: none"> <li>• cost minimization</li> <li>• conditional input demands</li> <li>• complements and substitutes</li> <li>• short run and long run</li> <li>• duality in production</li> </ul>	6-7	8	4	12	JR 3.3, 3.4 MWG 5C-5D
6	<ul style="list-style-type: none"> <li>• perfect competition</li> <li>• short run and long run equilibrium</li> <li>• monopoly</li> <li>• Welfare analysis</li> </ul>	8	4	2	6	JR 4.1, 4.3 MWG 10C, 10E, 10F, 12B
7	<ul style="list-style-type: none"> <li>• Cournot competition</li> <li>• Bertrand competition</li> <li>• monopolistic competition</li> </ul>	9	4	2	6	JR 4.2, 4.3 MWG 12C
8	<ul style="list-style-type: none"> <li>• 2 by 2 exchange economy</li> <li>• Edgeworth box</li> <li>• existence of general equilibrium</li> <li>• efficiency</li> <li>• Welfare Theorems</li> </ul>	10-11	8	4	20	JR 5.1, 5.2 MWG 15A, 15B, 16A-16D, 17C
9	<ul style="list-style-type: none"> <li>• Robinson Crusoe Economy</li> <li>• 2 by 2 production model</li> <li>• general equilibrium in production economy</li> <li>• existence and efficiency</li> </ul>	12	4	2	10	JR 5.3 MWG 15C, 15D, 16A-16D
10	<ul style="list-style-type: none"> <li>• contingent commodities</li> <li>• Arrow-Debreu equilibrium</li> <li>• sequential trade and incomplete markets</li> </ul>	13	4	2	10	JR 5.4 MGW 19B-19F

11	<ul style="list-style-type: none"> <li>externalities</li> <li>the tragedy of the commons</li> <li>Pigouvian taxation</li> <li>Coase Theorem</li> </ul>	14-15	6	3	15	MWG 11B, 11C, 11D
12	<ul style="list-style-type: none"> <li>adverse selection</li> </ul>	15	2	1	5	JR 8.1 MGW 13B

### Description of the course methodology and the forms of assessment to be used

The course adopts the following teaching methods and the forms of control:

- ⇒ lectures (4 hours a week);
- ⇒ practical sessions (2 hours a week);
- ⇒ written home assignments;
- ⇒ self-study;
- ⇒ teachers' consultations [office hours];
- ⇒ written mid- and end-module tests

### Policies on late work

Late home assignments are not accepted.

### Grading

The grade is cumulative and based on three elements:

- Home assignments – 30% (6 problem sets with the weights of 5% each);
- Midterm tests – 30% (2 tests with the weights of 15% each);
- Final test (exam) – 40% (covers all the material taught).

The 100-point scale applies to grade all course elements. The resulting score converts into the 10-point scale according to the following rule:

100-point scale	10-point scale
75–100	10
67-74	9
59-66	8

51–58	7
43–50	6
36–42	5
28–37	4
20–27	3
12–19	2
1–11	1
0	0

At the same time, if the final scores appear to be quite low, a less severe scale may be used (this decision is solely made by the instructor).

### ***Make-up and Retake Policies***

Home assignments are not subject to make-ups. All late submissions get zero. There is no make-up for the midterm test. If a student misses it without an official excuse, s/he gets zero for this course element. With an official excuse the weight of the final exam is increased by 15%.

In case of failing the course there are two retakes. The format of the retake is the same as that of the final exam, and it replaces the grade for the final and midterm exams (its weight is 70%). The first retake is graded by the course instructors the second one is graded by a committee consisting of three or more members, including the course instructors.

### **Section 4. Texts, readings and other informational resources**

#### **Required readings:**

Jehle and Reny, Advanced Microeconomic Theory (any edition could be used but here references are provided to the Third Edition, 2011) [JR].

#### **Optional readings:**

Mas-Collel, Whinston and Green, Microeconomic Theory (any edition could be used but here references are provided to the First Edition, 1995) [MWG].

For topics related to producer theory and market failures **additional reading of MWG is required**. Other chapters of MWG are optional.

### **Section 5. Academic Integrity**

The Higher School of Economics strictly adheres to the principle of academic integrity and honesty. Accordingly, in this course there will be a zero-tolerance policy toward academic dishonesty. This includes, but is not limited to, cheating, plagiarism (including failure to properly cite sources), fabricating citations or information, tampering with other students' work, and presenting a part of or the entirety of another person's work as your own. HSE uses an automated plagiarism-detection system to ensure the

originality of students' work. Students who violate university rules on academic honesty will face disciplinary consequences, which, depending on the severity of the offense, may include having points deducted on a specific assignment, receiving a failing grade for the course, being expelled from the university, or other measures specified in HSE's [Internal Regulations](#).