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Compulsory Area

| Module number | Module name | Responsible lecturer |
|---|---|---|
| WW-MA-PIE-ACW | Academic Writing | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | The students can compile a literature review according to the principles of scientific work. They manage to research relevant literature, work with literature databases, and cite correctly. | |
| Contents | Literature research and management, reading strategies, structuring text, argumentation, and writing process design. | |
| Teaching and learning methods | Workshop: 2 hours per week, self-study | |
| Prerequisites for participation | None | |
| PIE Usability | Compulsory module | |
| Examination | on Complex assessment, 100 hours | |
| Workload and Credit points 180 hours, 6 credit points | | |
| Frequency | Tequency Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-EEC | Empirical Economics | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | Students are familiar with applying modern empirical methods in economics and using them independently. | |
| Contents | Basics and methods of empirical economic research, the use of statistical software, and methods allowing causal interpretations based on regression models. | |
| Teaching and learning methods | Lecture: 2 hours per week, tutorial: 1.5 hours per week, self-study | |
| Prerequisites for participation | · | |
| PIE Usability | Compulsory module | |
| Examination | Complex assessment, 30 hours | |
| Workload and Credit points | pad and Credit 210 hours, 7 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-MEC | Microeconometrics | Prof. Dr. Bernhard Schipp bernhard.schipp@tu-dresden.de |
| Qualification objectives | Students are familiar with econometric analysis methods based on individual data. They are familiar with current microeconometric methods and can apply them to economic problems. | |
| Contents | Generalized linear models, Quantile-Regression, Maximum- Likelihood, IV and GMM estimators, Binomial Logit, Probit and Gompit- models, Multinomial models, regression with censored and truncated variables, Tobit-models, models for Duration data, Hazard-rate models and Panel-data analysis. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge of statistics and econometrics, in particular interval estimators and hypothesis testing as well as linear multiple regression models, at Bachelor's level. The following literature is suitable for preparation: Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Compulsory module | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-PPI | Principles of Public and International Economics | Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de |
| Qualification objectives | Students are familiar with current theories and formal analytical techniques in public economics and international trade. They are able to use these tools to address economic issues. | |
| Contents | Production and household theory, general equilibrium, game theory, imperfect competition, international trade, growth and computerbased modeling. | |
| Teaching and learning methods | Lectures: 4 hours per week, practical: 1 hour per week, tutorial: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge of basic economic concepts, in particular economic cycle, economic systems, and market forms, of methods of economic analysis, in particular equilibrium analysis, comparative statics, and of mathematics, in particular analysis, stochastics, and inferential statistics at Bachelor's level. The following literature is suitable for preparation: https://www.core-econ.org/the-economy/. | |
| PIE Usability | Compulsory module | |
| Examination | Complex assessment, 50 hours | |
| Workload and Credit points | 360 hours, 12 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|----------------------------------|--|--|
| WW-MA-PIE-RSD | Research Design | Dean of studies, Faculty of Business and Economics studiendekan.ww@mailbox.tu- dresden.de |
| Qualification objectives | Students have in-depth conceptual and application-oriented knowledge of general and task-specific research methods in economics. Being able to reflect on the interrelationships between the research question and methodology, they can independently set up an economic research project, handle it with proper scientific methods, and discuss the results. | |
| Contents | Economic theory, economic policy, public finance, monetary economics, international economics, or empirical economic research, pending on student's choice. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study The courses are to be selected from the Research Design course catalog to the extent indicated; this catalog will be announced at the beginning of the semester in the usual manner. | |
| Prerequisites for participation | Competencies to be acquired in the modules Principles of Public and International Economics, Microeconometrics, Empirical Economics, and Academic Writing. | |
| PIE Usability | Compulsory module | |
| Examination | Complex assessment, 40 hours | |
| Workload and Credit points | 300 hours, 10 credit points | |
| Frequency | Offered each semester | |
| Duration | One semester | |

Elective Area

Core Electives

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-ATE | Advanced Topics in Applied Econometrics | Prof. Dr. Kamila Cygan-Rehm kamila.cygan-rehm@tu-dresden.de |
| Qualification objectives | Students are introduced to modern econometric methods and know about solutions to typical data analysis challenges in an economic policy and scientific context. They can analyze specific questions, propose suitable analysis methods, deal critically with the central assumptions and assess the quality of empirical studies. They are familiar with statistical software and programming. | |
