UNIVERSITY OF MANNHEIM
Department of Economics

Master of Science Economics

University of Mannheim

Module catalog fall 2025

The schedule of the introductory phase and the specialization phase as well as information on the course registration and links to the course pages in Portal[2] can be found in our online course catalog.

Additional courses at Heidelberg University: Within the scope of the cooperation agreement with the Alfred Weber Institute for Economics of Heidelberg University students may contribute up to a total of 40 ECTS credits from elective modules of the master's program Economics (area MScE 2b) and from the master's thesis. Participation requires a Heidelberg University matriculation number. For more information please visit the information website for non-AWI students.

Additional courses outside economics: Students may contribute up to a total of 16 ECTS credits from the following master's programs of the University of Mannheim: Mannheim Master in Management (area Business Administration), M.Sc. Political Science, M.Sc. Sociology, M.Sc. Business Mathematics, Master of Law, and Competition Law and Regulation (LL.M.) (for students in study track 2: Competition and Regulation Economics only). Additional 8 ECTS credits may be granted upon request.

Version: 2 September 2025

Contents

Preparatory course: E600 Mathematics

Form and usability of the module: Preparatory module for M.Sc. Economics
Responsible teacher of the module: Julian Klix
Cycle of offer: Every fall semester
Course language: English
Prerequisites: Basic knowledge in logic and set theory (please read Chapter 0, available on the course website). We will go rather superficially over these topics in the first lecture and you will get the most out of it if you are well prepared.

Goals and contents of the module: This module is a preparatory math course. I will thus try to make sure that you do not start the program without mastering what can be considered as the most basic mathematical concepts for a graduate student in economics. The plan therefore is as follows:

- Motivation and fundamental concepts (sets, functions)
- Introduction to vector spaces
- Introduction to matrix algebra
- Multivariate calculus and integral calculus
- Optimization

The order of content may be subject to change, the final outline will be announced in the first session. While the lecture sessions will be concept- rather than proof-oriented, by the end of the course, at the very least you should be comfortable with mathematical notation and logic, and should know that you need not be scared of formal proofs. At the same time, while the exercises will not be of the "cookbook" form, they should serve as a good warm-up for what will follow in the first semester master modules.

Expected competences acquired after completion of the module: By the end of the course the students should have a solid understanding of the most basic mathematical concepts for a graduate student in economics. Participants develop an intuition for basic mathematical constructs (for example derivatives, integrals and matrices), get familiar with mathematical notation and logic (such as distinguishing between axioms and theorems, following formal proofs), and learn when and how to apply the main theorems covered in this course (in particular Lagrange theorem).

Further information: This is an intensive course and will take place in the week prior to the beginning of the semester. The course will consist of lectures and exercise sessions. More information on the course structure can be found on the course website. As in most courses, you will need to put some extra time into preparing the exercises for the next session on your own. Problem sets will be handed out during the lecture and most of them will be discussed during the next days. I expect every participant to actively contribute to the discussions. If you feel you need some additional readings, you may want to have a look at Carl P. Simon / Lawrence Blume (1994): Mathematics for Economists, 1st Edition. W.W. Norton & Company, but there are many other good books around and I recommend you to have a look at many of them before you buy any to find one which best suits your personal needs.

Introductory phase

The descriptions of modules of the module combination "Economic Research Preparatory Courses" can be found in the CDSE course catalog on the website of the Graduate School of Economic and Social Sciences.

E601 Advanced Microeconomics

Form and usability of the module: Core module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Henrik Orzen + Prof. Dr. Ernst-Ludwig von Thadden
Cycle of offer: Each fall semester
ECTS credits: 10
Teaching method (hours per week): Lecture (4) + exercise (2)
Workload: 300 working hours, containing 63 hours in class and 237 hours independent study time
Course language: English
Prerequisites: Students are expected to have solid mathematical skills at the level reviewed in preparatory module E600 Mathematics. Students without these skills are expected to prepare prior to the start of the program and to attend E600 Mathematics.
Grading and ECTS credits: Written exam (120 min)

Goals and contents of the module: The course is a foundational course for the whole Master program, as all theories and applications of modern economics are based on microeconomic foundations. The course has two objectives. First, it provides a self-contained advanced introduction to the core concepts, notions, and tools of much of microeconomics, such as rational individual decision making, general equilibrium, and strategic interactions. Second, it acquaints the students with the formal reasoning and economic intuition behind modern economic analysis. The course covers the following broad areas:

- Advanced consumer and producer theory
- General equilibrium and welfare
- Games of complete information
- Games of incomplete information

Expected competences acquired after completion of the module: Upon successful completion of the course, students will know and be able to apply advanced concepts of microeconomic theory. In particular, they will be able to use the formal mathematical tools necessary for understanding economic research and for analyzing problems in economics and other social sciences. With these conceptual and formal competences, students will be able to critically evaluate economic arguments and conduct and communicate their own research in microeconomics and related areas.

Further information: A list of textbooks will be announced at the start of the course. The following two books cover all topics discussed in the course and much more:

- Mas-Colell, Andreu, Michael Whinston, Jerry Green: Microeconomic Theory
- Varian, Hal: Microeconomic Analysis, Norton, New York and London, 1992.

The mathematics needed for this and other courses in the program is covered, e.g., by

- Simon, Carl and Lawrence Blume: Mathematics for Economists
- Hammond, Peter and Knut Sydsaeter: Essential Mathematics for Economic Analysis

Contact information:
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Prof. Dr. Ernst-Ludwig von Thadden; Email: vthadden@uni-mannheim.de

E602 Advanced Macroeconomics

Form and usability of the module: Core module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Minki Kim, Ph.D.
Cycle of offer: Each fall semester
ECTS credits: 10
Teaching method (hours per week): Lecture (4) + exercise (2)
Workload: 300 working hours, containing 63 hours in class and 237 hours independent study time
Course language: English
Prerequisites: Good working knowledge of calculus (constrained optimization, multivariate Taylor expansion, geometric series)
Grading and ECTS credits: Written exam (120 min, 100%)

Goals and contents of the module: The course familiarizes students with the essential concepts of modern macroeconomic theory at an advanced level. Apart from traditional analysis of business-cycle fluctuations, a particular focus will be placed on learning how to use formal microfounded models to study and understand cross-sectional heterogeneity of households, one of key components for the most state-of-the-art macroeconomic models nowadays. During the course students will also learn the necessary techniques to solve dynamic programming models using MATLAB. Course roadmap:

- Introduction to the methodology. Scientific method in Macroeconomics. Ockham's razor. Lucas critique.
- Building block of models. Preferences, production. Optimization problems of agents.
- Permanent-income hypothesis. Lifecycle consumption. Permanent vs. transitory shocks. Public pensions in life-cycle economies. Consumption search and life-cycle prices. Consumption retirement puzzle.
- Fiscal stimulus programs. Wealthy hand-to-mouth households.
- Public debt in overlapping-generations economies.
- (If time permits) Solow growth model vs. Piketty growth model.
- Introduction to dynamic programming.
- Optimal stochastic growth model.
- McCall labor search.

