

**Пермский филиал федерального государственного автономного  
образовательного учреждения высшего образования  
"Национальный исследовательский университет  
"Высшая школа экономики"**

**Рабочая программа дисциплины  
«Теория отраслевых рынков»  
'Industrial Organization Theory'**

Утверждена

Академическим советом основных образовательных программ по направлениям  
подготовки 38.03.01 Экономика, 38.04.08 Финансы и кредит

Протокол № [8.2.2.1-32-09/04](#) от 30.08.2019

Академический руководитель ОП  
\_\_\_\_\_ С.А.Белых

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Число кредитов	5
Контактная работа (час.)	76
Самостоятельная работа (час.)	114
Образовательная программа, курс	Экономика, 3 курс
Формат изучения дисциплины	Без использования онлайн-курса

**Syllabus**  
**Industrial Organization Theory**  
(5 ECTS)

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Additional information: <https://www.hse.ru/org/persons/202452?r=idm140169077918144#teaching>

Department of Economics and Finance NRU HSE, Perm  
Meeting Minute # [8.2.2.1-32-09/04](#) dated 30.08.2019

### **1. Course Description**

#### **a) Pre-requisites**

Microeconomics, Game Theory.

#### **b) Abstract**

The course introduces the theory of industrial organization and focuses on behavior of firms, market structures, interaction between them, and antitrust policy. It includes economic modeling, game theory, case studies, and discussion of real life examples. The course focus is split between economy theory models and real markets analysis. Knowledge acquired in this course will provide students with analytical, business managing, and public governance skills.

### **2. Learning Objectives**

The goal of the course is to prepare students for managerial, analytical, entrepreneurial, and research activities and duties in the course of employment at entry level and junior executive positions and continuation of their education in postgraduate programs.

### **3. Learning Outcomes**

After the course students should be able to:

- Understand important concepts: *e.g.*, strategic interaction, collusion, equilibrium, strategy, differentiation, horizontal and vertical relations, anticompetitive behavior;
- Describe different market structures with particular emphasis on concentration and monopoly power;
- Analyze how market structures affect behavior of firms.
- Solve game theoretical models of industrial organization.
- Employ game theoretical models for analysis of particular markets and industries.
- Explain the rationale of antitrust regulation.
- Describe simple policy tools available to antitrust authorities, the contexts in which they might be deployed and their likely consequences.
- Understand relevant economic theory, including non-mainstream approaches, augmented by insights from other disciplines.

- Justify research question in the field of IO;
- To present the results of research project «Analysis of Market» in the form of report and paper.

If the course completes successfully, students are...

- capable to conduct research activities, including problem analysis, determination of goals and tasks, identification of research object and subject, selection of research methods and tools, and quality assessment;
- capable to work in a team;
- capable to evaluate critically main trends in modern economic science and competently discuss pro et contra arguments for each of them;
- capable to find organizational and managerial decisions and take responsibility for them;
- capable to evaluate critically proposed managerial decisions, develop and justify a proposal with regard to socioeconomic efficiency criteria, risks, and possible socioeconomic consequences.

#### **4. Course Plan** (76 hours)

##### 1. Introduction (14 hours)

- 1.1. Introduction to IO: The NEIO and SCP. Review of microeconomic knowledge about markets and firm behavior.
- 1.2. Market Power
- 1.3. Concentration Measure
- 1.4. Market Definition
- 1.5. Analytical project. Part 1.

##### 2. Monopoly and Price Discrimination (12 hours)

- 2.1. Review of Monopoly
- 2.2. Durable Goods Monopoly
- 2.3. Price Discrimination
- 2.4. A Dominant Firm with a Competitive Fringe

##### 3. Oligopoly (20 hours)

- 3.1. Static Oligopoly Models
- 3.2. Dynamic oligopoly
- 3.3. Collusion

##### 4. Market Entry (16 hours)

- 4.1. Entry Barriers
- 4.2. Entry Deterrence. Introduction to Entry Games
  - 4.2.1. Analytical project. Part 2. Assignment is presented in Appendix 1

## 5. Vertical Integration and Vertical Restraints (16 hours)

### 5.1. Incentives for Vertical Merger

### 5.2. Vertical Restraints

#### 5. Reading List

##### a) Required

1. Jeffrey R Church and Roger Ware. Industrial Organization: A Strategic Approach. New York 2000. Available at: [http://works.bepress.com/jeffrey\\_church/23/](http://works.bepress.com/jeffrey_church/23/)
2. Tirole, Jean. The Theory of **Industrial Organization** MIT Press. 1988 ISBN: 978-0-262-20071-4, 978-0-262-28499-8, 978-0-585-13529-8, 978-1-61344-819-9. [EBSCO eBooks](#)