| Contents | Selected advanced methods of applied econometrics, particularly causal analysis (matching, shift-share instrumental variables, robust difference-in-differences, etc.), illustrative examples from current research on economic policy issues. | |
| Teaching and learning methods | Lecture: 2 hours per week, self-study Participation is limited to 25 persons, selected by lottery. | |
| Prerequisites for participation | Knowledge in Econometrics as conferred by the modules Empirical Economics and Microeconometrics, respectively. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | t 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|--|--|--|
| WW-MA-PIE-CPT | Cost and Prices in Transport | Dr. Stefan Tscharaktschiew stefan.tscharaktschiew@tu- dresden.de |
| Qualification objectives Students know the relationship between costs and prices in the transport sector and can assess the appropriateness of typical regulation of transport companies. They can identify existing (or future) inefficiencies in various areas of the transport sector and develop suitable solutions to eliminate them. Students know the welfare-optimized pricing of transport services (individual transp local public transport) and the pricing of transport infrastructure facilities. Based on this comprehensive knowledge, students can a socially responsible manner by recognizing, developing and communicating solutions to improve the overall social situation is transport sector. | | the appropriateness of typical es. They can identify existing (or areas of the transport sector and minate them. Students know the asport services (individual transport, ricing of transport infrastructure ensive knowledge, students can act in a recognizing, developing and |
| Contents | Analytical and quantitative methods for the analysis of a variety of transport economic and transport policy issues in the areas of individual road passenger transport, local public transport and air transport. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hour per week, self-study | |
| Prerequisites for participation | Competencies in empirical methods of transportation economics at Bachelor's level. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 20 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-CAT | Cost-Benefit Analysis in Transport | Dr. Stefan Tscharaktschiew stefan.tscharaktschiew@tu- dresden.de |
| Qualification objectives | Students can present the economic theory of welfare-based assessment of transportation projects, including cost and benefit components, and understand these using practical examples. They are enabled to systematically and theoretically analyze socio-politically relevant issues beyond the transport field, thus strengthening their ability to make decisions and act socially responsibly. | |
| Contents | Measurement and evaluation of costs and benefits as well as the associated problems and difficulties, their dependence on central framework conditions in the transport sector. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hour per week, self-study | |
| Prerequisites for participation | Competencies in empirical methods of transportation economics at Bachelor's level. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 120 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|---|
| WW-MA-PIE-DEV | Development Economics | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | Students are familiar with relevant models of modern growth theory and models of comparative development research to explain the causes of intra- and international income differences. Furthermore they can analyze and interpret the effects of population of population changes, fertility and migration. | |
| Contents | Traditional and alternative approaches to explaining for growth and development, inequality as well as population growth and migration as determinants of development. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-MIG | Economics of Migration | Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de |
| Qualification objectives | Students are familiar with the economic causes and consequences of the cross-border mobility of individuals and households. They can analyze and evaluate economic aspects of the migration debate. | |
| Contents | Individual economic migration incentives, global and nation-state effects of migration, migration and the welfare state, illegal immigration and questions of international policy coordination. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-EWS | Economics of the Welfare State | Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de |
| Qualification objectives | Students understand social security systems' workings and dependence on economic and demographic developments. They can competently discuss and evaluate reform proposals. | |
| Contents | Functioning and effectiveness of social security security systems, normative reasons for the the government's role in health insurance and old-age and income security, models in insurance economics. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-ERS | Empirical Research in Spatial and Environmental Economics | Prof. Dr. Georg Hirte georg.hirte@tu-dresden.de |
| Qualification objectives | Students have advanced knowledge of the methods of empirical regional and environmental economic research and are able to apply them. The students have key qualifications in the areas of rhetoric, presentation and presentation techniques as well as social skills and the ability to work in a team. Furthermore, students are strengthened in their personality. | |