Expected competences acquired after completion of the module: Completion of this course is a core requirement for our Master programs in Economics. It prepares students to successfully participate in advanced field courses offered in this program. Together with the companion courses in microeconomics and econometrics, this course will enable students to develop their own research agenda for the Master program as well as a PhD program that they may want to pursue subsequent to this Master program. Having completed these courses, students will feel comfortable reading journal articles at the frontier of modern economic research. A particular focus will be placed on obtaining technical skills, i.e. log-linearization techniques, solving linear rational expectations models, etc.

Contact information: Prof. Krzysztof Pytka, Ph.D.; Email: pytka@uni-mannheim.de

E603 Advanced Econometrics

Form and usability of the module: Core module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Markus Frölich
Cycle of offer: Each fall semester
ECTS credits: 10
Teaching method (hours per week): Lecture (4) + exercise (2)
Workload: 300 working hours, containing 63 hours in class and 237 hours independent study time
Course Language: English
Prerequisites: Undergraduate level of econometrics
Grading and ECTS credits: Written exam (120 min, 100%)

Goals and contents of the module: The goal of the module is to offer advanced treatment of econometric theory and to serve as the gate way to further advanced theoretical and applied econometric modules offered in the economics graduate program at the Department of Economics in Mannheim.
The module offers a revision of undergraduate level econometrics before moving on to extensive coverage of large-sample theory and some organizing estimation principles such as GMM estimators. Asymptotic properties of these estimators are also the focus of the module as well as non-linear models and the treatment of serial correlation.

Expected competences acquired after completion of the module: On successful completion of the module, students are expected to attain the following competences:

- Attain advanced theoretical knowledge in econometrics in the specific topics the module covers at a high technical and mathematical level.
- Be familiar with current theories and recent developments in the specific topics of focus for the module.
- Attain a higher/advanced level of analytical capability.
- Be in a position to take on follow-up advanced theoretical and applied econometrics modules.
- Attain the level of competence that permits independent undertakings in search of new knowledge in the specialist areas the module covers.
- Attain the level of competence required to carry out (theoretical) research-oriented projects independently.
- To be in a position to exchange information, ideas, and solutions with experts of the field on a scientific level as well as with laymen.
- To be able to communicate and to work effectively and efficiently with people and in groups.
- Graduates are able to communicate precisely in the English specialist language.

Further information: Recommended textbooks:

- Econometrics; Bruce E. Hansen; University of Wisconsin; https://www.ssc.wisc.edu/~bhansen/econometrics/
- Wooldridge (2010): Econometric Analysis of Cross Section and Panel Data. MIT Press.

Contact information: Name: Anja Doster; Email: anja.dostert(at)uni-mannheim.de

Spezialization phase: lecture courses

The descriptions of modules for study track 3: Economic Research can be found in the CDSE course catalog on the website of the Graduate School of Economic and Social Sciences.

E563 Game Theory

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Volker Nocke, Ph.D., Andrei Matveenko, Ph.D.
Cycle of offer: Each spring semester
Course language: English
ECTS credits: 7
Teaching method (hours per week): Lecture (2) + exercise (1)
Workload: 210 working hours, including 31.5 hours in class and 178.5 hours independent study time
Prerequisites: E601- E603 (or equivalent)
Grading: Written exam (120 min)

Goals and contents of the module: This course provides a thorough treatment of game theory, which is a formal framework for analyzing strategic interactions. It revisits, expands on, and complements the game-theoretic concepts introduced in E601 Advanced Microeconomics. Covering static and dynamic games of complete and incomplete information, this course defines suitable solution concepts and discusses various economic applications. The exercises allow students to familiarize themselves with the use of game-theoretic tools and to study further applications.

Expected competences acquired after completion of the module: The students know game theory at an advanced level. They are able to describe strategic interactions formally, identify and apply suitable solution concepts, and critically evaluate the resulting prediction of behavior and outcomes. Moreover, the students understand the key ideas of game-theoretic reasoning used in academic research in economics and other disciplines.

Expected number of students in class: 15

Contact person: Name: Andrei Matveenko, Ph.D.; Email: andrei.v.matve@gmail.com

E577 Inequality and the Macroeconomy

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Moritz Kuhn
Cycle of offer: Irregular
ECTS credits: 9
Teaching method (hours per week): Lecture (2) + exercise (2)
Workload: 270 working hours, including 42 hours of class time and 228 hours of independent studies and exam preparation
Prerequisites: E601-603 (or equivalent)
Grading and ECTS credits: Written exam (60 minutes, 50%), take-home assignment (2 – 5 pages, excluding figures and tables, 50%)

Goals and contents of the module:
In this class, students will be introduced to macroeconomic models of income and wealth heterogeneity. We will discuss models of consumption-saving behavior and how these models account for income, consumption, and wealth inequality. Students will also be introduced to data on income and wealth inequality. Part of the class will be to introduce students to analyze data on income and wealth inequality and to analyze models of wealth inequality.

Expected competences acquired after completion of the module:
Firstly, students will have a comprehensive knowledge of macroeconomic models of income, consumption and wealth. To be specific, students are expected to be able to define and interpret the key features and the limits of the macroeconomic theories learnt in this course. Secondly, they are expected to have a good understanding of the empirical tools in macroeconomics. They are expected to be able to apply and integrate the knowledge learnt in this course to conduct independent researches. Thirdly, they will improve their competencies in scientific writing and presentation skills. The group work in this course will allow students to learn to communicate and work efficiently with other students. They are able to bear particular responsibility in a team.

Expected number of students in class: 15

Contact information: Prof. Dr. Moritz Kuhn; Email: moritz.kuhn@uni-mannheim.de

E5008 Economic Policy and the Financial System

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Hans Peter Grüner
Cycle of offer: every fall semester
ECTS credits: 7
Teaching method (hours per week): Lecture (2) + exercise (1)
Workload: 210 hours, containing 31.5 hours class time and 178.5 hours independent study time
Course language: English
Prerequisites: E601-E603 (or equivalent)
Grading: First draft of slides for case presentation (10%), case presentation (30%, 30 minutes), and written exam (60 min, 60%)

Goals and contents of the module:
This course offers an introduction to several important economic policy questions that are related to the financial system. I first present basic analytical instruments and provide an overview of some fundamental results from general equilibrium theory. Based on this, we study why financial markets are useful in practice. We analyze the role of financial intermediaries and the future role that they may play in the context of the emergence of disintermediation and big tach banking. Next, we turn to cases in which financial markets fail to work properly, and we discuss appropriate policy responses. The rest of the course is devoted to the analysis of fiscal and monetary policy measures that affect financial markets and to the design of a new financial and economic architecture in Europe. Course structure:

- Analytical instruments and fundamental results in economics
- Games, experiments and the design of rules for society
- Financial intermediation and financial stability
- Financial market imperfections and inequality I
- Financial market imperfections and inequality II

- Fiscal sustainability
- Monetary policy institutions
- Towards a consistent European economic policy framework

Expected competences acquired after completion of the module: Understand role of financial markets, regulatory institutions and policy interventions. Perform individual literature research on policy related issues and present major insights.

