Synopsis of the modules in the
Master's Degree Program in Economics (M.Sc.)

Mandatory Modules	**Study Points**
Advanced Microeconomics **or** Advanced Microeconomics 1 (PhD-level)	6 9
Introduction to Advanced Macroeconomics	6
Econometric Methods	9

Mandatory Elective Modules in Economics	**Study Points**
Applied Microeconomics: Competition Policy	6
Advanced Monetary Economics	6
Information Economics	6
European Integration	6
Empirical Labor Economics	6
Decision-Making under Uncertainty	6
Advanced International Trade: Theory and Empirics	6

Elective Modules in Economics	**Study Points**
Theory of Incentives	6
Advanced International Trade	6
Game Theory	6
Topics in Microeconomics	6-18
Labor Markets and Social Policy	6-12
Advanced Labor Economics	9
Current Issues in Macroeconomics	6-12
Topics in Macroeconomics	6
Advanced Macroeconomic Analysis I (PhD-level)	6
Advanced Macroeconomic Analysis II (PhD-level)	6
Current Research in Macroeconomics	6
Quantitative Macroeconomics and Numerical Methods	6
Economic History	6-18
Spatial Economics	6
Advanced Topics in Public Economics	6-15
Social Preferences	6
Theory of the State in Economics and in Law	6
Selected Topics in Competition Policy	6
Topics in Industrial Organization	6-12
Datengrundlagen der Wirtschaftspolitik (German)	6

Elective Modules in Quantitative Methodology	**Study Points**
Operations Research	6-18
Advanced Information Systems I	6-9
IT Security and Privacy	6
Applied Predictive Analytics	6
Business Process Management	6
E-Business and Online Marketing	6
Multivariate Statistical Analysis	6-9
Advanced Statistics	6-15
Statistics and Finance	6-15
Privatissimum Statistics	18
Time Series Analysis	6-9
Selected Topics in Econometrics	6
Econometric Projects	6
Analysis of Panel Data	6
Multiple Time Series Analysis	6
Microeconometrics	6
Financial Econometrics	6-9
Advanced Econometrics	6

Elective Modules in Business Administration	Study Points
General Management	6-30
Entrepreneurship and Innovation	6-18
Research-Seminar on Entrepreneurship and Innovation	6
Finance	6-27
Management	6-21
Marketing	6-21
Accounting Courses	6-18
Accounting Research Seminar	6
Master Tax Seminar	6-12
Financial Economics	6-18
Thesis Seminar Corporate Finance	6
Thesis Seminar Financial Economics	6
Strategic Management	6
Financial Contracting	6-12
Topics in the Theory of Markets and Organizations I/II	9-18
Topics in Energy and Network Economics	6-15
Real Estate Economics	6
Analysis of Competition	6

Elective Modules	Study Points
Variable Module for completing courses inside the economic department	3-12
Elective Module for courses outside of the economic department which students may select on their own initiative	3-24

Master Thesis

Students are awarded 18 study points for the Master thesis.

Competency Targets of the Mandatory and of the Mandatory Elective Modules in the Master's Program "Economics"

Students will acquire specific knowledge in the fields of microeconomics, macroeconomics and econometrics, as well as a broad understanding of the most recent developments in these economic disciplines.
Students will be able to pass this knowledge on; they will learn to structure it, to classify it, to arrange it, to visualize it, as well as to judge this information with a critical eye, to asses its value.
Students will be encouraged to make the effort necessary for a successful course of studies, as well as to create the preconditions, through their dedication and commitment, for a productive intellectual climate through all the various phases and stages of their course of study.

Students will learn to select and apply the appropriate scientific and academic methodologies as well as the specific tools and resources needed to solve a specific problem.
Students will improve their ability to accept criticism and to engage with this criticism in a fruitful manner. They will also improve their ability to contribute intelligently to discussions and to defend their arguments.
Students will also learn to assume various roles, such as participants in discussions, or experts or moderators.
Students will improve their abilities to work in teams and to sustain their own life-long learning.

At the end of their course of studies, students will be able to work independently and to assume responsibility when they undertake demanding and challenging tasks in business and in public administration.
Students will acquire the ability to undertake analytical analysis, within the framework of which they will apply sophisticated and complicated mathematic methodologies, to analyze complex economic problems in order to describe these problems clearly and lucidly. In short, the students are to be prepared to work in a research-oriented field or institution**.**
Students will be introduced to the most recent research and they will be able and qualified to apply the most recent methodological developments in economics; indeed, students will have reached a level such that they would be qualified to independent academic work or to do a doctorate in these fields.

Kompetenzziele des Pflicht- und Wahlpflichtbereiches im Masterstudiengang Volkswirtschaftslehre

Die Studierenden erwerben vertiefendes und anwendungsorientiertes Wissen auf den Fachgebieten der Mikroökonomie, Makroökonomie und der Ökonometrie sowie weiterführendes Wissen über die aktuellsten Entwicklungen in diesen Wissenschaftsdisziplinen.
Die Studierenden sind in der Lage, dieses Wissen wiederzugeben, zu strukturieren, konstruktiv und kritisch einzuordnen, zu gewichten und darzustellen.
Die Studierenden sind motiviert, den für einen positiven Studienerfolg notwendigen persönlichen Einsatz zu leisten und schaffen durch ihr Engagement die Voraussetzungen für ein konstruktives Studienklima in den verschiedenen Formen des Studiums.

Die Studierenden lernen, die für ein erfolgreiches Studium erforderlichen und geeigneten wissenschaftlichen Arbeitsmethoden und Hilfsmittel zu wählen und gezielt zur Lösungsfindung/Problemlösung einzusetzen.
Die Studierenden können fundierte Kritik akzeptieren und sich damit auseinander setzen. Gleichzeitig sind sie in der Lage, kritische Argumente in Diskussionen einzubringen und zu verteidigen. Sie lernen dabei verschiedene Rollen als Diskutant/in, Expert/in oder Moderator/in einzunehmen.
Die Studierenden erwerben die Fähigkeit zu Teamarbeit und lebenslangem Lernen.

Die Studierenden sind in der Lage, in der freien Wirtschaft und in der Verwaltung anspruchsvolle und verantwortliche Aufgaben selbständig zu übernehmen.
Die Studierenden erwerben die Fähigkeit zum Einstieg in analytische Tätigkeiten, im Rahmen derer anspruchsvolle mathematische Methoden genutzt werden, um komplexe wirtschaftliche Probleme übersichtlich darzustellen und die Studierenden auf ihre Arbeit in einem forschungsorientierten Bereich vorzubereiten.
Die Studierenden werden an den aktuellen Stand der Forschung herangeführt und dabei befähigt, wirtschaftswissenschaftliche Methoden auf einem Niveau anzuwenden, das sie für eine selbständige akademische Tätigkeit oder eine Promotion in diesen Gebieten qualifiziert.