| Contents | Contents of the module are the basics of regression analysis as well as the presentation of methods of spatial economics specifically used in regional research of spatial economics. Using software and concrete regional and specific regional data, individual questions are analyzed using using various methods with reference to current research. are examined. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hours per week, self-study | |
| Prerequisites for participation | Students acquire skills in the microeconomic fundamentals of spatial economics and the new economic geography Economic Geography and basic knowledge of statistics at Bachelor's level are required. For preparation, see for example: Heumann, C., Schomaker Shalab, M.: Introduction to Statistics and Data Analysis, Springer, 2016. | |
| PIE Usability | Core Elective | |
| Examination | Term paper, 75 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-EXC | Exchange Rates | Prof. Dr. Stefan Eichler stefan.eichler@tu-dresden.de |
| Qualification objectives | Students know the functioning and structure of foreign exchange markets. They know theoretical and empirical issues of interest rate and purchasing power parity and understand exchange rates' shortand long-term dynamics. They can explain the development of foreign exchange markets and their institutional design. | |
| Contents | Fundamentals of exchange rates and foreign exchange markets, in particular structure, price formation and liquidity in the foreign exchange market, purchasing power and interest parity, the Mundell-Fleming model, and the monetary model of exchange rate formation. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 60 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer | |
|---------------------------------|--|---|--|
| WW-MA-PIE-RFM | Financial Stability and Regulation of Financial Markets | Prof. Dr. Thilo Liebig yvonne.bludau@tu-dresden.de | |
| Qualification objectives | Students are familiar with the problem of systemic risk and its impact on financial market stability. They understand the essential tasks, institutions, and instruments of banking, insurance, securities, and macroprudential supervision at national and international levels. They can analyze the causes and effects of financial crises in a well-founded manner and discuss suitable regulatory mechanisms. | | |
| Contents | Fundamentals of financial stability in micro- and macroprudential dimensions, including various indicators for measuring financial stability and models for explaining financial crises and their effects. | | |
| Teaching and learning methods | Lecture: 2 hours per week, self-study | | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | | |
| PIE Usability | Core Elective | | |
| Examination | Written exam, 90 minutes | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | | |
| Frequency | Offered each winter semester | | |
| Duration | One semester | | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-IFM | International Financial Markets | Prof. Dr. Stefan Eichler stefan.eichler@tu-dresden.de |
| Qualification objectives | Students are familiar with the functioning and structure of international financial markets. They can analyze pricing on international financial markets, balance of payments problems and issues of monetary policy and derive practical conclusions. | |
| Contents | Fundamentals of international financial markets, including the various actors, the instruments for processing transactions, the pricing of shares and bonds, monetary and bonds, monetary policy and the macroeconomic implications of capital and current account imbalances. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer | |
|---------------------------------|---|--|--|
| WW-MA-PIE-IPE | International Public Economics | Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de | |
| Qualification objectives | Students can put fundamental concepts of public economics into a global context. In particular, they understand the strategic interaction between states and can analyze and evaluate policy measures in a globalized world. | | |
| Contents | Motivation and effects of national policy measures in an international context in the absence of a so-called world government, strategic interaction between states in the design of economic policy instruments, modeled by cooperative and non-cooperative game theory. | | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | | |
| PIE Usability | Core Elective | | |
| Examination | Written exam, 90 minutes | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | | |
| Frequency | Offered each winter semester | | |
| Duration | One semester | | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-GIS | Introduction to Geographic Information Systems | JunProf. Dr. Valentin Lindlacher valentin.lindlacher@tu-dresden.de |
| Qualification objectives | Students are familiar with Geographic Information Systems software and can apply it to problems in the field of economics. They are able to collect, process and analyze data using Geographic Information Systems based on a research or application question in economics. | |
| Contents | Properties and application areas of Geographic Information Systems and respective software. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Basic programming and IT skills at A-level. | |
| PIE Usability | Core Elective | |
| Examination | Complex assessment, 25 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-MDE | Microeconomic Perspectives on Development Economics | JunProf. Dr. Valentin Lindlacher valentin.lindlacher@tu-dresden.de |
| Qualification objectives | Students are familiar with relevant topics and models of modern development economics as well as models of comparative development research. They can assess the role of different factors, such as health, education, and private wealth, on the development of individuals and critically consider resulting policy measures. | |