Expected number of students in class: 10

Contact information: Astrid Reich; Email: lswipol@uni-mannheim.de

E5024 Poverty and Inequality

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Dr. Johanna Gather, Dr. Viviana Urueña
Cycle of offer: Each fall
ECTS credits: 9
Teaching method (hours per week): Lecture (2) + exercise (2)
Workload: 270 hours, containing 42 hours class time and 228 hours independent study time
Course language: English
Prerequisites: E601- 603 (or equivalent). A background in development economics and Stata is helpful.
Grading and ECTS credits: Presentation and discussion (30 min, 30%), written assignments (8 - 12 pages, 70%)

Goals and contents of the module:
The course will introduce students to the main concepts of poverty and inequality measurements and the critical links between poverty and inequality and economic growth. Students will get an overview on theories of justice, methodological aspects of poverty & inequality measurement, gender inequalities, economic mobility, inequality and poverty in rich countries as well as development policy targeting poverty. The course will focus on low- and middle-income countries. It is structured as follows:

- Introduction
- Long Run Determinants of Growth
- Concepts and Measurements of Poverty I
- Concepts and Measurements of Poverty II
- Poverty Alleviation I: (Micro-)finance
- Poverty Alleviation II: Cash transfers
- The Behavioral Economics of Poverty
- Concepts and Measurements of Inequality
- Inequality and Gender
- Does Inequality Cause Growth?
- Pro-Poor Growth
- Poverty and Inequality in High-Income Countries
- Economic Mobility
- Recap

Expected competences acquired after completion of the module: The students will become acquainted with topics related to poverty alleviation and inequality measurements. They will also learn how to synthesize, interpret regression tables, critically review, and discuss peer-reviewed papers in the field. In addition, students will improve their presentation skills and will learn how to handle feedback and questions from their peers in class. Last, students will extend their programming skills by calculating inequality indexes and poverty measures in Stata.

Expected number of students in class: 15

Contact Information: Dr. Johanna Gather; Email: johanna.gather(at)uni-mannheim.de

E5026 Programming in Stata

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Dr. Ingo Steinke, Nicholas Barton, Ph.D.
Cycle of offer: Each fall semester
ECTS credits: 9.5
Teaching method (hours per week): Lecture (3) and exercise (1)
Workload: 285 hours, containing 42 hours class time and 243 hours independent study time
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Written exam (90 min, 100%)

Goals and contents of the module: Although Stata already offers a large number of econometric tools, novel approaches are often not available and have to be implemented by users. This course offers an introduction to advanced programming in Stata. Since comparatively few people know how to do so, Stata programming skills can be a competitive advantage. The lecture will start with an introduction to efficiently written do-files (including data processing). We will look at and discuss different data types. In hands-on sessions students will be taught how to prepare the data for analysis. Variables will be generated and their distributions explored; data will be merged; and regression results will be critically discussed. Moreover, in this course students will learn how to implement new commands for Stata and to conduct Monte Carlo simulations. These are important for verification of implementations and are used as a very important tool to analyse the small sample properties of estimators and to complement the theoretical properties of estimators making them an integral part of econometric analyses. We will also touch upon Stata's matrix programming language Mata, non-linear optimization, e.g. ML estimation and bootstrap methods

Expected competences acquired after completion of the module: Students will be able to program quantitative methods using Stata independently. They are able to use Stata and Mata as programming languages and understand the standard syntax and the grammar of the languages. They will also be able to understand commands in Stata and edit these accordingly. Knowledge won from this module can be applied to various records. Students are capable of automatizing analysis and working efficiently. In addition to that, they will be able to conduct Monte Carlo simulations and interpret and use the results to estimate the quality of the estimation procedure. They can generate samples from a variety of distributions. Through Monte Carlo simulations, students will have a better comprehension of the uncertainty and quality of the estimation and test procedures.

Expected number of students in class: 20

Further information: Cameron, A., & Trivedi, P. (2022). Microeconometrics using Stata. (Second ed.)

Contact information:
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Dr. Ingo Steinke; Email: isteinke(at)rumms.uni-mannheim.de

E5040 Impact Evaluation and Causal Inference

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Markus Frölich
Cycle of offer: Each fall semester
ECTS Credits: 7
Teaching method (hours per week): Lecture (2) + exercise (1)
Workload: 210 hours, containing 31.5 hours class time and 178.5 hours independent study time
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Written exam (120 min, 100%)

Goals and contents of the module: This course will introduce students to theory and methods of modern impact evaluation. Topics will include counterfactual outcomes, heterogeneous treatment effects, (propensity) score matching, differences in differences, instrumental variables designs, randomized control trials, and regression discontinuity design.

Expected competences acquired after completion of the module: The students are able to apply the main econometric models and estimators for impact evaluation and causal inference and are able to analyze and judge causal inference identification strategies.

Further information: Impact Evaluation (Frölich, Sperlich, 2019, Cambridge University Press)

Expected number of students in class: 20

Contact Information: Anja Dostert; Email: dostert(at)uni-mannheim.de

E5067 Behavioral Economics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Peter Duersch
Cycle of offer: Irregular
ECTS credits: 9
Teaching method (hours per week): Lecture (2) + exercise (2)
Workload: 270 working hours, including 42 hours of class time and 228 hours of independent studies
Course language: English
Prerequisites: E601-603 (or equivalent)
Examination: Written exam (120 min)

Goals and content of the module: In this course, advanced topics in Behavioral Economics are discussed. These contain, among others, models of reference dependence, social preferences (inequity

aversion, reciprocity, normative behavior, social image / self-image concerns), misconceptions of the world (overconfidence, self-serving beliefs), models of salience and focusing. Finally, the use of process data and Neuroeconomics topics are touched upon.

Expected competences after completion of the module: By the end of the course students should have an overview of the field of Behavioral Economics, be able to apply behavioral models to social and economic interactions, and understand the challenges and limitations of theoretical modelling of human behavior.