Mandatory Module: Advanced Microeconomics **Responsible: Strausz, Weizsäcker**			**Study Points: 6**
Goals: The lecture plus tutorial listed below are a mandatory course on advanced microeconomics. The course emphasizes a sample of topics ranging from the theory of competitive markets, to industrial organization, welfare economics, information, and incentives. The lectures are supplemented by problem solving exercises and in class presentations by participants.			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Lecture Introduction to Advanced Micro-economic Analysis	2	3; Attendance (30 h) Reading the relevant literature (60 h)	General Equilibrium; Partial Equilibrium; Externalities; Imperfect Competition; Asymmetric Information; Behavioral Aspects
Tutorial Introduction to Advanced Micro-economic Analysis	2	3; Attendance (30 h) Solve exercises and preparations for presentations in class (30 h) Exam preparation (30 h)	Exercises and model application
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

This module is suitable for students who want to qualify for an admission to PhD. This module replaces the module "Advanced Microeconomics" according to paragraph 8 of the study regulations Master in Economics.

<table>
<tr><td colspan="3">Mandatory Module (replacement): Advanced Microeconomics 1 (PhD-level)

Responsible: Kamecke</td><td>Study Points: 9</td></tr>
<tr><td colspan="4">Goals:

This module teaches fundamental microeconomic concepts and tools on a very advanced level. Both lecture and exercises generate a considerable workload during the whole semester. Students are allowed to quit the course until the Christmas holidays if they find out that they overestimated their willingness and/or ability to understand demanding microeconomic analysis.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: none</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture and Exercises

“Advanced Microeconomics (PhD-level)“</td><td>2</td><td>4,5;
Attendance (30 h)
Preparation of lecture and exams (105 h)</td><td>Theory of consumer, producer, perfectly competitive equilibrium, monopoly, introduction to game theory</td></tr>
<tr><td>Tutorial

„Advanced Microeconomics (PhD-level)“</td><td>2</td><td>4,5;
Attendance (30 h)
Preparation of problem sets and exams (105 h)</td><td>Theory of consumer, producer, perfectly competitive equilibrium, monopoly, introduction to game theory</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">In order to encourage continuous preparation the total examination time of 120 minutes will be split into 3-5 short tests written in selected exercise sessions. These tests are based on the lecture as well as on the problem sets discussed in class. The results form the basis for the grades of the module. A late registration requirement guarantees that the students are free to skip the course after 50% of the tests.</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☐ Spring Semester</td></tr>
</table>

Mandatory Module: Introduction to Advanced Macroeconomics **Responsible: Burda/Weinke**	**Study Points: 6**

Goals:

Introduction to Advanced Macroeconomic Analysis (IAMA)
In this class, the students will learn the key tools for analysing a variety of economic models and their policy implications. In particular, the students will learn

- tools of intertemporal optimization: Euler equations, dynamic programming
- Econometric tools for analysing economic data and their practical application, using software such as Eviews.

These tools will be applied to a variety of specific models and data sets in order to introduce the students into advanced macroeconomic analysis.

Advanced Macroeconomic Analysis I (AMA I – Ph.D.-Level)
This is the first term of a two-term "first-year" sequence in macroeconomics, intended for master and doctoral students with a strong interest in academic research. It requires a solid background in mathematics.

Strong emphasis will be placed on acquiring the key tools for advanced macroeconomic analysis suitable for pursuing PhD-level research. The following topics will be taught:
A1: Tools of intertemporal optimization: Euler equations, dynamic programming and Lagrangian methods, stochastic difference equations, dynamic stochastic general equilibrium models; solution techniques;
B1: macroeconomic applications of welfare theorems, the Ramsey problem, consumption, investment, search, labour markets.
This will be complemented by learning mathematical and econometric tools, such as MATLAB and/or EViews.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture IAMA	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Key tools for macro- economic analysis and basic applications.
Tutorial IAMA	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises and literature review
Lecture AMA I – Ph.D.-Level	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on Advanced Economic Dynamics
Tutorial AMA I – Ph.D.-Level	2	3; Attendance (30 h) Preparation of exercises (30 h) Exam preparation (30 h)	Exercises
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

Mandatory Module: Econometric Methods **Responsible: Hautsch**			**Study Points: 9**
Goals: To gain a deep understanding of advanced econometric methods The lecture aims at providing students with methods to perform own econometric analysis. Topics like the generalized linear regression model, dummy variables, the consideration of stochastic regressors, nonlinear regression models, SUR models and the specification and estimation (2SLS, 3SLS) of simultaneous equation models are covered. Furthermore, asymptotic and test theory is treated. In the turorials theoretical exercise questions and empirical applications of the advanced methods will be discussed.			
Recommened prerequisites to participate in the module: Module „Introduction to Econometrics“ (or equivalent)			
Course	Periods/ Week	SP; work load	Topics
Lecture	4	6; Visiting the lecture (60 h), Preparation for courses (60 h), Exam preparations (60 h)	Generalized linear model, stochastic regressors, nonlinear regression models, Specification, and simultaneous equation models
Tutorials	2	3; Attendance of sessions (30 h), Preparation for and review of tutorial sessions (60 h)	Theoretical exercise questions, empirical examples.
Module examinations		Written exam (180 minutes)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

Mandatory Elective Module Economics: Applied Microeconomics: Competition Policy **Responsible: Kamecke**	**Study Points: 6**

Goals:

The participants in this module understand the structure of elementary models in industrial organization and learn how to discuss issues in competition policy with the help of such models. For this purpose the model structure, results and policy implications are presented in the lecture. The exercises concentrate on a thorough discussion of the theoretical models used in the lecture and on their modification for a policy analysis. The students learn to develop simple models to address selected questions of competition policy.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture Competition Policy	2	3; Attendance (30 h) Preparation of lecture (40 h) preparation of exam (20 h)	Neoclassical welfare theorems; normative results of static (SCP, dynamic price competition, vertical restraints) and dynamic (patent races, endogenous growth theory) industrial organization theory.
Tutorial	2	3; Attendance (30 h) Preparation of exercises (60 h)	Practice of the theoretic analysis of policy question with the help of simple examples.
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

Mandatory Elective Module Economics: Advanced Monetary Economics **Responsible: Weinke**			**Study Points: 6**
Goals: How to use dynamic stochastic general equilibrium models for positive and normative analysis.			
Prerequisites to participate in the module: IAMA			
Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	The lecture develops a stochastic dynamic general equilibrium model featuring mono-polistic competition and sticky prices. Compared with the exposition in the course “Monetary Economics” more emphasis will be put on the technical aspects that one needs to understand in order to use this framework. We will also analyze some recent extensions of the baseline model that is at center stage in the course “Monetary Economics”.
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	The tutorial helps understand the material of the lecture in different ways. First, some additional derivations of theoretical and empirical results are provided. Second, applications of the theory are illustrated. Third, some aspects of the practical implementation of monetary policy are discussed.
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