| Contents | Different types of capital, in particular human, physical, financial, and social capital, coordination failures, models of asymmetric information, simple behavioral models, and specific policy measures. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-REC | Resource Economics | Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de |
| Qualification objectives | Students know how to determine pricing on markets for exhaustible and renewable resources using dynamic optimization tools. | |
| Contents | Economic interrelations on global resource rmarkets and economic principles determining the distribution of various types of scarce natural resources to competing uses. | |
| Teaching and learning methods | Lecture: 2 hours per week, tutorial: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TAX | Theory of Taxation | Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de |
| Qualification objectives | Students possess an in-depth understanding of the central concepts of tax theory. They can fathom and evaluate the effects of tax policy measures. | |
| Contents | Primary incentive and incidence effects of direct and indirect taxation, optimal design of tax systems, tax reforms. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Core Elective | |
| Examination | Written exam, 90 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-UEC | Urban Economics | Prof. Dr. Georg Hirte georg.hirte@tu-dresden.de |
| Qualification objectives | Students have a sound understanding of urban economics's main approaches and problems. They can numerically investigate and analyze urban economic issues within the framework of these approaches. Students possess key qualifications in rhetoric, presentation and presentation techniques, social skills, and teamwork. | |
| Contents | Theoretical foundations of urban economics, effects of policy measures in the urban environment, housing construction and land use regulation, traffic in urban areas, agglomeration effects, external effects caused by emissions, environmental effects, and urban economic issues in the context of developing countries. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hour per week, self-study | |
| Prerequisites for participation | Competencies in microeconomic fundamentals of spatial economics and the New Economic Geography. | |
| PIE Usability | Core Elective | |
| Examination | Project, 75 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

Presenting and Discussing (also eligible for Core Electives from summer 2025)

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|---|
| WW-MA-PIE-AIE | Advanced Topics in International Economics | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | Students are familiar with current theoretical and empirical research in international economics. They can apply theoretical models and empirical methods, discuss the consequences of methodological differences, and write academic papers in the field. | |
| Contents | Advanced questions of international economics, theoretical and empirical contributions and methods of scientific research and selected approaches to address specific research questions. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by enrolment order. | |
| Prerequisites for participation | Microeconomics and macroeconomics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Complex assessment, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered commonly each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TER | Current Topics in Empirical Economic Research | JunProf. Dr. Valentin Lindlacher valentin.lindlacher@tu-dresden.de |
| Qualification objectives | Students can analyze quantitative, research-oriented literature in economics, identify and evaluate relevant problems and research questions in empirical economic research, and place them in broader contexts of impact. | |
| Contents | Recent fundamental and application-oriented research questions of empirical economic research. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by enrollment order. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Complex assessment, 25 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-FSR | Current Topics in Financial Stability and Regulation of Financial Markets | Prof. Dr. Thilo Liebig yvonne.bludau@tu-dresden.de |
| Qualification objectives | Students are familiar with current theoretical discussions and applied problems in financial market stability and regulation of the financial markets. They can present, analyze, and discuss current issues using scientific methods. | |
| Contents | Research contributions on current applied problems of financial market stability and regulation of the financial markets. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TME | Current Topics in International Monetary Economics | Prof. Dr. Stefan Eichler stefan.eichler@tu-dresden.de |
| Qualification objectives | Students can answer current questions regarding financial crises, such as currency, banking and debt crises. They can analyze these issues from a theoretical, empirical and economic policy perspective. | |
| Contents | Current theoretical and empirical topics in international monetary economics. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by lottery. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TPE | Current Topics in Public Economics | Prof. Dr. Marcel Thum marcel.thum@tu-dresden.de |
| Qualification objectives | Students are familiar with applied problems in public economics. They can prepare and analyze current topics in that field using scientific methods. | |
| Contents | Current theoretical and empirical topics in public economics. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by lottery. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-ELE | Empirical Labor Economics | Dr. Andreas Leibing andreas.leibing@tu-dresden.de |