##### b) Optional

3. Baumol, WJ, JC Panzar, and RD Willig. 1982. “Contestable markets and the theory of industry structure”
4. Bresnahan, Timothy F. and Peter C. Reiss. 1991. “Entry and Competition in Concentrated Markets.” Journal of Political Economy 99 (5):pp. 977–1009. URL <http://www.jstor.org/stable/2937655>.
5. Einav, L. and J. Levin. 2010. “Empirical Industrial Organization: A Progress Report.” Journal of Economic Perspectives 24 (2):145–162. URL <http://www.aeaweb.org/articles.php?doi=10.1257/jep.24.2.145>.
6. Reiss, P.C. and F.A. Wolak. 2007. “Structural econometric modeling: Rationales and examples from industrial organization.” Handbook of econometrics 6:4277–4415. URL <http://www.sciencedirect.com.ezproxy.library.ubc.ca/science/article/pii/S1573441207060643>.
7. Whinston, M. D. (2001). Exclusivity and tying in U.S. v. microsoft: What we know, and don't know. The Journal of Economic Perspectives, 15(2), 63-80.
8. Gilbert, R.J., Katz, M.L. An economist's guide to U.S. v. Microsoft (2001) Journal of Economic Perspectives, 15 (2), pp. 25-44.

#### 6. Grading System

Composition of resulting course grade (*Oresult*):

$$O_{result} = 0.2 O_{HW} + 0.2 O_{CT} + 0.15 \cdot O_{aud} + 0.15 \cdot O_{self} + 0.3 \cdot O_{exam},$$

where

$O_{HW}$ — Homework grade (Analytical Project. Part 1 and Part 2);

$O_{CT}$ — Classroom Test grade;

$O_{aud}$  — grade for Seminar work;

$O_{self}$  — grade for Self-study work.

All grades have one to ten scale. Rounding procedure of final grade is arithmetical.

### *Guidelines for Knowledge Assessment*

*Seminar work.* For each class there is an assignment (reading, problem set, presentation, case study, etc.) Short quizzes are provided in Kahoot.it Students that are absent during the class get individual tasks.

*Self Study Work.* The purpose of students' individual work is to develop the ability to solve problems not only on classic models, which are discussed during lectures, but on their modified versions. Students are supposed to solve the provided set of problems at home and can discuss their solutions and difficulties they encountered with the lecturer or assistant during consultation hours. Grading of assignments is done at special sessions. Problem solving enables students to prepare for the class test and for the exam.

*Homework (rating grade).* Three themes of the course end with a student group project (3-4 students), which includes written part, oral presentation, and individual questions. For this assignment, students receive clear instructions and the list of requirements.

*Classroom Test (rating grade).* Solving of the problem set. The goal of this test is to evaluate students' understanding of the subject and ability to work with canonical models discussed during lectures and seminars.

Excellent grade (8,9,10)	Student gives more than 80% correct answers, shows an excellent understanding of relevant theoretical models, graphs are used to illustrate the argumentation correctly.
Good grade (6,7)	Student gives 60-79% correct answers, graphs are used to illustrate the argumentation correctly, but there are some minor flaws.
Passing grade (4,5)	Student gives 40-59% correct answers.
Unsatisfactory grade (0,1,2,3)	Student gives less than 40% correct answers

*Exam.* The assignment consists of two parts. The first one is a test, which covers all basic concepts of the course (definitions, classifications, models etc). The second part is a mini case analysis.

Excellent grade	Student demonstrates an excellent understanding of relevant economic theory, and the theory is applied successfully to answer the research question. Relevant concepts, algebra, and graphs are used to illustrate the argumentation, which is adequate and follows a logical pattern.
Good grade	Student demonstrates a good understanding of relevant economic theory and the theory is applied reasonably well to answer the research question, but there are some minor flaws. Relevant concepts, algebra, and graphs are used to illustrate the argumentation, which is adequate and follows a logical pattern, though there are some minor flaws.
Passing grade	Student demonstrates some understanding of relevant economic theory, but the application of the theory is not successful, given that there are some major flaws, logical mistakes and/or unjustified conclusions.
Unsatisfactory	Student tries to answer the questions, but demonstrates

grade	insufficient knowledge of basic concepts or/and understanding of theoretical concepts
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## 7. Examination Type: written

## 8. Methods of Instruction

The course format is based on interactive teaching style with active participation of students in learning activities. It combines lectures, class discussions, analysis of cases, readings, and discussion of academic papers. Video presentations by well-known IO economists and experts on market analysis are included in traditional lectures (for example, in TED format). For most of topics in the course, the Instructor employs the integrated approach presenting theoretical background, case studies (best business practices or antitrust cases), and recent empirical studies. The format of group projects motivates students to collaborate with each other, apply theoretical knowledge in practice, and develop presentation skills. Moreover, elements of gamification are applied during the course. Two types of games are used: a debate game (see Appendix 2 for details) and an intellectual game.