<table>
<tr><td colspan="3">Mandatory Elective Module Economics: Information Economics
Responsible: Strausz</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

The goal of this course is to familiarize students with the analysis of asymmetric information and with its economic effects. The course studies the role of asymmetric information in specific economic markets, such as labour and insurance markets. It shows how and why outcomes in these markets crucially depend on the underlying information structure between market participants. The course discusses the appropriate equilibrium concepts (rational equilibrium, perfect Bayesian equilibrium), the different type of market outcome (separation, pooling, hybrid), the Pareto inefficiencies that are due to asymmetric information, and the analytical complications of multiple equilibria.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module:
Basic knowledge in microeconimics “Introduction to Advanced Microeconomic Analysis” and “Game Theory”</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture/ Tutorial</td><td>4</td><td>6;
Participate in class (60 h)
Home study/work (90 h)
Exam preparation (30 h)</td><td>Incomplete quality information (Lemons problem), Labour markets with asymmetric information (signalling, efficiency wages, equilibrium unemployment), Insurance markets with asymmetric information (screening), Credit markets with asymmetric information (rationing), Principal-Agent Problems</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Written exam (90 min)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☐ Spring Semester</td></tr>
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Mandatory Elective Module Economics: European Integration **Responsible: Burda**			**Study Points: 6**
Goals: To gain a deeper understanding of the real and monetary aspects of European economic integration by applying theoretical concepts and using basic tools of empirical analysis. The lecture course designed to introduce the student to both theoretical and applied issues involving the economic integration process in Europe. The convergence of standards of living, mobility of factors, the role of trade and technology, as well as the regulation of individual national economies will be discussed. In addition the growing constraints on European economic policy via monetary and fiscal integration of Europe will be examined.			
Prerequisites to participate in the module: basic knowledge in Microeconomics and Macroeconomics			
Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on European Integration
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Tutorials on European Integration
Module examinations		Lecture I: Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Mandatory Elective Module Economics: Empirical Labor Economics **Responsible: Spitz-Oener**			**Study Points: 6**
Goals: This course provides an overview on the economic analysis of labor markets. The emphasis is on applied microeconomics and empirical analysis. Topics to be covered include: labor supply and demand, human capital, education and training, changes in the wages structure and inequality, biased technological change and returns to skills, organizational change and skill demand, the closing gender gap. The introduction of topics will be on textbook level, but the focus will be on the discussion of empirical implementation strategies used in recent publications.			
Prerequisites to participate in the module: Acquaintance of intermediate microeconomics, labor economics, and econometrics is highly recommended.			
Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial	4	6; Participate in class (60 h) Home study/work (90 h) Exam preparation (30 h)	labor supply and demand, human capital, education and training, changes in the wages structure and inequality, biased technological change and returns to skills, organizational change and skill demand, the closing gender gap
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

Mandatory Elective Module Economics: Decision-Making under Uncertainty **Responsible: Weizsäcker**	**Study Points: 6**

Goals:

The goal of this course is to familiarize students with the most important models of economic decision-making under uncertainty. The course's initial part introduces state spaces and other general and basic concepts. The first part also describes how the most widely-used model, expected utility theory, relates to other models. The second part covers expected utility theory in depth, both under the assumption of known probabilities and the assumption of unknown probabilities. The third part generalizes to models of probability weighting (including Prospect Theory) and ambiguity preferences. Examples and exercises are covered in the lecture as well as in the tutorial.

Prerequisites to participate in the module:
Basic knowledge in microeconomics as covered in "Introduction to Advanced Microeconomic Analysis"

Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial	4	6; Participate in class (60 h) Home study/work (90 h) Exam preparation (30 h)	Uncertainty and preferences, risk versus uncertainty, Expected utility under risk and under uncertainty, Risk preferences under expected utility, Probability weighting under risk, Prospect Theory, Ambiguity preferences
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

<table>
<tr><td colspan="3">Mandatory Elective Module Economics: Advanced International Trade: Theory and Empirics

Responsible: Wolf</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

The course deals with patterns of international trade, both in theory and empirics. Starting with the classic Ricardian and Heckscher-Ohlin trade models, students will be introduced to modern models, such as Eaton and Kortum (2002), Melitz (2003) and Melitz & Ottaviano (2008).</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Basics in both micro and macro economics</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture/ Tutorial

Advanced International Trade: Theory and Empirics</td><td>2</td><td>6;
Attendance (60 h)
Preparation (60 h)
Exam preparation (60 h)</td><td>Ricardian trade model, Heckscher-Ohlin trade model, Eaton-Kortum trade model, Melitz-Ottaviano trade model, economic policy, economic history, economic geography</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Lecture/Tutorial: Written exam (90 min, 70%), Presentation (30%)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☐ Fall Semester or ☒ Spring Semester</td></tr>
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Competency Targets of the Elective Modules in the Master's Program "Economics"

Students acquire supplementary and additional basic information and special knowledge from related academic disciplines, which can be used within the field of economics (contextual knowledge).

Students develop a good command of interdisciplinary problem-solving methods.

Students learn to develop and use internal and external resources.

Students will be able to expand and to deepen their individual profiles.

Students learn to be flexible, to be able to respond to quick or sudden changes and differing and varied situations, and indeed, to help shape such developments.

Students learn to perceive their own expectations, values and norms as well as the expectations, values and norms of others, to differentiate among them, and to treat others with respect and tolerance. They will be able to reflect on their own experiences and to create a link between such experiences and their current work as well as to question their own actions.

Students learn strategies to manage their time, to acquire knowledge, to reach decisions, to find solutions to problems and to manage projects.

Students are able to work in teams and to contribute independently and competently to solving problems.

Kompetenzziele des Wahlbereiches im Masterstudiengang Volkswirtschaftslehre

Die Studierenden erwerben ergänzendes und weiterführendes Grundwissen und Spezialwissen aus verwandten Wissenschaftsdisziplinen, das in Beziehung zum Fachgebiet gesetzt werden kann („Kontextwissen").

Die Studierenden lernen, fächerübergreifende Problemlösungsmethoden zu beherrschen.

Die Studierenden sind der Lage, interne und externe Ressourcen zu erschließen.

Die Studierenden sind in der Lage, erworbene individuelle Profile zu erweitern und zu vertiefen.

Die Studierenden sind so flexibel, sich auf schnelle oder plötzliche Veränderungen und unterschiedliche Situationen einstellen zu können und somit in der Lage, diese aktiv mitzugestalten.