| Qualification objectives | Students can discuss and assess the usage and the suitability of various microeconometric methods in applied microeconomics, primarily labor economics. Based on current research papers, they learn about the current state of empirical research in empirical labor market economics. | |
| Contents | Labor supply and demand, emphasizing education, trade, and the role of firms, panel data analysis, instrumental variables, differences-in-differences estimators, and regression discontinuity analysis. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 30 persons, selected by enrolment order. | |
| Prerequisites for participation | Microeconomics and macroeconomics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|----------------------------------|---|---|
| WW-MA-PIE-ERT | Empirical Research Task | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | Students can address an economic, empirical research question comprehensively. They master statistical software, for example, R or Stata, formulate theory-based hypotheses, formulate empirical models, test them econometrically and communicate and critically scrutinize the results. | |
| Contents | Theory-based hypothesis formation, data processing methods, and the creation and estimation of econometric models. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 1 hour per week, project: 1 hour per week, self-study Participation in the project is limited to 20 persons, selected by enrollment order. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Complex assessment, 50 hours | |
| Workload and Credit points | 300 hours, 10 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-SUS | Sustainability Economics | Prof. Dr. Artem Korzhenevych artem.korzhenevych@tu-dresden.de |
| Qualification objectives | Students are familiar with current theoretical and application-oriented discussions in sustainability economics. They can prepare, present, analyze, and discuss these current topics using scientific methods. | |
| Contents | Current theoretical and empirical research contributions of fundamental and application-oriented nature to sustainability economics. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 16 persons, selected by lottery. | |
| Prerequisites for participation | Microeconomics and macroeconomics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TEP | Topics in Economic Policy | Prof. Dr. Alexander Kemnitz alexander.kemnitz@tu-dresden.de |
| Qualification objectives | Students can scrutinize a current economic policy problem scientifically. They can evaluate alternative solutions and proficiently communicate their expertise in English. | |
| Contents | Recent fundamental and application-oriented research questions of economic policy. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by lottery. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-TIE | Topics in International Economics | Prof. Dr. Christian Leßmann christian.lessmann@tu-dresden.de |
| Qualification objectives | Students can understand current theoretical and empirical contributions to international economics, present their most important contents and put them in a scientific context. | |
| Contents | Current theoretical and empirical topics in public economics. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 20 persons, selected by enrollment order. | |
| Prerequisites for participation | Microeconomics, macroeconomics, and econometrics at the Bachelor's level. Literature for preparation: Varian, H: Microeconomic Analysis. Norton, latest edition, Blanchard, O.: Macroeconomics. Pearson, latest edition, Gujarati, D. N.; Porter, D. C.: Basic Econometrics. McGraw-Hill, latest edition. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TPV | Topics in Policy Evaluation | Prof. Dr. Kamila Cygan-Rehm kamila.cygan-rehm@tu-dresden.de |
| Qualification objectives | Students are familiar with modern methods and applied issues in empirical policy evaluations. They can analyze the assessment of concrete political interventions, propose suitable research designs and deal critically with the central assumptions. They also learn to assess the quality of empirical studies about the study design used, the data basis and the policy recommendations derived. | |
| Contents | Common methods of policy evaluation (randomized studies, difference-in-differences, regression discontinuity, instrument variable estimation, matching, etc.) and current applications in labor economics, education, social and health policy. | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study Participation is limited to 15 persons, selected by enrollment order. | |
| Prerequisites for participation | Knowledge in Econometrics at Bachelor's level. | |
| PIE Usability | Presenting and Discussing or Core Elective | |
| Examination | Combined term paper, 40 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

Free Electives

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-IFR | Advanced International Financial Reporting | Prof. Dr. Michael Dobler wus@mailbox.tu-dresden.de |
| Qualification objectives | The students have in-depth specialist knowledge of international financial reporting. In particular, they are able to present and explain the International Financial Reporting Standards (IFRS) including specific development and application problems anad are able to apply this knowledge in a problem-oriented manner as preparers and users of financial reports in an international context. They are able to differentiate between the various normative concepts and are familiar with the scientific language English. | |
| Contents | Economic, institutional and legal foundations of international accounting, selected accounting problems of single entities, group and industry-specific accounting in an international context mainly according to IFRS. | |