Expected number of students in class: 20

Contact information: Name: Dr. Peter Duersch; Email: duersch@uni-mannheim.de

E5087 Banking and Banking Regulation

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Ernst-Ludwig von Thadden
Cycle of offer: irregular
ECTS credits: 7,5
Teaching method (hours per week): Lecture (3)
Workload: 225 hours, containing 31.5 hours class time and 193.5 hours for independent studies
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Written exam (120 min, 100%)

Goals and contents of the module: The course covers the basic theory of banking and its regulation, with an emphasis on the systemic problems of financial stability. The course will first cover classic theories of banking based on screening, monitoring, risk-sharing, maturity transformation, and liquidity provision. It will then address problems of financial stability with respect to banking as well as to shadow banking and discuss regulation in the context of the current debate about macroprudential regulation and the Basel reform process.

Expected competences acquired after completion of the module: Upon successful completion of the course, students should understand the most important economic functions of banks and the associated potential of banking failures. They will acquire the necessary analytical tools to understand the current regulatory debate about banking reform and should be able to critically assess the merits of different reform proposals.

Further information: There is no textbook for this course, as some of the material is still fairly new and subject to ongoing research. The following book provides a broad overview over modern banking and financial markets and covers many topics of the course in quite accessible form: Greenbaum, Stuart, Anjan Thakor, and Arnout Boot, Contemporary Financial Intermediation, Fourth Edition, Academic Press 2016. This book is written for a less advanced audience than the Mannheim MSc and therefore does not cover some of its themes in the same depth as our course. Another excellent and very accessible book on a central problem of banking is: Admati, Anat and Martin Hellwig, The Bankers' New Clothes, Princeton University Press 2013.

Contact Information: Name: Prof. Dr. Ernst-Ludwig von Thadden; Email: vthadden@uni-mannheim.de

E5090 Internet Economics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Anton Sobolev, Ph.D. + Robin Ng, Ph.D.
Cycle of offer: Irregular
ECTS credits: 7
Teaching method (hours per week): Lecture (2) + exercise (1)
Workload: 210 working hours, containing 31.5 hours class time and 178.5 hours independent study time and preparation for the exam
Course language: English
Prerequisites: E601-603 (or equivalent), advanced knowledge in Industrial Organization and Game Theory is advantageous.
Grading and ECTS credits: Written exam (120 min, 100%)

Goals and contents of the module: The last two decades have seen the striking emergence of new Internet platforms for search, e-commerce, online media, job matching, social networking and other online activities. This course is aimed at exploring how online businesses are organized, what role search intermediaries play in getting together buyers and sellers, the optimal design of online platforms and related efficiency issues. The topics we are going to cover are based on real world examples, such as consumer search using search engines, competition between online platforms, sponsored search auctions used by Google and online reputation mechanisms on Amazon. The course will be mainly theory-orientated. The theoretical models we will cover thus require a solid microeconomics and math background. However, we will also discuss related case studies, empirical works and experiments.

Expected competences acquired after completion of the module: Students are expected to acquire knowledge of the internet markets and learn how to explain online phenomena by using economics language. They should be able to discuss the key mechanisms on online platforms, platform pricing structure, online participant interactions, consumer surplus and related policy issues.

Further information: There is no required textbook for this course. The lecture will be mainly based on lecture notes and some research papers. However, the following books might be useful for both refreshing basic IO knowledge and selective reading of topics:

- Paul Belleflamme and Martin Peitz, Industrial Organization: Markets and Strategies, 2010, Cambridge University Press.
- Martin Peitz and Joel Waldfogel, The Oxford Handbook of The Digital Economy, 2012, Oxford University Press.
- Hal Varian, Information Rules: A Strategic Guide to the Network Economy, 1998, Harvard Business Review Press.

Notice that it is unnecessary to buy those books, as we will only cover a small fraction of each book.

Expected number of students in class: 20

Contact Information:
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Robin Ng, Ph.D.; Email: robin.ng@uni-mannheim.de

E5095 Nonparametric Econometrics

Form and usability of the module: Elective course for M.Sc. Economics
Responsible teacher of the module: Prof. Mengshan Xu, Ph.D.
Cycle of offer: each fall semester
ECTS credits: 9
Teaching method (hours per week): lecture (2) + exercise (2)
Workload: 270 working hours, including 42 hours of class time and 228 hours of independent studies
Course language: English
Prerequisites: E603 (or equivalent)
Grading: Written exam (120 min, 100%)

Goals and contents of the module: Nonparametric estimations do not depend on the assumption that models can be described by finite-dimensional parameters. Instead, they are constructed based on infinite-dimensional functional classes characterized by what are known as “smoothness conditions.” This approach is both a starting point and a cornerstone of modern machine learning.
This course provides an introduction to nonparametric estimation, offering insights from both theoretical and applied perspectives. Although the primary focus is on theoretical aspects, it begins with fundamental ideas and straightforward intuitions that distinguish and connect parametric and nonparametric models. Key concepts will be introduced and visualized progressively throughout the course. The material is ideally suited for students without prior knowledge of the functional structures of the underlying models.The course explores kernel and series estimators, focusing on applications in density estimation and regression problems. We will discuss the statistical properties of these estimators, including consistency, upper bounds for estimation risk, and asymptotic normality. Throughout the course, we will examine typical phenomena such as the trade-off between bias and variance, as well as the curse of dimensionality, which has become increasingly important in modern big data analysis.

Expected competences acquired after completion of the module:
Upon completing this course, students will possess a practical understanding of classical nonparametric methods for estimating unknown functions of interest. They will also grasp the theoretical foundations of these methods. Additionally, students will be able to apply the estimation procedures to data using statistical software at a basic level.

Further information: Recommended textbooks:

- Econometrics, Bruce E. Hansen; University of Wisconsin, (2022)
- Semiparametric and nonparametric methods in econometrics, Horowitz, (2009)
- Introduction to Nonparametric Estimation, Tsybakov, (2009)

Expected number of students in class: 20

Contact information: Prof. Mengshan Xu, PhD.; Email: mengshan.xu(at)uni-mannheim.de

E5100 Economic History

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Dr. Alexander Donges
Cycle of offer: Each fall semester
ECTS credits: 9
Teaching method (hours per week): Lecture (2) + Exercise (2)
Workload: 270 working hours, including 42 hours of class time and 228 hours of independent studies
Course language: English
Prerequisites: E601-E603 (or equivalent)
Grading: Written exam (100 min, 70%), presenting and discussing a paper (20 min, 20%), active participation (10%).

Goals and contents of the module: Economic history is important for understanding long-run economic development and to study the question, why some countries became rich, while others remained poor. In this course, we focus on selected topics of quantitative economic history that have been explored by economists and economic historians in recent years. Topics include trade, the role of institutions in economic development, religion, human capital, innovation, market integration, financial development, inequality, migration, epidemics, and climate change. The weekly lecture (2 hours) will give you an overview on recent empirical research on each topic. In the weekly exercise sessions (2 hours), we will then discuss key research papers in more depth. Each student is required to presents a critical discussion of one research paper. The presentation accounts for 20% of the final grade, and the participation in class discussions accounts for 10% of the final grade.