Die Studierenden lernen, eigene und fremde Erwartungen, Normen und Werte wahrzunehmen, zu differenzieren und damit umzugehen (Toleranz). Sie können die eigenen Lebenserfahrungen reflektieren und Verbindungen zur aktuellen Arbeit herstellen sowie das eigene Handeln hinterfragen.

Die Studierenden verfügen über effiziente Arbeitstechniken wie Zeitmanagement, Wissenserwerb, Entscheidungsfindung, Problemlösungstechniken und Projektmanagement.

Die Studierenden besitzen die Fähigkeit, in einem Team zu arbeiten und einen eigenständigen und kompetenten Beitrag zur Projektlösung zu leisten.

Elective Module Economics: Theory of Incentives **Responsible: Strausz**			**Study Points: 6**
Goals: The course reviews the main topics and models of the incentive theory. It focuses on the principal-agent paradigm where the principal delegates an action to a single agent through the take-it-or-leave-it offer of a contract. Major topics are represented by the problem of adverse selection, which occurs when the agent learns some piece of information relevant to the contractual relationship, and the problem of moral hazard, which appears as soon as the agent's actions are not observable. First, the trade-offs that emerge in these contexts are characterized: the rent extraction-efficiency trade-off under adverse selection and the trade-offs between the extraction of limited liability rent and efficiency and also between insurance and efficiency under moral hazard. Then, extensions of the basic framework to more complex environments are discussed. Mixed models with adverse selection, moral hazard and nonverifiability of the state of the world are also treated. Principal-agent models with adverse selection and moral hazard are finally considered in a dynamic context.			
Prerequisites to participate in the module: Basics in microeconomics "Introduction to Advanced Microeconomic Analysis" and "Game Theory"			
Course	Periods/ Week	SP; work load	Topics
Lecture + Tutorial Theory of Incentives	4	3; Attendance (60 h) Preparation (90 h) Exam preparation (30 h)	The Problem of Adverse Selection, Revelation Principle, Solution Techniques, Ex-Post vs. Ex-Ante Contracting, Limited Liability, The Problem of Moral Hazard, First-Order-Approach
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

<table>
<tr><td colspan="3">Elective Module Economics: Advanced International Trade
Responsible: Strausz</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

This course presents international trade theory at the advanced level. The course focuses on general equilibrium approaches to modeling trading relations. Topics covered include models of trade with constant returns and perfect competition, models of trade with variable returns and imperfect competition, positive and normative analyses of commercial policy, the political economy of trade policy, and topics related to offshoring/outsourcing.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Basics in Microeconomics (general equilibrium, imperfect competition)</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture/ Tutorial

Advanced International Trade</td><td>2</td><td>6;
Attendance (60 h)
Preparation (90 h)
Exam preparation (30 h)</td><td>comparative advantage, outsourcing, patterns of international trade, instruments of trade policy, monopolistic competition, strategic trade policy, economic geography, political economy</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Lecture/Tutorial: Written exam (90 min)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester or ☐ Spring Semester</td></tr>
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Elective Module Economics: Game Theory **Responsible: Strausz**			**Study Points: 6**
Goals: The purpose of this course is to familiarize students with game-theoretic methods that are used in various fields of economics.			
Prerequisites to participate in the module: Module „Advanced Microeconomics".			
Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Normal-form games, extensive-form games, games with incomplete information, standard solution concepts and refinements
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

Elective Module Economics: Topics in Microeconomics **Responsible: Strausz, Weizsäcker**			**Study Points: 6-18**
Goals: This module gathers several seminars/lectures on selected topics in microeconomics. Lectures and seminars may be in English or German. Based on the basic knowledge acquired in “Advanced Microeconomics”, this module shall enable students to study applications of microeconomic techniques and to analyze microeconomic problems in different fields of economics.			
Prerequisites to participate in the module: Module „Advanced Microecomomics“			
Course	Periods/ Week	SP; work load	Topics
Lecture Advanced Microeconomic Analysis I (PhD)	4	6; Attendance (60 h) reading (60 h) homework assignments and exam preparation (60 h)	Preferences, decision under certainty, theory of household and firm, general equilibrium.
Lecture Advanced Microeconomic Analysis II (PhD)	4	6; Attendance (60 h) reading (60 h) homework assignments and exam preparation (60 h)	Decision under uncertainty, market power, strategic interaction, game theory, asymmetric information, incentives, mechanism design, contract theory.
Lecture Regulation in Product Markets	2	3; Attendance (30 h) reading (30 h) homework assignments and exam preparation (30 h)	Antitrust and Merger Regulation; Price and Monopoly Regulation; Environmental Regulation; Regulation in Vertical Markets
Seminar Behavioral Economics	2	6; Attendance (60 h) reading literature (60 h) writing and presenting a seminar paper (60 h)	Decision-making under risk and uncertainty, anticipatory utility and other variants of utility, biased expectations, experimental methods, empirical evidence
Seminar Microfinance	2	6; Attendance (30 h) Group assignment (120 h) Presentation (30 h)	Microcredit, Microfinance, Microinsurance, Financial Repression, Credit Rationing, Transaction Costs
Seminar The Theory of Regulation under Asymmetric Information	2	6; Attendance (30 h) reading literature, giving a presentation (75 h) writing a seminar paper (75 h)	Regulation, asymmetric information, monopoly, principal-agent problem.

Seminar Empirical Methods in Applied Micro-economics	2	6; Discussions (30 h) Presentation preparation (30 h) Seminar paper preparation (120 h)	Microeconometrics; Applied Microeconomics; Public Policy
Seminar Theory of Market Structure	2	6; Attendance (30 h) Reading literature (60 h) Writing and presenting a seminar paper (90 h)	Institutions; Rational Expectations; Equilibrium; Financial Market
Seminar Market Design	2	6; Attendance (30 h) Reading literature (25 h) Writing a seminar paper (90 h) Preparing a presentation (35 h)	Theory: Introduction to market design and mechanism design, auctions, two-sided matching; Applications: cap-and-trade, electricity markets, school choice, position auctions, kidney exchange
Seminar Advanced Experimenta l Economics	3	6; Attendance (45 h) Reading literature (60 h) Writing a seminar paper and preparing a presentation (75 h)	Economic experiments, social preferences, non-equilibrium beliefs, quantal response equilibrium, econometric estimation
Seminar The Economics of Identity and Ethnic Conflict	2	6; Attendance (30 h) Reading literature (60 h) Writing a seminar paper and preparing a presentation (90 h)	Theory: club goods, economics of identity, economics of fractionalization Empirics: measuring conflict and fractionalization, experimental evidence
Module examinations		Advanced Microeconomic Analysis I and Advanced Microeconomic Analysis II: Written exam (90 min) after each course Regulation in Product Markets: written exam (90 min) Decision-Making under Uncertainty: written exam (90 min) Seminar Microfinance: Group assignment paper (70 %), presentation (30 %) Seminar Behavioral Economics: Seminar paper (70 %), presentation (30 %) Seminar The Theory of Regulation under Asymmetric Information: Seminar paper, presentation Seminar Empirical Methods in Applied Microeconomics: Seminar paper (80 %), presentation (20 %) Seminar Theory of Market Structure: Seminar paper (80 %), presentation (20 %) Seminar Market Design: Seminar paper (70 %), presentation (30 %) Seminar Advanced Experimental Economics: Seminar paper (80 %), presentation (20 %) Seminar The Economics of Identity and Ethnic Conflict: Seminar paper (70 %), presentation (30 %)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester	