| Teaching and learning methods | Lecture: 2 hours per week, self-study | |
| Prerequisites for participation | Basic knowledge of accounting and financial statements as well as IFRS accounting at the Bachelor's level. Literature for preparation: Weygandt, J.J.; Kimmel, P.D.; Kieso, D.E.: Financial Accounting: IFRS. John Wiley and Sons, latest edition. | |
| PIE Usability | Free Elective | |
| Examination | Written exam, 60 minutes in case of more than three registered students, and individual oral examinations of 20 minutes otherwise. | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-AMS | Applied Multivariate Statistics | Prof. Dr. Ostap Okhrin ostap.okhrin@tu-dresden.de |
| Qualification objectives | Students know the most important multivariate statistical methods, such as cluster analysis, regression analysis, analysis of variance, discriminant analysis and factor analysis, and can apply these to real data. They also have key qualifications in rhetoric, presentation and presentation techniques, social skills, and the ability to work in a team. | |
| Contents | Multivariate statistical methods in current research questions, basics of a free programming language for statistical calculations and graphics. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge of mathematics and statistics at the Bachelor's level. Literature for preparation Sydsaeter, K.; Hammond, P.: Essential Mathematics for Economic Analysis, Financial Times Prentice Hall, Harlow, most recent edition, Härdle, W., Okhrin, O., Okhrin, Y.: Basic Elements of Computational Statistics, Springer, 2017. | |
| PIE Usability | Free Elective | |
| Examination | Complex assessment, 75 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-DDS | Data-Driven Multivariate Statistics | Prof. Dr. Ostap Okhrin ostap.okhrin@tu-dresden.de |
| Qualification objectives | Students have an in-depth understanding of data analysis, particularly of unstructured data and dealing with data sets with missing data. They have strong skills in statistical software and, thus, media competence. | |
| Contents | Non-trivial regressions, in particular with correlated residuals, non-diagonal covariance matrices and kernel regressions, Bayesian regressions, classification methods, in particular logistic regressions, support vector machines, decision trees, random forests, boosting and bagging, missing data analysis, including missing at random and EM algorithms, as well as neural networks including deep learning. | |
| Teaching and learning methods | Lecture: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge of mathematics and statistics at the Bachelor's level. Literature for preparation Sydsaeter, K.; Hammond, P.: Essential Mathematics for Economic Analysis, Financial Times Prentice Hall, Harlow, most recent edition, Härdle, W., Okhrin, O., Okhrin, Y.: Basic Elements of Computational Statistics, Springer, 2017. | |
| PIE Usability | Free Elective | |
| Examination | Written exam, 120 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each summer semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-DBE | Digital Business Engineering | Prof. Dr. Martin Wiener martin.wiener@tu-dresden.de |
| Qualification objectives | Students are familiar with key issues and central approaches of (digital) business engineering and know the basic principles of methodical design of digital services and business models. They can also apply selected methods and technologies to analyze and develop appropriate solutions. | |
| Contents | Principles, methods, and techniques of (Digital) Business Engineering. | |
| Teaching and learning methods | Lecture: 2 hours per week, project: 1 hour per week, self-study Participation is limited to 20 persons, selected by enrollment order. | |
| Prerequisites for participation | Knowledge in Business Information Systems at Bachelor's level. | |
| PIE Usability | Free Elective | |
| Examination | Written exam, 90 minutes in case of more than three registered students, and individual oral examinations of 20 minutes otherwise. | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-DIH | Digital Health | Dr. Hannes Schlieter digital-health@tu-dresden.de |
| Qualification objectives | Students will be able to name the concepts of the design and management of of digital health interventions and to explain them in the context of of information and communication systems in the healthcare sector classify them. They are aware of the specifics of the healthcare industry, such as those given by normative provisions, communication standards or technological limitations. are given. Students will also be familiar with the basic concepts of the provision, processing and utilization of health-related data, processing and utilization of health-related information information and the associated technologies. They are able to able to design systems for the provision of digital health services and and integrated care concepts against the background of the overall organizational target corridor. describe, classify and evaluate systems for the provision of digital health and evaluate them. | |
| Contents | Contents of the module are basic concepts of the design and management of management of digital health interventions, such as digital health applications (DiGAs), normative provisions and standards and standards of medical informatics as well as central concepts for the design of operational information systems in integrated, patient-centered healthcare networks, such as patient pathways, electronic records and data security concepts, European strategies and digital health applications, for example digital therapeutics. | |
| Teaching and learning methods | Lecture: 2 hours per week, seminar: 1 hour per week, self-study Participation is limited to 20 persons, selection by enrollment order. | |