Expected competences acquired after completion of the module: Students will acquire thorough knowledge of empirical methods used in modern applied economics and quantitative economic history. They will be able to apply their knowledge of econometrics in analyzing research questions in economic history and discuss potential policy implications, for example with respect to development policies. The course also aims at enabling students to critically evaluate empirical research designs that may encounter in their future career.

Further information: A detailed syllabus (including literature) is available on my website (https://www.vwl.uni-mannheim.de/en/donges/).

Expected number of students in class: 20

Contact: Dr. Alexander Donges; Email: donges@uni-mannheim.de

E5119 Spatial Data Management and Analysis

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Kathrine von Graevenitz, Ph.D.
Cycle of offer: Irregular
ECTS-Credits: 2.5
Teaching method: Lecture (1)
Workload: 75 working hours, including 10.5 hours of class time and 64.5 hours for independent studies
Course language: English
Prerequisites: E601-603 (or equivalent), coding experience in R is beneficial

Grading: Presentation (15 min, 70%), presentation slides and code (30%), the course will be graded pass/fail.

Goals and contents of the module: This short-course provides an introduction to spatial data. We will discuss what is special about spatial data, introduce software to handle it, and learn to merge data and create simple maps. We will do simple spatial econometric analyses (correlations and regressions) and discuss spatial regression discontinuity research designs. We will also talk about how to geo-code data. The course is intended for students approaching their master's thesis to get them started with independent research using spatial data.

Expected competences acquired after completion of the module: Students will acquire an understanding of what spatial data is. They will also gain first insights into open source software used for spatial data (QGIS and R).

Expected number of students in class: 12

Contact information: Kathrine von Graevenitz; Email: Kathrine.vonGraevenitz@zew.de

E5130 Environmental Macroeconomics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Jan Schymik
Acting teacher: Robin Sogalla, Ph.D.
Cycle of offer: each fall semester
ECTS Credits: 5
Teaching method (hours per week): lecture (2)
Workload: 150 working hours, containing 21 hours class time and 129 hours independent study time
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Written Exam (90 min, 70%), group take-home assignments (8 - 12 pages, 30%)

Goals and contents of the module: What are the environmental consequences of economic growth? How does climate change affect economic activity? How effective are different climate policy instruments, and what are their economic impacts? Is globalization good or bad for the environment? This course equips students with modern macroeconomic tools to address these questions. We begin by reviewing the physical science of climate change and examining how climate modules are integrated into macroeconomic models. We then study integrated assessment models (IAMs) and their use in quantifying climate damages and informing policy design. In the second part of the course, we cover models with directed technical change and analyze the role of clean innovation and the feasibility of green growth. The final part deals with environmental policy in open economies. We will study quantitative general equilibrium trade models and their use to investigate the relationship between trade policy, globalization and the environment.

Expected competences acquired after completion of the module: Upon completion of the course, students will have a solid understanding of how to incorporate environmental aspects into macroeconomic models. They will be able to critically assess the limits of different modelling approaches and which modelling framework is best suited for a specific research question. They will acquire the practical skills to analytically solve, numerically simulate and calibrate these models. By

the end of the course, students are expected to be able to apply these tools to investigate independent research questions in the field of climate and environmental macroeconomics and analyze the trade-offs of different policy instruments.

Further information: The class is based on frontier research papers. Therefore, there is no ideal textbook. The reading list will be handed out at the beginning of the class. The following papers provide a good overview.
Integrated Assessment Models:

- Dietz, S. (2024): Chapter 1 – Introduction to integrated assessment modeling of climate change. In Handbook of the Economics of Climate Change, Volume 1
- Fenandéz-Villaverde J., K. Gillingham, and S. Scheidegger (2025): Climate Change through the Lens of Macroeconomics. Annual Review of Economics, forthcoming
- Bilal, A. and J. H. Stock (2025): A Guide to Macroeconomics and Climate Change. NBER Working Paper No. 33567

Directed Technical Change:

- Hémous, D., and M. Olsen (2021): Directed Technical Change in Labor and Environmental Economics, Annual Review of Economics, Vol.12:571-597 Trade and Environment
- Copeland, B. R., J. S. Shapiro, and M. S. Taylor (2022): Chapter 2 - Globalization and the environment. In Handbook of International Economics, Volume 5

General:

- Pisani-Ferry, J. and Posen A.S. The Green Frontier (2023): Assessing the Economic Implications of Climate Action. Peterson Institute for International Economics.
- Chan, Y. T and Zhang, D. (2025): Climate Macroeconomics. Foundations, Methods and Computational Analysis

Expected number of students in class: 20

Contact Information: Robin Sogalla, Ph.D.

E5132 Computational Macroeconomics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Michele Tértilt, Ph.D.
Acting teacher of the module: Kanato Nakakuni, Ph.D.
Cycle of offer: each fall semester
ECTS Credits: 5
Teaching method (hours per week): lecture (2)
Workload: 150 working hours, containing 21 hours class time and 129 hours independent study time
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Final exam (90 min, 50%) + assignments (5 – 10 pages, 50%)

Goals and contents of the module: The goal of this course is to provide an introduction to quantitative macroeconomic analysis and the computational techniques essential for solving modern macroeconomic models. Building on prior theory-based macroeconomics courses, Computational Macroeconomics is designed to equip students with practical skills and methods for computationally solving macroeconomic models. We will learn these techniques through working mainly on the overlapping generations (OLG) model—one of the core frameworks in macroeconomics—and its

extensions that incorporate household heterogeneity. We begin with a programming primer in Julia and a partial-equilibrium, two-period model to introduce key concepts and numerical methods for solving households' dynamic optimization problems. The course then progresses to the general-equilibrium, multi-period OLG model. Students will learn how to calibrate the model, solve for equilibrium in both the long run and along the transitional path. We will further extend the model to capture household heterogeneity—for example, in income, gender, and family structure. Throughout the course, we will also discuss real-world applications of the model and work with it hands-on. Example applications and questions include: What are the macroeconomic consequences of family policies, such as cash or in-kind transfers to households with children? What are the macroeconomic and welfare implications of social security reforms, such as increasing social security premiums, reducing the public pension benefits, or increasing the retirement age?

Expected competences acquired after completion of the module: By the end of the course, students will have acquired practical skills in solving dynamic optimization problems computationally, calibrating macroeconomic models, and simulating those models to address their own research questions.