Elective Module Economics: Labour Markets and Social Policy **Responsible: Burda / Spitz-Oener**	**Study Points: 6-12**

Goals:

Lecture + Tutorial I
The theoretical functioning of labour markets and labour market interventions are of key concern to practical policymaking. A number of relevant issues will be examined in this class. Examples include:
What determines the demand for and supply of different types of labour in modern economies?
How is labour compensated, and which factors determine the level of wages?
How does search and matching in the labour market work, and how can this matching process be influenced by policy e.g. regarding unemployment benefits or certain labour market regulation?

Lecture + Tutorial II
This lecture examines social policies as well as their economic foundations. Examples of topics covered are:
What are the effects of various intergenerational schemes for financing pension systems? Which ones work best and why?
What are the consequences of welfare reform? How can one analyse the macroeconomic consequences of reforms of the health sector, the education sector or other sectors which are largely dominated by public policy?
How can a society provide insurance against labour market risk? Is there an optimal unemployment insurance scheme?

Lecture + Tutorial III
The empirical analysis of labour markets is applied to labour supply and demand, human capital, education and training, changes in the wages structure and inequality, biased technological change and returns to skills, organizational change and skill demand, the closing gender gap. The introduction of topics will be on textbook level, but the main focus will be on the discussion of empirical implementation strategies used in recent publications. Exercises will be held in the computer lab and students will learn to work with Stata.

Lecture IV
Economics is an empirical science. The validity of the competing economic theories and therefore the legitimacy of the application of economic theories toeconomic policy is an empirical question. This course has two goals. First, it covers basic methods and techniques of the empirical analysis in economics. Second, the students become familiar with the typical line of argumentation in the empirical analysis of current problems in economics. As an integral part of the course applications are implemented in the PC-Pool based on the software package Stata.

Seminar:
The seminar aims at preparing students to present and discuss critically empirical research in all areas of labour economics. It may likewise be viewed as a preparation for an empirical diploma, master or doctoral thesis. Students are free to choose a topic themselves or to work on a topic proposed by the instructor. The topic is expected to be in the field labour economics. Participants are expected to discuss the relevant literature, data sources, methodology, to acquaint themselves with the necessary institutional details and to present and discuss their work.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture I	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on Labour Markets and Social Policy
Tutorial I	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises, Discussions, Literature Review

Lecture II	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on Labour Markets and Social Policy
Tutorial II	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises, Discussions, Literature Review
Lecture III	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on Labour Markets and Social Policy
Tutorial III	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises, Discussions, Literature Review
Lecture IV	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures and integrated tutorium using Stata
Seminar	2	6; Discussions (45h) Presentation (45h) Seminar paper (90 h)	Discussions, Presentation, Writing of seminar paper
Module examinations		Lecture/Tutorial: Written exam (90 min) each course Seminar: Seminar paper	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester or	

Elective Module Economics: Advanced Labour Economics **Responsible: Burda**	**Study Points: 9**

Goals:

To gain a deeper understanding of the functioning of labour markets at the level of a doctoral student aspring to do research in the area
The lecture aims at broadening the understanding of labour supply by households and labour demand decision making by firms, and the influence of institutions on the labour market outcome. To this end, several fields of labour economics (human capital accumulation, wage determination, imperfect information) will be covered. In this module the student has the option of pursuing a more formal-theoretic approach to the subject. Like the module “Labour Economics” this module requires attendance of the basic lecture course “Labour Economics”.

Marshallian analysis of the labour market and comparative statics; basic Hicksian concepts
Labour demand and its determinants: Static and dynamic aspects
Labour supply and its determinants: Static and dynamic aspects
Human capital: Theory and empirical aspects
Models of wages and wage determination
Imperfect information in labour markets: Search, implicit contracts, efficiency wages
Equilibrium models of unemployment and search
The economics of labour market institutions

The tutorials will revisit these models, cover their formal analysis in detail, and apply them to exercises. The advanced mathematical tutorial will help students to work with formal techniques necessary for success in a research career.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Theoretical Models of Labour Economics and their Empirical Application
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Assignments (30 h)	Review of Models and Exercises
Advanced Mathematic Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	More formal treatment of models considered in lectures
Module examinations		Written Exam for basic lecture (60 min); Written Exam for mathematical tutorial (60 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

Elective Module Economics: Current Issues in Macroeconomics **Responsible: Burda / Weinke**			**Study Points: 6-12**
Goals: This class provides an in-depth examination of current issues in macroeconomics.			
Prerequisites to participate in the module: Module “Introduction to Advanced Macroeconomics” and Module “Advanced Monetary Economics” or “Labour Markets and Social Policy”			
Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Lectures on current issues in macroeconomics
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Exercises, Literature Review, Discussions
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

<table>
<tr><td colspan="3">Elective Module Economics: Topics in Macroeconomics
Responsible: Burda / Weinke</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

This seminar aims to carry out projects on selected topics in macroeconomics.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Module “Introduction to Advanced Macroeconomics” or “Monetary and Fiscal Policy” or “Labour Markets and Social Policy”</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Seminar</td><td>2</td><td>6;
Attendance (30 h)
Preparation for seminar and presentation (60 h)
Seminar Project (90 h)</td><td>Topics in macroeconomics</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Seminar Paper</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☒ Spring Semester
Semester or</td></tr>
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Elective Module Economics: Advanced Macroeconomic Analysis I (Ph.D.-Level) **Responsible: Burda / Weinke**	**Study Points: 6**

Goals:

In this current research on dynamic economic models will be examined in detail to prepare students for doing research in macroeconomics and related fields. Depending on the approach examined, particular emphasis may be given to the theoretical or to the empirical aspects of the analysis. Examples are