## 9. Special Equipment and Software Support (if required)

A laptop with installed software and a projection device are required for lectures and students presentations.

### Software

<b>№</b>	<b>product</b>	<b>access conditions</b>
1.	Adobe Acrobat Reader	Free licensing agreement
2	Google Chrome Enterprise	Free licensing agreement
3	Windows 10	Contract
4	Power Point/Keynote	Contract/Free licensing agreement

### 1. Цель самостоятельной работы студентов по дисциплине

Цель самостоятельной работы студентов в рамках дисциплины «Теория отраслевых рынков» (Industrial Organization Theory) — развить умение самостоятельно решать задачи на основе пройденного материала на лекциях, семинарах. Формат курса подразумевает, что на лекциях и семинарах обсуждаются модели и базовые задачи, основанные на моделях, затем дома студент решает предложенные задачи, консультируется с преподавателем в консультационные часы. Преподаватель осуществляет контроль решенных задач на индивидуальных консультациях. Решение задач позволяет подготовиться к контрольной работе и к экзамену.

The purpose of students' individual work is to develop the ability to solve problems not only on classic models, which are discussed during lectures, but on their modified versions. Students are supposed to solve the provided set of problems at home and can discuss their solutions and difficulties they encountered with the lecturer or assistant during consultation hours. Grading of assignments is done at special sessions. Problem solving enables students to prepare for the class test and for the exam.

### 2. Вес самостоятельной работы в оценке знаний студентов

Composition of resulting course grade (*Oresult*):

$$O_{result} = 0.2 O_{HW} + 0,2 O_{CT} + 0.15 \cdot O_{aud} + 0.15 \cdot O_{self} + 0.3 \cdot O_{exam},$$

where

$O_{HW}$  — Homework grade (Analytical Project. Part 1 and Part 2);

$O_{CT}$  — Classroom Test grade;

$O_{aud}$  — grade for Seminar work;

$O_{self}$  — grade for Self-study work.

All grades have one to ten scale. Rounding procedure of final grade is arithmetical.

Grade for Self-study work is 20% of resulting course grade.

### 3. Формы самостоятельной работы студентов по дисциплине

*Problem set for self-study (Example - Topic Price Discrimination)*

1. Any airline sells two types of tickets - for tourists and for businessmen. It is clear that flights cost more to businessmen. But how to distinguish a tourist from a businessman (or manager)? How to make sure that he does not fly under the guise of an ordinary tourist? This is done very simply. Usually, if tourists fly to other countries, then at least for 7 days. But at the same time people who are going on business trips try to be at home as quickly as possible. Therefore, airlines sell tickets with a return flight in a few days much more expensive than those where a return flight is ordered in a week. In this simple way, airlines segment consumers. And this method really works, because the demand of businessmen for air travel is inelastic (it's necessary to fly anyway). **Is there price discrimination in this example, if so, what type can it be attributed to, and why?**
2. A monopolist sells goods in a market where customers are divided into two groups. The demand of each group is defined as a function of the price of demand versus quantity:  $P_1(Q) = 3000 - 5Q$ ;  $P_2(Q) = 200 - 40Q$ .
  - a. Calculate the marginal revenue of the company as a function of product quantity for two options:
    - i. the product is sold on the market at a uniform price;

- ii. the product is sold to groups of customers at different prices.
- b. Let the average costs be  $C$ . Find the equilibrium for the two cases above. Give a graphic illustration.

**4. Формы отчетности, требования к выполнению, график предоставления результатов по самостоятельной работе студентов**

Written. Individual. Student should be able to explain the solution of the each problem.

Grading of assignments is done at special sessions. Verification of the solution of problems and their discussion with students is carried out during consultation hours. The sessions is held after the topic has been covered (usually after every two or three seminars). The teacher conducts the consultation. A training assistant may be involved in the audit.

Проверка решения задач и их обсуждение со студентами осуществляется в часы консультаций. Консультация проводится после того, как будет пройдена тема (как правило, после каждых двух-трех семинаров). Консультацию проводит преподаватель, ведущий семинары. К проверке может привлекаться учебный ассистент.

**5. Критерии оценки самостоятельной работы**

The teacher evaluates the students' individual work: assesses the success of solving the problem set, an explanation of the logic of the selected solution.

Evaluation Criteria for each homework problem set

Excellent grade (8,9,10)	Student gives more than 80% correct answers, shows an excellent understanding of relevant theoretical models, graphs are used to illustrate the argumentation correctly.
Good grade (6,7)	Student gives 60-79% correct answers, graphs are used to illustrate the argumentation correctly, but there are some minor flaws.
Passing grade (4,5)	Student gives 40-59% correct answers.
Unsatisfactory grade (0,1,2,3)	Student gives less than 40% correct answers

The grade is affected by the timeliness of the report.

Grades of the students' individual work are set on a 10-point scale.