Further information: This course will include hands-on programming exercises. In providing and explaining sample code, I will use Julia - a programming language that has become increasingly popular and useful for computational work in economics. If you are more comfortable using another programming language (e.g., MATLAB, Fortran, Python), you may use it for in-class exercises and to submit your coding assignments in that language. Otherwise, students are expected to install Julia on their own laptops, as it is not available on the classroom computers. You will also need to install a suitable code editor, such as Visual Studio Code, which will be used during class. In the first session, I will briefly go over the language, the editor, and the installation process, so it is not necessary to install them beforehand if you haven't done so yet.

Expected number of students in class: 20

Contact Information: Name: Kanato Nakakuni; e-mail: kanato.nakakuni@uni-mannheim.de

Spezialization phase: seminar courses

E568 International Macroeconomics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Jan Schymik
Cycle of offer: irregular
ECTS credits: 5
Teaching method (hours per week): Blockseminar (2)
Workload: 150 working hours for organizational meeting, block seminar, and preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-603
Grading: Term paper (12 - 14 pages, 50%), presentation (45 min, 40%) + discussion and oral participation (10%)

Goals and contents of the module: The seminar deals with the macroeconomics of open economies. Covered topics include (i) the foreign exchange market and the determination of exchange rates in international money markets; (ii) determinants of the trade balance, national income, the balance of payments, money flows, and interest rates; (iii) capital flows in integrated financial markets; monetary and fiscal policy in open economies; (iv) international macroeconomic interdependence and policy coordination; (v) supply-chain relationships. Expected competences acquired after completion of the module: The students will acquire the ability to understand and critically evaluate academic articles in the field. They will improve their competencies in scientific writing and further their presentation skills by presenting an academic paper.

Expected competences acquired after completion of the module: The students will acquire the ability to understand and critically evaluate academic articles in the field. They will improve their competencies in scientific writing and further their presentation skills by presenting an academic paper.

Expected number of students in class: 12

Contact Information: Prof. Dr. Jan Schymik; Email: jschymik@mail.uni-mannheim.de

E569 Topics in Behavioral Economics: Fairness, Preferences and (Optimal) Redistributive Policies

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Dr. Cornelius Schneider
Cycle of offer: Irregular
ECTS credits: 5
Teaching method (hours per week): Block seminar (2 SWS)
Workload: 150 working hours for organizational meeting, block seminar, preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-E603 (or equivalent), Introductory Public Economics could be useful.

Grading: Presentation (40 min, 40%), classroom discussion (10%), seminar paper (7 - 10 pages, 50%)

Goals and contents of the module: The main objectives of the course are twofold. First, the course will explore how preferences for redistribution differ across different countries, cultures and institutional settings. It explores how personal preferences, (mis)perceptions and norms can inform redistributive (tax) policies. The conventional utilitarian approach often neglects the fact that citizens judge an economic system not only by its allocative achievements but also by the procedures under which it operates. Therefore, the seminar considers recent and advanced empirical research eliciting multiple dimensions of preferences from surveys, experiments, and existing policies. Second, the course examines optimal ways to implement redistribution, specifically focusing on income and wealth taxation. Recent empirical studies (both experimental and field) have become increasingly important for guiding tax policies by evaluating the trade-off between the potential gains and the efficiency losses from taxation. Specifically, behavioral responses to taxation are decisive – e.g., labor supply adjustments, tax evasion or avoidance, migration, or rent-seeking activities. The course therefore puts a lot of emphasis on empirical studies that quantify behavioral responses to taxation along different response margins.

Expected competences acquired after completion of the module: Students will become familiar with important quantitative (experimental) methods to assess the determinants of redistributive preferences and causal effects of redistributive taxation. By examining empirical state-of-the-art papers, students will develop a critical perspective to highlight the advantages and challenges of various methodologies. Furthermore, participants will enhance their ability to read advanced economic papers, to filter the key message(s) out of fairly dense papers and refine their own academic writing, communication and presentation skills. Further information: Please note that you have to register for this seminar within the common registration week.

Expected number of students in class: 12

Contact Information: Dr. Cornelius Schneider; Email: schneider@uni-mannheim.de

E599 Empirical Environmental Economics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Kathrine von Graevenitz
Cycle of offer: only in fall
ECTS-Credits: 5
Teaching method (hours per week): Blockseminar (2)
Workload: 150 working hours for organizational meeting, block seminar, preparation of the seminar paper and presentation
Course language: English
Prerequisites: E601- E603 (or equivalent)
Grading and ECTS credits: Presentation (30 min, 40%), report (6 - 8 pages, 40%), classroom discussion (20%)

Goals and contents of the module: This seminar covers recent empirical research in environmental economics. The reading list for the class will focus on a particular research topic in environmental economics, such as climate policy or air pollution control. Each student will present a paper chosen from the list to the class and write a report critiquing the paper. Emphasis will be on identifying the

central questions addressed in the paper, evaluating the methodology and data, and making suggestions for improvements and extensions.

Expected competences acquired after completion of the module: Ability to present academic research to semi-expert audience, ability to critically reflect on academic research, and to articulate criticism and suggestions for improvement.

Expected number of students in class: 14

Contact information: Prof. Dr. Kathrine von Graevenitz; Email: Kathrine.vonGraevenitz@zew.de

E5054 Topics in Environmental and Energy Economics

Form and applicability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Kevin Remmy, Ph.D.
Cycle of offer: Irregular
Course language: English
ECTS Credits: 5
Teaching method (hours per week): Block seminar (2 SWS)
Workload: 150 hours consisting of class time, independent study and writing of the final paper.
Prerequisites: E601-603 or equivalent. Basic knowledge of empirical industrial organization and econometrics are advantageous.
Grading: Presentation (30 min, 50%) and seminar paper (10 - 15 pages, 50%)

Goals and contents of the module: The seminar covers recent research in environmental and energy economics. The course gives introduction to empirical studies of important topics in environmental and energy economics. The empirical papers we will study use a wide array of methods and approaches, ranging from theoretical modeling, to quasi-experimental research designs, to structural modelling and estimation. Topics include emissions reduction policy in the U.S. and EU, electricity market (market power and regulation) and natural resource market etc.

Expected competences acquired after completion of the module: Students have gained a broad understanding on selected recent trends in environmental and energy economics. They are able to apply their expertise and methods to analyse, discuss and evaluate issues of environmental and energy economics. The students have broadened and sharpened their analytical abilities as well as their presentation and discussion skills.