- Modern variants of the neoclassical growth model
- Modern dynamic business cycle theories.
- dynamic models of matching on labor markets
- models of intergenerational trade (overlapping generations models)
- models of intertemporal choice
- facts and models of long run growth
- dynamic models of international trade
- econometric dynamic multivariate models regarding the interaction of major economic time series. The empirics of shocks driving the economy.
- econometric panel approaches regarding the functioning and the dynamics of labor markets
- numerical solution methods for linearized and non-linearized models.
- Models pertaining to asset markets and to the role of money.
- models of asset markets resulting from the intertemporal portfolio allocation problem
- models of money.
- The econometric evidence regarding the role of money and the role of monetary policy shocks.
- Models of the interplay between monetary and fiscal policy.
- Models of international exchange on goods and asset markets.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h), Preparation (30 h), Exam preparation (30 h)	Lectures on Advanced Economic Dynamics
Tutorial	2	3; Attendance (30 h), Preparation of exercises (30 h), Exam preparation (30 h)	Exercises
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module Economics: Advanced Macroeconomic Analysis II (Ph.D.-Level) **Responsible: Burda / Weinke**	**Study Points: 6**

Goals:

This is the second term of a two-term "first-year" sequence in macroeconomics, intended for master and doctoral students with a strong interest in academic research. It requires a solid background in mathematics. Strong emphasis will be placed on acquiring the key tools for advanced macroeconomic analysis suitable for pursuing PhD-level research. The following topics will be taught:
A2: Asset pricing; advanced preference theory such as Epstein-Zin; dynamic contracts and applications; growth models, OLG models;
B2: Money and models of price and wage rigidities; economic policy and time consistency, applied VAR analysis.
This will be complemented by deepening the knowledge regarding mathematical and econometric tools, such as MATLAB and/or EViews.

Prerequisites to participate in the module: “Advanced Macroeconomic Analysis (Ph.D.)”. Also may be accepted if approved by the lecturer: “Introduction to Advanced Macroeconomic Analysis”

Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Key tools for macroeconomic analysis, advanced study of topics A2 and B2.
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	In-depth review, literature review and exercises
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

Elective Module Economics: Current Research in Macroeconomics **Responsible: Burda / Weinke**			**Study Points: 6**
Goals: This seminar aims to teach students to carry out projects at the current research frontier in macroeconomics.			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Seminar	2	6; Attendance (60 h) Preparation (60 h) Seminar Research Project (60 h)	Carrying out research projects in macroeconomics
Module examinations		Seminar: Research Paper	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module Economics: Quantitative Macroeconomics and Numerical Methods (Ph.D. Level) **Veantwortlich: Ebell**	**Study Points: 6**

Goals:

To learn a variety of solution methods for non-linear dynamic stochastic general equilibrium (DSGE) models, which are prominent in modern quantitative macroeconomics.
These solution methods may include, but are not necessarily limited to:
Log linearization
Higher order approximations
Policy function iteration
Value function iteration
In addition, students will learn calibration methods, that is, methods for choosing parameters for the DSGE models. In the practical part of the course (Übung), students will implement the solution methods taught in the course using Matlab. A brief introduction to Matlab will also be offered.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture	2	3; Attendance (30 h) Preparation (30 h) Homework (30 h)	Solution methods for DSGE models in theory
Tutorial	2	3; Attendance (30 h) Preparation (30 h) Homework (30 h)	Implementing solution methods for DSGE models in practice

Module examinations	3 homeworks (take-home exams)
Duration of the module	☒ 1 Semester ☐ 2 Semesters
Module can be started in	☒ Fall Semester ☒ Spring Semester Semester or

Elective Module Economics: Economic History **Responsible: Wolf**			**Study Points: 6-18**
Goals: Economic history stresses the long-term perspective and the role of historical case studies for economic decision making. It offers new insights and allows the students to apply their knowledge of economic theory and empirical methods. The aim of the lectures is to give an overview over the economic history of the world, in particular of Europe and Germany. The seminars introduce the students to modern research in economic history. The discussion of recent publications enables students to devise own research questions and research designs for their master's thesis.			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial European Economic History I	4	6; Attendance (60 h) Preparation (60 h) Exam preparation (60 h)	European Economic History 1800 - 1914
Lecture/ Tutorial European Economic History II	4	6; Attendance (60 h) Preparation (60 h) Exam preparation (60 h)	European Economic History 1914 – up to now
Seminar	2	6; Attendance (30 h) Preparation (60 h) Presentation (30 h) Seminar paper (60 h)	The seminars cover key topics in European economic history, ranging from methods of modern research in economic history, over economic crises to long-run economic developments, and specific historical case-studies.
Seminar Data Management and Empirical Economics	2	6; Attendance (30 h) Preparation (60 h) Presentation (30 h) Seminar Paper (60 h)	This research seminar deals with information systems used in Economic history, such as statistical software, database management systems and geographical information systems.
Module examinations		Lectures: Written exam (90 min) Seminars: Seminar paper (70%), presentation (30%) of final mark	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Economics: Spatial Economics **Responsible: Wolf**			**Study Points: 6**
Goals: The students will be introduced to the vast literature on Spatial Economics. The course starts with ideas developed by Von Thünen and Krugman leading to modern theories on the interaction between economics and geography. We will introduce models and empirics for topics such as international specialization, the clustering of industries, the spatial pattern of economic growth, and the relationship between core and periphery within economic regions.			
Prerequisites to participate in the module: Basics in both micro and macro economics			
Course	Periods/ Week	SP; work load	Topics
Seminar Spatial Economics	2	6; Attendance (60 h) Presentation (30 h) Seminar paper (90 h)	Core and Periphery, Increasing returns to scale, Transport costs, Law of one price, Clustering, Specialization
Module examinations		Seminar: Seminar paper (70%), Presentation (30%)	
Duration of the module		☒ 1 Semester	☐ 2 Semesters
Module can be started in		☒ Fall Semester or	☐Spring Semester

Elective Module Economics: Advanced Topics in Public Economics **Responsible: Wickström**			**Study Points: 6-15**
Goals: To learn about advanced topics of Public Economics in the cutting point of government and markets			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Lecture/ Seminar Elemente der Finanz-wissenschaft I (German)	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h) **or** Attendance (30 h) Exam paper (30 h) Preparation of presentation (60h)	Various aspects of Public Economics
Lecture/ Seminar Elemente der Finanz-wissenschaft II (German)	4	6; Attendance (60 h) Preparation (60 h) Exam preparation (60 h) **or** Attendance (60 h) Exam paper (60 h) Preparation of presentation (60h)	Various aspects of Public Economics
Lecture Theory of Taxation	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Tax incidence Tax shift Optimal taxation Public Enterprise Pricing
Lecture Theory of Social Choice	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Collective decisions, Impossibility theorems, Distributive justice, Bargaining
Lecture Welfare Theory	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Welfare Theory, Foundations of Cost Benefit Analysis
Lecture Theory of Social Policy	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Public expenditures, justice and efficiency, public insurance (e.g. health and unemployment insurance) and redistribution.
Lecture Environmental and Resource Economics	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Pollution, Renewable Resources, Exhaustible Resources, Environmental Policy
Lecture Environmental Economic Policy	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Environmental Economic Policy

