

E601 Advanced Microeconomics

Fall 2025

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We will be using a single mailbox for all E601-related matters to organize our communications more efficiently. Please send your problem set solutions (see the Requirements and Grades section below) and course-related questions to *course-e601@vwl.uni-mannheim.de*. Keep in mind that all instructors and teaching assistants can monitor this mailbox: if you want to contact any of us personally for some reason, please use our personal email addresses.

Lectures: Tuesday, 10:15 - 11:45, and Wednesday, 12:00 - 13:30, from Sept. 2 to Dec. 3.

Auditorium: O145 (Tuesday) and O151 (Wednesday), both in the East Wing of the palace.

Teaching will be in person. We advise you to come to class in person and not to work from home.

Exercise Sessions: There will be several sessions each week, beginning in the week of September 12. Each of you should choose one session. In case of overcrowding of one session we will have to reallocate students. It is important to have an approximately equal number of students in each session to allow for the maximum possible interaction. Here are the dates:

- Thursday 8:30, in L9, 1-2, room 002
- Thursday 10:15, in L9, 1-2, room 002
- Friday 8:30, in L7, 3-5, room P044
- Friday 10:15, in the Palace, room O142

Office Hours: For appointments with E. von Thadden or H. Orzen, please get in touch after the lectures or by email.

ILIAS: Students have access to the course website on ILIAS on the university teaching portal "Portal2". On the ILIAS website, there is also a discussion forum for students to exchange questions, ideas, answers and more among each other. This forum is not monitored by the instructors. So please be respectful to others and also do not expect answers to questions from the instructors.

Course Description: The first part of the course (taught by E. von Thadden) will present the economic theory of consumers and firms and their resulting interaction in the theory of general equilibrium. The second part (taught by H. Orzen) provides an introduction to Game Theory and information economics at an advanced level.

Because of a travel commitment, Prof. von Thadden will teach in weeks 1-6 and 8, and Prof. Orzen in weeks 7 and 9-14.

Requirements and Grades: There will be weekly problem sets that are discussed in the weekly TA Sessions. The problem sets will be made available after the lecture on Wednesday and must be solved and turned in before 6:00 p.m. on Wednesday the week after. Students will be divided in groups of 3 to 4 each week of the course. Each group must work collectively on each problem set and turn in one solution each week. Students are encouraged to meet in person, sit together, and work on the assignments collectively. The learning experience is much better when working jointly than when working in isolation. The solution must be hand-written, well legible, and numbered consecutively from the first to the last page. If submitted electronically, the hand-written solution must be scanned and be submitted to the *course-e601@vwl.uni-mannheim.de* address as a single pdf-file, numbered consecutively from the first to the last page. The solutions will be read and graded by the TAs and returned the week after. This is a service towards the students and meant to help to improve the learning environment. The grades will not count towards the final grade of the course, but they will provide valuable information to the instructors. The final exam in the period of December 9 - 21 will count for 100% of the final grade. In line with university rules, there will be a repeat exam in the first week of February.

Readings: The main texts are (in alphabetical order)

- Jehle, Geoffrey, and Philip Reny: *Advanced Microeconomic Theory* (third edition), Pearson Education, 2011 (JR).
- Mas-Colell, Andreu, Michael Whinston & Jerry Green: *Microeconomic Theory*, Oxford University Press, 1995 (MWG).
- Varian, Hal: *Microeconomic Analysis* (third edition). Norton & Company, New York and London, 1992 (V).

These texts cover all the material that will be covered in the course and much more. You should obtain your own copy of one of these books.

The second half of the course on game theory will also use the book

- Osborne, Martin: *An Introduction to Game Theory*, Oxford University Press, 2003 (O).

The following text by two masters of the field covers all the material of our course and is at the same time thought-provoking and entertaining. It has the additional advantage of being open source:

- Osborne, Martin J. and Ariel Rubinstein: *Models in Microeconomic Theory*, 2023, at <https://arielrubinstein.tau.ac.il/>.

The following book is a comprehensive reference for the mathematical tools and definitions we will use throughout:

- Simon, Carl & Lawrence Blume, *Mathematics for Economists*, Norton & Company, New York and London, 1994.

Course Outline

Part I: Consumer and Producer Behavior

1. Consumer Behavior (MWG 3-4; V 7-8; JR 1-2.3)
2. Production (MWG 5; V 1-6, 13; JR 3)
3. Choice under Uncertainty (MWG 6; V 11; JR 2.4)

Part II: General Equilibrium Theory

1. The Edgeworth Box and the General Equilibrium model (MWG 15.B, 15.C; V 17, 18; JR 5.1)
2. Equilibrium and Welfare: The Fundamental Theorems of Welfare Economics (MWG 16.B-D; V 17,18; JR 5.2-5.3)
3. Externalities (MWG 11.B, 11.D, V 24)

Part III: Introduction to Game Theory

1. Static Games with Complete Information (O 2-4)
2. Extensive Games with Perfect Information (O 5-6, 14, 16)
3. Static Games with Incomplete Information (O 9)
4. Topics in Dynamic Games with Incomplete Information (O 10).