| Prerequisites for participation | Good knowledge of basic concepts, methods and contexts of and nterrelationships of economics at Bachelor's level are is a prerequisite. | |
| PIE Usability | Free Elective | |
| Examination | Non-public oral examination as a group examination of 15 minutes duration per student. | |
| Workload and Credit points | 150 hours, 5 credit points | |

| Frequency | Offered each winter semester |
|-----------|------------------------------|
| Duration | One semester |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|---|
| WW-MA-PIE-FTE | Financial Technology | Prof. Dr. Lars Hornuf arite.schrehardt@tu-dresden.de |
| Qualification objectives | Students know comprehensively about financial technology and its origins. They understand and can explain the basics of current financial technology developments. Students can evaluate the potential of financial technology, describe reasons for changes in financial services, and explain the interaction of technology and regulation regarding financial services. | |
| Contents | Cryptocurrencies and blockchain technology, mobile and digital payment systems, social trading and robo-advice, marketplace lending and crowdfunding. | |
| Teaching and learning methods | Lecture: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge in finance at Bachelor's level. | |
| PIE Usability | Free Elective | |
| Examination | Written exam, 60 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--------------------------------------|
| WW-MA-PIE-GLSB2 | German Language Skills Basics | Ute Meyer ute.meyer@tu-dresden.de |
| Qualification objectives | Students have a basic communicative competence in German at level A2 of the Common European Framework of Reference for Languages. They can grasp slowly and clearly articulated concrete information on everyday topics. They understand simple and short texts relating to regular and professional experience in a readable manner in terms of syntax, semantics, lexical and morphology, if the vocabulary is limited to frequently occurring and internationally understandable words. Moreover, they are able to follow short, simple conversations and straightforward presentations to a large extent, react appropriately if the topic is familiar, and describe their environment orally and in writing using simple phrases and sentences. | |
| Contents | Simple texts on everyday situations and specific topics, especially in a university environment, simple presentations and original documents, e.g., announcements, interviews, short audio and video sequences, relevant reading and listening strategies, simple grammatical structures and appropriate vocabulary and various forms of work with different media. | |
| Teaching and learning methods | Language course: 4 hours per week, self-study | |
| Prerequisites for participation | German language skills at level A1 of the Common European Framework of Reference for Languages. | |
| PIE Usability | Free Elective | |
| Examination | Language test, 105 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--------------------------------------|
| WW-MA-PIE-GLSB1 | German Language Skills Beginners | Ute Meyer ute.meyer@tu-dresden.de |
| Qualification objectives | Students have elementary language skills in German at level A1 of the Common European Framework of Reference for Languages. Students can slowly and clearly articulate concrete information on familiar everyday topics, understand simple and short texts in terms of syntax, semantics, lexis and morphology by reading with a focus on keywords, infer the meaning of unknown concrete terms from the context, use simple expressions to talk about their environment and respond appropriately to simple questions. | |
| Contents | Very simple texts and listening texts on everyday situations, especially in a university environment, elementary oral and written text production and interaction, relevant reading and listening strategies, simple grammatical structures and appropriate vocabulary and various forms of work, also with different media. | |
| Teaching and learning methods | Language course: 4 hours per week, self-study | |
| Prerequisites for participation | None | |
| PIE Usability | Free Elective | |
| Examination | Language test, 105 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|--|--|
| WW-MA-PIE-ISH | Internship Public and International Economics | Praktikumsbeauftragte bzw. Praktikumsbeauftragter der Fakultät Wirtschaftswissenschaften praktikantenamt.ww@mailbox.tu- dresden.de |
| Qualification objectives | Students have experience with complex practical problems and are informed about the feasibility of theoretical concepts. They can combine the theoretical knowledge they have acquired with professional practice. | |
| Contents | Economic policy issues with international reference in professional practice, specific requirements in the profession, particularly the various fields of work and internal activities at the internship site. | |
| Teaching and learning methods | Internship: 135 hours total, blocked in at least 4 weeks, self-study | |
| Prerequisites for participation | None | |
| PIE Usability | Free Elective | |
| Examination | Ungraded term paper, 10 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-PSE | Power System Economics | Prof. Dr. Dominik Möst ee2@mailbox.tu-dresden.de |
| Qualification objectives | Students can reproduce basic terms, definitions, concepts and methods of the electricity industry and name relevant parameters of the electricity industry. They can explain market relationships (e.g., merit order concept), present electricity trading and the associated problems and concepts and transfer them to expected issues, and answer quantitative problems in a group with the help of modelling. Students can mathematically set up and implement basic operations research optimization models. | |