Lecture The theory of optimal extraction of natural resources	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	The course is an introduction to the theory of the optimal extraction of natural resources.
Lecture Developmen t Economics	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	The course is an introduction to the principles of Development Economics
Seminar Ökonomie und Sprache (German)	2	6; Attendance (30 h) Exam paper and presentation (90 h) Exam preparation (60 h)	Schnittstelle zwischen Ökonomie und Sprache, Soziolinguistik, Ökonomie der Sprache
Seminar Environment al and Resource Economics	2	3; Attendance(30 h) Seminar paper (30 h) Preparation of presentation (30h)	Pollution, Renewable Resources, Exhaustible Resources, Environmental Policy
Seminar Empirical Distribution Analysis	4	6; Attendance (60 h) Seminar paper (60 h) Preparation of presentation (60h)	This course aims at introducing empirical methods of distributional analysis.
Seminar Developmen t Economics	4	6; Attendance(60 h) Preparation of presentation (30h) Case Study (90 h)	Development Economics; influence of trade, distribution, institutions, factor mobility on development; policy analysis
Seminar Selected Topics in Developmen t Economics	2	3; Attendance (30 h) Preparation of presentation I (10 h) Seminar paper (30 h) Preparation of presentation II (20 h)	Individual research papers based on background knowledge in development economics
Module examinations		Lecture: Written exam (90 min, 67%) homework (if requested 33%) Seminar: Seminar paper (33-67%), presentation (33%), written exam/case study (if requested 33%)) Seminar Development Economics: Presentation (if requested, 25%), case study (75-100%)	
Duration of the module		☒ 1 Semester ☒ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester or	

45035, Social Preferences	Leistungspunkte: 6

Lern- und Qualifikationsziele:

The students
- know key experimental evidence on social preferences
- can apply the most important models of social preferences to explain key experimental results and know their limitations
- can contribute to the debate about the relevance of laboratory experiments on social preference
- are able to explain the relevance of social preferences for economic theory and have an understanding how economic models can be extended to incorporate social preferences

Preconditions:
- Introduction to Advanced Microeconomic Analysis or equivalent
- Knowledge of elementary game theory
- Knowledge of statistical analysis will make it easier to follow the data analysis in the experimental papers and thus enable a more critical view, but is not strictly necessary

Teaching formats	Hours per week, workload in hours	Credits and preconditions for granting	Topics, contents
Lecture Social Preferences – Theories and Evidence	2 SWS 60 hours 25 hours presence in class, 35 hours preparation and learning	3 credits, participation	- Experimental evidence of social preference - Models of social preferences and their applications - Testing models of social preferences - Multiplicity of fairness norms and heterogeneity of social preferences - Relevance and generalizability of laboratory experiments on social preferences - Applications to economic theory
Tutorial Social Preferences – Theories and Evidence	2 SWS 60 hours 25 hours presence in class, 35 hours preparation and learning	2 credits, participation	- Discussions of further literature, examples, and applications of the topics from the lecture
Final exam	60 hours Exam Social Preferences – Theories and Evidence (90 min) and preparation	1 credits, Exam Social Preferences – Theories and Evidence, pass	
Duration	☒ 1 semester	☐ 2 semester	
Start of Module	☒ winter term	☐ summer term	

Elective Module Economics: Theory of the State in Economics and in Law **Responsible: Blankart / Kirchner**	**Study Points: 6**

Goals:

To understand the economic theory of law as a two stage process of collective decisions on law and the applications of law in markets as well as in governments.
Seminar:
The seminar is aimed at analysing the institutional rules governing private markets and the state. A distinction is made between decisions on rules and decisions within rules.
The seminar is interdisciplinary held jointly by a professor of economics and a professor of law.
Students should write essays applying theoretical economic thought to practical problems of legislation.
Special attention should be given to an economic analysis of agents in government.

Prerequisites to participate in the module: Module „Public Finance and Public Choice I“

Course	Periods/ Week	SP; work load	Topics
Seminar	3	6; Attendance (45 h) Preparation and presentation (60 h) Writing essays (75 h)	Case Studies in the Economic analysis of Law and State

Module examinations	Essays (80%), presentation (20%)
Duration of the module	☒ 1 Semester ☐ 2 Semesters
Module can be started in	☐ Fall Semester ☒ Spring Semester

Elective Module Economics: Selected Topics in Competition Policy **Responsible: Kamecke**			**Study Points: 6**
Goals: The participants get to know selected parts of the theory of industrial organization with a special emphasis on their implications for the European competition law. They learn to use formal results in a discussion of controversial political issues. To prepare for this the lecture introduces fundamental theoretical concepts and their application as well as the relevant parts of the competition law. This lecture is concentrated on the first part of the term. In the second part of the term the students demonstrate in their seminar presentations that they understand this method of economic analysis.			
Prerequisites to participate in the module: Module „Applied Microeconomics“			
Course	Periods/ Week	SP; work load	Topics
Lecture	1	1,5; Attendance (15 h) Preparation (10 h) exam preparation (20 h)	One of the topics: cartel prohibition, abuse control, and merger control in the European or German Competition law
Seminar	2	4,5; Attendance (30 h) Seminar paper and presentation (105 h)	Discussion of selected problems of competition policy, case studies, modelling issues and/or changes of the law
Module examinations		Lecture: Written exam (60 min); Seminar: Seminar paper (80 %), presentation (20 % of final mark)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

Elective Module Economics: Topics in Industrial Organization **Responsible: Kamecke**	**Study Points: 6-12**

Goals:

In each lecture or seminar the participants study one aspect of industrial organization. In empirical industrial organization they are introduced to theory-based empirical model building in core areas of industrial economics and learn how to implement empirical studies using micro-econometric methods and real-market data. In "Cartel law" they are introduced to the European and German antitrust legislation from an economic point of view. In the seminar "actual problems of economic policy" the participants analyze selected topics discussed in the popular press which are related to the insights from one of these lectures, while the seminar "Applied Industrial Organization" discusses various issues in the field of industrial organization. In this module it is also possible to get credit for courses from the module "topics in microeconomics" or from further courses in the field of industrial organisation which the candidate passed in other universities.