Expected number of students in class: 12

Contact Information: Kevin Remmy, Ph.D.; Email: kremmy@mail.uni-mannheim.de

E5107 Topics in Financial Economics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Celine Yue Fei, Ph.D.
Cycle of offer: Irregular
Course language: English
ECTS credits: 5

Teaching method (hours per week): Block seminar (2)
Workload: 150 working hours for organizational meeting, block seminar, preparation of the seminar paper and presentation
Prerequisites: E601-603 (or equivalent)
Grading: Term paper (8 – 10 pages, 70%), presentation (45 min, 30%)

Goals and contents of the module: This course covers advanced topics in corporate finance by discussing important research papers. We focus on two forms of failures in financial markets, asymmetric information and moral hazard. We will discuss how these market failures affect firms' investment and financing decisions and how to use the theory to understand the practice in financial markets.

Expected competences acquired after completion of the module: Upon successful completion of the module, the students should understand the fundamental questions of corporate finance: how firms make investment and financing decision. From a positive perspective, they will be able to understand the practice in financial markets. From a normative perspective, they will be able to discuss the necessity of regulation in financial markets. In addition, they will also acquire the necessary tools to understand more advance corporate finance models.

Expected number of students in class: 10

Contact information: Name: Celine Yue Fei, Ph.D.; Email: yue.fei@uni-mannheim.de

E5120 Topics in Econometrics

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Carsten Trenkler
Cycle of offer: Each fall term
ECTS credits: 5
Teaching method (hours per week): Block seminar (2)
Workload: 150 working hours for organizational meeting, block seminar, preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-603 (or equivalent), recommended: E508, E5019, and E5095 (or equivalent)
Grading: Presentation (45 min, 60%), max. 2 pages handout (10%), seminar paper (8 - 10 pages, 30%)

Goals and contents of the module: This seminar focuses on recent research developments in Econometrics, covering both theoretical and applied aspects. Each student is required to present a paper selected from the reading list and write a course paper (ranging from 15 to 20 pages) on a topic related to the subject of their presentation. The course paper may be structured as a discussion paper or an empirical application of an econometric method.

Expected competences acquired after completion of the module: The students will develop the capability to comprehend and critically assess academic articles within the field. This will enhance their proficiency in scientific writing. Additionally, by presenting an academic paper, they will further refine their presentation skills.

Expected number of students in class: 10

Contact information: Name: Prof. Dr. Carsten Trenkler; Email: trenkler<at>uni-mannheim.de

E5129 Ethics and Market Design

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Achim Wambach
Cycle of offer: irregular
ECTS credits: 5
Teaching method (hours per week): Block seminar (2)
Workload: 150 working hours for organizational meeting, block seminar, and preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-603
Grading: Presentation (30 min, 50%), report (22,000 characters including spaces, 50%)

Goals and contents of the module: The seminar explores a wide range of topics in market design. The purpose of this seminar is to provide students the opportunity to present and discuss research papers, get familiar with the state of art in the field and inspire their own research in this area.

Expected competences acquired after completion of the module: Students have gained knowledge in recent developments in market design. They can apply their expertise and methods to analyze and evaluate ongoing debates in both the academic and the policy-oriented literature. The students have broadened their analytical and empirical abilities as well as their presentation and discussion skills.

Expected number of students in class: 10

Contact Information: Name: Kaja von Campenhausen; email: Kaja.vonCampenhausen@zew.de

E5131 Introduction to Predictive Analytics and Machine Learning

Module number and title: E5131 Introduction to Predictive Analytics and Machine Learning
Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Responsible teacher of the module: Krzysztof Pytka, Ph.D.
Cycle of offer: irregular
ECTS credits: 5
Teaching method (hours per week): Block seminar (2)
Workload: 150 working hours for organizational meeting, block seminar, and preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Final report (10 - 15 pages, 50%) and the presentation (25 - 30 min, 50%)

Goals and contents of the module: Statistical learning is a set of methods that allows us to study processes that cannot be satisfactorily explained by the existing theories. Those procedures are

particularly useful for analyzing complex datasets with many observations and many variables. This seminar will introduce the basics of statistical learning with emphasis put on building models that provide the most accurate predictions. Each participant will have to study on her own using materials pre-recorded and shared by me. In those video materials, I will review supervised problems, in which the value of an outcome measure is predicted on the base of a number of input measures. All examples will be implemented in R, an open-source statistical computing language. One of the purposes of the course is to familiarize students with this language, which nowadays is extensively used both in academia and in industry. No programming skills are assumed and I will start teaching it from scratch. During the seminar the students will present their prediction model built with the use of artificial datasets prepared by me. Course roadmap:

- Introduction to programming in R. Classical econometrics with R.
- Monte-Carlo simulation.
- Gauss-Markov theorem revised. Statistical Learning. What is it?
- The trade-off between prediction accuracy and model interpretability.
- The bias-variance trade-off.
- Supervised vs. unsupervised learning.
- Resampling methods.
- Cross-validation and bootstrap.
- Linear model selection and regularization.
- Subset selection.
- Shrinkage methods: ridge regression and lasso.
- Regression trees.
- Random forests.

Expected competences acquired after completion of the module: The students gain knowledge and understanding how modern statistical learning methods differ from classical econometrics. They can use those methods to build predictive models. The students can choose the right method for a given problem. They can write simple programs in R.

Further information: Literature recommendations:

- Grolemund, G. (2014) “Hands-On Programming with R: Write Your Own Functions and Simulations.”
- Matloff, N. (2011) “The Art of R Programming: A Tour of Statistical Software Design.”
- James, G., Witten, D., Hastie, T., & Tibshirani, R. (2017) “An introduction to statistical learning: With applications in R.”

Expected number of students in class: 10

Contact Information: Krzysztof Pytka; Email: pytka@uni-mannheim.de

E5060 Interdisciplinary Competition and Regulation Seminar

Form and usability of the module: Compulsory module for M.Sc. Economics in study track 2: Competition and Regulation Economics
Responsible teacher of the module: Prof. Dr. Volker Nocke + Prof. Dr. Jens-Uwe Franck
ECTS credits: 5
Teaching method (hours per week): Blockseminar (2)
Workload: 150 working hours for organizational meeting, block seminar, preparation of the seminar paper and presentation.
Course language: English
Prerequisites: E601-603 (or equivalent)
Grading: Written report (25 – 30 pages, 30%), presentation (90 minutes, 50%), classroom discussion (20%)

Goals and contents of the module: In this seminar economics and law students will form mixed teams to analyze competition cases as well as regulatory proposals from a law and economics perspective. These case teams will take the perspective of the different parties involved and present their line of argument in class.

Expected competences acquired after completion of the module: Students learn to read, present, and critically evaluate cases. Students in economics will also improve their communication skills regarding the practice of competition law.