| Contents | Basic theoretical concepts of competitively organized markets, pricing mechanisms and investment decisions on liberalized electricity markets, different markets within the electricity industry (e.g. intra-day electricity market, emissions certificate market), market power, regulatory framework conditions and the regulation of electricity grids. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hours per week, seminar: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge in Energy Economics at the Bachelor's level. | |
| PIE Usability | Free Elective | |
| Examination | Portfolio exam, 90 hours | |
| Workload and Credit points | 300 hours, 10 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-SSM | Strategic Sustainability Management | Dr. Remmer Sassen lehre_bu@mailbox.tu-dresden.de |
| Qualification objectives | Students have a basic understanding of strategic sustainability management. They understand the roles and responsibilities of sustainable and strategic leadership and can apply tools of strategic management in relation to sustainability problems. | |
| Contents | Determinants of strategic sustainability management, roles and responsibilities of sustainable and strategic management, instruments of strategic management, and sustainability problems. | |
| Teaching and learning methods | Lecture: 1 hour per week, tutorial: 1 hour per week, self-study | |
| Prerequisites for participation | Knowledge of accounting, annual financial statements, investment and financing as well as marketing and sustainable management at the Bachelor's level. Literature for preparation: Hahn, R: Sustainability Management. Block Services, latest edition. | |
| PIE Usability | Free Elective | |
| Examination | Combined term paper, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|---|
| WW-MA-PIE-TMA | Technology Management | Prof. Dr. Michael Schefczyk mandy.windisch@tu-dresden.de |
| Qualification objectives | Students have a sound knowledge of the fundamentals and possible applications in technology management. They can apply this knowledge independently and appropriately regarding practical issues. In addition, they can work in teams to analyze the complex problems in the fundamentals of technology management, intellectual property rights and market transactions, as well as the internationalization of technologies, to develop and implement solutions in a targeted manner. | |
| Contents | Fundamentals of technology management, property rights and market transactions, internationalization of technologies, forecasting and evaluation of technologies, technology procurement, use and licensing. | |
| Teaching and learning methods | Project: 2 hours per week, self-study Participation is limited to 50 persons. | |
| Prerequisites for participation | Knowledge in business administration at Bachelor's level. | |
| PIE Usability | Free Elective | |
| Examination | Complex assessment, 90 hours | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer |
|---------------------------------|---|--|
| WW-MA-PIE-TMS | Theoretical Multivariate Statistics | Prof. Dr. Ostap Okhrin ostap.okhrin@tu-dresden.de |
| Qualification objectives | Students can apply frequently used methods in practice and describe multivariate data. They know and understand matrix algebra, regression analysis, simple analysis of variance, general and specific multivariate distributions, copulae, theory of the multivariate normal distribution, estimation theory and hypothesis tests. Furthermore, students master mathematical and statistical principles and can understand other statistical methods, such as cluster analysis and principal component analysis. | |
| Contents | Mathematical and statistical basics, procedures of theoretical multivariate statistics and their analysis methods such as matrix algebra, regression analysis, simple variance analysis, general and specific multivariate distributions, copulae, theory of multivariate normal distribution, estimation theory and hypothesis tests as well as cluster analysis and principal component analysis. | |
| Teaching and learning methods | Lecture: 2 hours per week, practical: 2 hours per week, self-study | |
| Prerequisites for participation | Knowledge of mathematics and statistics at the Bachelor's level. Literature for preparation Sydsaeter, K.; Hammond, P.: Essential Mathematics for Economic Analysis, Financial Times Prentice Hall, Harlow, most recent edition, Härdle, W., Okhrin, O., Okhrin, Y.: Basic Elements of Computational Statistics, Springer, 2017. | |
| PIE Usability | Free Elective | |
| Examination | Written exam, 120 minutes | |
| Workload and Credit points | 150 hours, 5 credit points | |
| Frequency | Offered each winter semester | |
| Duration | One semester | |

| Module number | Module name | Responsible lecturer | |
|---------------------------------|--|---|--|
| WW-MA-PIE-TEF | Topics in Empirical Finance | Prof. Dr. Lars Hornuf arite.schrehardt@tu-dresden.de | |
| Qualification objectives | Students can develop research designs in finance and plan their implementation. They can critically evaluate the theoretical foundations, empirical results, and methods used in the literature. | | |
| Contents | Current research topics from finance and financial services. | | |
| Teaching and learning methods | Seminar: 2 hours per week, self-study | | |
| Prerequisites for participation | Knowledge in finance at Bachelor's level. | | |
| PIE Usability | Free Elective | | |
| Examination | Combined term paper, 40 hours | | |
| Workload and Credit points | 150 hours, 5 credit points | | |
| Frequency | Offered each summer semester | | |
| Duration | One semester | | |