

Economics of the Market Syllabus

1. Description

This course builds on the course Microeconomics I (module Introduction to Economics). It applies many of the essential decision theory tools of microeconomic theory in various **market settings**. The course focuses on the production side and the allocation of resources in market-based economic systems. The ideal **competitive market** is introduced and employed as a benchmark model of long-run, frictionless market behavior. More importantly, instances of **non-competitive markets** are presented. Specifically, the production choice of a firm acting as a **monopoly** in a market is discussed in detail. Strategic interactions of firms in simple **oligopoly** markets are also discussed. To this end, the very basics of game theory for simultaneous and sequential strategic interactions are introduced. This provides students with the necessary tools to think through problems of firm interactions in many different market settings. In addition, students will be able to understand the basic **pricing strategies** of firms with (some degree of) market power. Finally, the regulatory challenges of production **externalities** and the provision of **public goods** are discussed.

2. Objectives

This course is intended for second-year undergraduate students. The objective of the course is to introduce students to topics relating to the organization of production and the allocation of resources. Thematically, it focuses on the actions of commodity and service providers in self-organized markets. The course is designed to illustrate essential concepts, results, and modeling approaches that can help students understand fundamental ideas in business and economics.

The course's main approach is to help students develop critical economic thinking. The introduced concepts will be continuously challenged and contrasted with actual business practices (case studies) and patterns observed in real markets during the course. The students will not be instructed on the "correct" market model but rather be encouraged to critically examine economic problems in market settings, determine the most relevant concepts, and apply the most appropriate theoretical ideas.

3. Prerequisites

Basic knowledge of economic decision-making (simple optimization techniques from Introduction to Economics and Mathematics I) is a prerequisite. The game theory concepts will be introduced from scratch, and no previous knowledge is required. From a mathematics perspective, basic results from high-school calculus will be commonly used. In particular, knowledge of basic differentiation is expected. Integration will be avoided unless otherwise noted in the lectures or the tutorials. A quick reference guide of all mathematical rules that will be used can be found in the appendix of the online blog.

4. Reading Material

Textbooks:

The course gathers topics from multiple textbooks. Specific sections of each book and supplementary material can be found at the end of each topic on the online blog. The two most important sources for the course are:

[V]

Varian, H. (2014). *Intermediate Microeconomics*. W. W. Norton & Co. A Modern Approach (9th edition).

A classic introductory microeconomic theory book with a fairly comprehensive coverage of topics.

[C]

CORE-Team. (2017). *The economy*. Oxford University Press.

A modern introductory economics book with a more empirical approach.

Blog:

The discussion topics of the course are available online. Each course's session is organized in a separate discussion topic in the course's online blog. In addition, the blog contains interactive components (figures, videos, etc.) that can be used when studying. Last but not least, the blog has indices for all the concepts, learning activities, and applications of the course, with links to the corresponding material section they are introduced. It is highly recommended that the students use these features in their preparation.

<https://teach.pikappa.eu/markets/>

Slides:

The slides of the course are available online. The content of the slides is a *subset* of the content available on the blog. The slides are optimized for presenting the course's main ideas in the lectures and are not meant to be used as reading material (for instance, they do not include tutorial exercises). Instead, students can use either the blog's topics or the handout to revise what we cover in the lectures and tutorials.

<https://teach.pikappa.eu/markets/slides.html>

Handout:

A cumulative version of the course's material is given in an online handout format as a single web page (loading all the material can take a while on older cell phones or tablets, though). Additionally, the online handout contains the exercises of the course. Those who prefer using PDF material can use the [Downloads](#) section of the course's blog. The handout can be downloaded in PDF format from there, though this comes at the expense of figure interactivity.

<https://teach.pikappa.eu/markets/handout.html>

Exercises:

The course's exercises and extensive solution hints are also available online. Similar to the handout, they are also formatted as a single web page. The exercises can be downloaded in PDF format from the [Downloads](#) section of the course's blog.

<https://teach.pikappa.eu/markets/exercises.html>

5. Organization

The lectures are organized based on topics. Each lecture corresponds to one of the main course's discussion topics. For one to make the most out of this course, some preparation prior to each lecture is recommended. Those who come unprepared to the class will most probably not reap the course's benefits to their full extent. A first read of the corresponding chapters of the main text before coming to class can be quite helpful for the participants' understanding. The discussion of each topic in class will focus on i) clarifying concepts that students might have found difficult on the first pass of their reading and ii) critically discussing the arguments given in the main textbooks. Besides some standard points that will be covered by default, the discussion in the class will primarily be orchestrated by the well-prepared students.

Table 1: Planned Coursework

Date	Class	Topic	Preparatory Reading
2023-09-12	Lecture	Markets, Strategies, and Firms	V01
2023-09-13	Lecture	Technology	V19, C2.4,7.2
2023-09-18	Lecture	Profit Maximization	V20, C7.3-7.5
2023-09-19	Lecture	Cost Minimization	V21, C7.3
2023-09-27	Lecture	Cost Types	V22, C7.3,7.3.1
2023-09-28	Lecture	Firm Supply	V23, C8.3,8.8
2023-10-02	Lecture	Market Supply	V24.1-4, C8.2,8.4,8.5,8.8
2023-10-05	Lecture	Monopoly	V25, C7.5-8
2023-10-10	Lecture	Monopoly Behavior	V26, C11.2
2023-10-12	Lecture	Game Theory I	V29.1-6, C4.1-5,4.13
2023-10-17	Lecture	Game Theory II	V29.1-6, C4.1-5,4.13
2023-10-19	Lecture	Oligopoly	V28
2023-10-24	Lecture	Externalities	V35.3-7, C12.1
2023-10-26	Lecture	Public Goods	V37.1-4, C12.1

The tutorials are organized and given by Anna Daelen, Sara Parente Ferreira Soares, and Romasa Ali. The online handout contains various exercises at different difficulty levels at the end of each lecture. Some (not necessarily all) exercises will be discussed during the tutorial sessions. There are three exercise groups that are ordered in ascending difficulty. Group A contains the easiest exercises that can be asked in an exam (potentially adjusted, taking into account time limitations). Group B exercises are of intermediate difficulty and constitute a smaller part of the examination points. Their inclusion aims to reward the students who exhibit significant interest and dedication to this course during the semester. Group C contains advanced exercises only for those who are interested in specializing in economics. These exercises will not be asked in the examination.

Table 2: Planned Tutorials

Class	Exercises
Tutorial 1	Markets, Strategies, and Firms & Technology
Tutorial 2	Profit Maximization & Cost Minimization
Tutorial 3	Cost Types & Firm Supply
Tutorial 4	Market Supply & Monopoly
Tutorial 5	Monopoly Behavior & Game Theory
Tutorial 6	Game Theory & Oligopoly
Tutorial 7	Externalities & Public Goods

6. Evaluation

The evaluation of the students for the course will be based on an individually graded, written final exam consisting of 90 points (1st of November 2023). From those, 40 points will examine the understanding of basic theoretical and applied concepts from the discussion in the lectures, 40 points will examine the understanding of exercises similar to those of the lectures or tutorials, and 10 points will examine more advanced concepts covered in the lectures or tutorials.

7. Acknowledgments

The material and the exercises have greatly profited from the comments of many of my colleagues and students; in particular Jenny Kragl, Anna Daelen, Sara Parente Ferreira Soares, Uliana Sulakshina, Marie-Claire Joyeux, Carlos Rodríguez Gómez-Rico, and Lars Heinendirk. I am extremely grateful for the suggestions and typos and mistake corrections in earlier versions of the material indicated to me by many readers and students. I encourage others to send me their comments to my contact email.

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