Expected number of students in class: 20

Contact information: Prof. Volker Nocke, Ph.D.; Email: volker.nocke@uni-mannheim.de

Specialization Phase: E5998 Internship

Form and usability of the module: Elective module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
ECTS credits: 6
Teaching method (hours per week): Internship
Workload: 175 internship working hours; 5 hours for the preparation of an internship report in line with the Internship Report form
Course language: Language of the internship: any; Language of documents of proof: German or English
Participation requirements: Bachelor's degree
Requirements for the award of ECTS credits: Proof that the intern worked at least 175 hours, typically to be completed within a period of eight to twelve weeks; internship report (600 – 1000 words) and confirmations in accordance with the corresponding form; the internship is not graded

Goals and contents of the module: Application of specialized knowledge and approaches from the field of the economic sciences to practical problems; getting to know practical approaches relevant to the respective field of work; acquisition of key competences

Expected competences acquired after completion of the module: Upon completion of the module, students are able to apply the knowledge and understanding gained from the degree program in a professional context. They have developed and enhanced explanations and solutions in their area of work and obtained specialized knowledge relating to this field. They have reflected on work processes, evaluated them and, if applicable, (re)designed them. They have exchanged with their colleagues about information, ideas, problems and solutions and have formulated and defended positions and solutions. By completing an internship abroad, they may have developed their proficiency in a foreign language for use in business contexts.

Additional information The internship meets the requirements for mandatory internships set out in the federal regulations on employing interns dated 1 January 2015 (Praktikantenrichtlinie Bund) and the supplementary information on internships (Durchführungsrundschreiben D5-31005/1#11 dated 4 May 2020, page 4: „Sehen Studiengänge ein Praktikum als Wahlpflichtmodul (Wahl zwischen einem Praktikum oder Seminar, Hausarbeit, Forschungsaufenthalt etc.) vor und entscheidet sich eine Studentin oder ein Student für ein Praktikum, gilt dieses als Pflichtpraktikum nach dieser Richtlinie.“)

Contact information: Sebastian Herdtweck; Email: econgrad@uni-mannheim.de; Office: L7, 3-5, room 405; Office hours: upon appointment

Research phase

E5999 Master's Thesis

Form and usability of the module: Compulsory module for M.Sc. Economics in study track 1: Economics and study track 2: Competition and Regulation Economics
Cycle of offer: Every semester
ECTS credits: 30
Teaching method (hours per week): Written final thesis, length to be agreed with the supervisor, typically 20 to 70 pages
Workload: 900 hours, optionally including a master's colloquium
Module language: English
Participation requirements: Completion of at least 45 ECTS credits in the specialization phase and successful completion of at least one seminar
Requirements for the Award of ECTS Credits, and Grading: The master's thesis is passed if it is graded "fair" (4.0) ("ausreichend") or better.

Goals and contents of the module: The students work independently on a topic from the fields of Economics, Statistics, Econometrics, and/or Economic History. The thesis should demonstrate the ability to identify and apply relevant theories and methods in academic research and to present the results in a linguistically and formally appropriate way. The topic, assignment, and scope of the master's thesis shall be limited by the supervisor so that its completion is possible within the given period of time.

Expected competences acquired after completion of the module: Upon completion of the module, students have demonstrated the ability to apply the knowledge and understanding gained from the degree program in a research context, in particular:

- largely independently develop a research idea and line of inquiry,
- identify and evaluate scientific literature relevant for the research topic,
- deepen and integrate specialized knowledge in the chosen field of research and independently close knowledge gaps,
- identify and apply scientific concepts and methods suitable for the respective line of inquiry,
- demonstrate profound skills in data collection, compilation, preparation, processing, and presentation,
- exchange with their supervisor about information, ideas, problems, and solutions and formulate and defend positions and solutions,
- recognize the specifics and limitations of their research,
- reflect on the results obtained scientifically, socially and, if necessary, ethically,
- present their results in a precise and consistent manner and in accordance with the formal requirements of a scientific work,
- organize their scientific work process independently and
- use English flexibly and effectively and produce clear, well-structured, detailed text on complex subjects.

Contact information: Sebastian Herdtweck; Email: econgrad@uni-mannheim.de; Office: L7, 3-5, room 405; Office hours: upon appointment

E8999 Master's Thesis (Dissertation Proposal)

Form and usability of the module: Compulsory module for M.Sc. Economics in study track 3: Economic Research
Cycle of offer: Every semester
ECTS credits: 20
Teaching method (hours per week): Written final thesis, length to be agreed with the supervisor, typically 10 to 35 pages
Workload: 600 hours
Module language: English
Participation requirements: Completion of at least 45 ECTS credits in the specialization phase
Requirements for the Award of ECTS Credits, and Grading: The master's thesis is passed if it is graded "fair" (4.0) ("ausreichend") or better.
Goals and contents of the module: The students work independently on a topic from the fields of Economics, Statistics, Econometrics, and/or Economic History. The thesis has two goals. Firstly, it should demonstrate the ability to identify and apply cutting-edge theories and methods to academic research and to present the results in a linguistically and formally appropriate way. Secondly, it should indicate the extent and nature of the student's dissertation research interests. The topic, assignment, and scope of the thesis shall be limited by the supervisor so that its completion is possible within the given period of time.

Expected competences acquired after completion of the module: Upon completion of the module, students have demonstrated the ability to apply the knowledge and understanding gained from the degree program in a research context, in particular:

- independently develop a research idea and line of inquiry,
- identify and evaluate scientific literature relevant for the research topic,
- deepen and integrate highly specialized knowledge in the chosen field of research and independently close knowledge gaps,
- identify, develop, and apply scientific concepts and methods suitable for the respective line of inquiry,
- demonstrate profound skills in data collection, compilation, preparation, processing, and presentation,
- exchange with their supervisor about information, ideas, problems, and solutions and formulate and defend positions and solutions,
- recognize and evaluate the specifics and limitations of their research with special consideration of most recent academic research,
- reflect on the results obtained scientifically, socially and, if necessary, ethically,
- present their results in a precise and consistent manner and in accordance with the formal requirements of a scientific work,
- organize their scientific work process independently and
- use English flexibly and effectively and produce clear, well-structured, detailed text on complex subjects.

Contact information: Sebastian Herdtweck; Email: econgrad@uni-mannheim.de; Office: L7, 3-5, room 405; Office hours: upon appointment

Additional course: E5051 Mannheim Competition Policy Forum

Form and usability of the module: Optional module for M.Sc. Economics
Responsible teacher of the module: Prof. Dr. Martin Peitz, guest lecturers
Cycle of offer: Every semester
Course language: English

Goals and content of the module: The last couple of years have seen a remarkable increase in the application of economic insights to competition problems. In order to further promote and refine this development, practitioners need to understand how microeconomics can help to shed light on particular aspects of competition problems. At the same time, academics benefit from a better understanding of real-world challenges and institutional details. The forum aims at providing a platform for the discussion of recent cases, general competition policy issues, and relevant academic research in the field. Renowned practitioners and academics will be invited to present their views on cases and general policy questions, followed by a discussion of the economic implications with the audience.