Prerequisites to participate in the module: Module „Applied Microeconomics"

Course	Periods/ Week	SP; work load	Topics
Lecture Empirical Industrial Organization	2	3; Attendance (30 h) Preparation (20 h) Exam preparation (40 h)	Structural approach in industrial economics; analyses of firm behaviour in dynamic markets.
Tutorial Empirical Industrial Organization	2	3; Attendance (30 h) Preparation (20 h) Exam preparation (40 h)	Empirical model building and micro-econometric methods; computer implementation using real-market data.
Lecture Cartel Law for Economists	2	3; Attendance (30 h) Preparation (20 h) Exam preparation (40 h)	European and German cartel law from an economic perspective. (So far this lecture has always been taught in German.)
Seminar „Aktuelle Probleme der Wirtschaftspolitik – Thema Umwelt" (German)	2 + field trip	6; Seminarteilnahme (30 h), Anfertigung und Präsentation von Seminararbeit (60 h) Exkursion (60 h + 30 h Vor- und Nachbereitung)	Diskussion von ausgewählten Themen aus dem Bereich Umweltökonomik und –politik.
Seminar Applied Industrial Organization	2	3; Attendance of seminar (30 h) Seminar paper and presentation (60 h)	Discussion of selected problems of industrial organisation, case studies, experimental evidence, modelling issues and/or changes of the institutional environment.
Module examinations		Lectures: Examination (60 min, 90 min if exercises and lecture are examined); Seminar: Seminar paper and presentation	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒Fall Semester or ☒ Spring Semester	

Elective Module Economics: Datengrundlagen der Wirtschaftspolitik (DGWP) **Responsible: Schmerbach**	**Study Points: 6**

Goals:

The Seminar is held in German.

Im Vordergrund des Gesamtkonzeptes stehen

- das Wecken des Interesses der Studierenden für statistische Fragestellungen und Probleme in Politik und Wirtschaft,
- die Vermittlung der Arbeitsweise der amtlichen und nichtamtlichen Datenproduzenten auf nationaler, europäischer und internationaler Ebene,
- die Qualität und Aussagefähigkeit ökonomischer Daten,
- der kompetente und verantwortungsvolle Umgang mit verfügbarem Datenmaterial aus amtlichen, nichtamtlichen und medialen Datenquellen
- eigenständige Datenrecherchen,
- selbständige wissenschaftliche Arbeit mit amtlichen und nichtamtlichen Originaldaten unter Einbeziehung statistischer Methoden zur Bereitstellung von Informations- und Entscheidungsgrundlagen,
- Hinweise zum Einsatz moderner Computerprogramme.

Prerequisites to participate in the module: Module „Statistics“

Course	Periods/ Week	SP; work load	Topics
Seminar DGWP (German)	3	6; Attendance (45h) Preparation and presentation (65h) Seminar paper (70h)	Bevölkerungsstatistik, Arbeitsmarktstatistik, Produktionsstatistik, Konjunkturtests, Verbraucherpreisstatistik (Messung der Teuerung), Expertenvorträge und Ko-Referate zu Themen des Seminars, Problemdiskussionen
Module examinations		Seminar paper (70 %), presentation (30 % of final mark)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester and ☒ Spring Semester	

Elective Module QM: Operations Research **Responsible: N.N.**			**Study Points: 6-18**
Goals: The „Elective Module Operations Research“ (for master students) is composed of fundamental and advanced courses as well as special topic courses and seminars. It offers the opportunity to become a specialist in Operations Research applications. The basic courses (OR I and OR II) cover classical material on linear and nonlinear programming. The advanced courses (OR III and OR IV) are devoted to dynamic programming and applied project work. They aim to provide students with the opportunity to gain enhanced theoretical knowledge and theory oriented as well as applied project experience. As part of the module special topic courses on a variety of business management specializations are offered, e. g. Revenue Management, Operational Risk Management, Operations Management, Financial Engineering, Queueing theory, inventory theory, logistic and supply chain management, simulation studies, stochastic modelling and optimization algorithms, etc. Within special seminars students will learn to use and to apply OR-software packages.			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Basic Lectures			
Lecture/ Tutorial OR I	3	4,5; Attendance (45 h) Preparation and homework assignments (60 h) Exam preparation (30 h)	Simplex algorithms, theory on duality and sensitivity analysis, production-, cutting-stock and blending problems, staffing and scheduling problems, quadratic optimization
Lecture/ Tutorial OR II	3	4,5; Attendance (45 h) Preparation and homework assignments (60 h) Exam preparation (30 h)	Integer programming with the view towards applications, knapsack problem, transportation and assignment problems, network flow optimization and project planning
Advanced Lectures			
Lecture/ Tutorial OR III	3	4,5; Attendance (45 h) Preparation and homework assignments (60 h) Exam preparation (30 h)	Deterministic and stochastic dynamic programming; solution algorithms, business and economic applications
Lecture/ Seminar OR IV	3	4,5; Attendance (45 h) Preparation, presentation and homework assignments (30 h) Project work (60 h)	Lectures based on research articles, presentation of thesis and project work
Special lectures			
Every lecture marked as Special OR lecture in the university calendar	3	4,5; Attendance (45 h) Preparation and homework assignments (60 h) Exam preparation (30 h)	There will be special lectures on OR topics every semester.
Seminars			
Software in Operations Research	2	6; Attendance (30 h) Preparation (30 h)	Introduction into the usage of, e. g. AMPL, OPL, AIMMS, NEOS, etc.; syntactic elements of model languages; linear, piecewise linear,

		Seminar paper and presentation (90 h + 30 h)	quadratic and integer valued optimization problems
Software project	2	3; Implementation, documentation und presentation (90 h)	Developing software packages; long term projects
Research Seminar	2	3; Attendance (30 h) Reports and presentation (60 h)	Lectures on research projects
Module examinations		Lecture/Tutorial OR I: Written exam (120 min, 100 %) or written exam (120min, 80 %) + homework assignments (20 %) Lecture/Tutorial OR II: Written exam (120 min, 100 %) or written exam (120min, 80%) + homework assignments (20 %) Lecture/Tutorial OR III: Written exam (120 min, 100 %) or written exam (120min, 80 %) + homework assignments (20 %) Lecture/Seminar OR IV: Homework assignments (20 %), presentation (40 %) and project work (40 %) or presentation (30 %) and seminar paper (70 %) Seminar Software in OR: work reports (50 %), presentation (40 %), exercises (10 %) Seminar Softwareproject: reports (30 %) and software with software documentation (70 %) Lecture/Tutorial OR Special: Written exam (120 min, 80 %) and homework assignments (20 %) or written exam (100 %) or oral exam (100 %)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Information Technology and Computer Science: Advanced Information Systems I	Leistungspunkte: 6-9

Learning Objectives:

The module is concerned with the theories, concepts, and practices of Information Systems, emphasizing the support of support managerial decision making by means of formal, data oriented methods. Students have the opportunity to develop a variety of skills, including:

- Students understand the **peculiarities of analytical** as opposed to operational **information systems**.
- Students are aware of the specific requirements of **analytical data management** and how these are addressed in the context of data warehousing.
- Students possess a basic understanding of the three branches of **descriptive, predictive and prescriptive analytics** and appreciate the relationships between these streams.
- Given some data, students are able to select appropriate techniques to **summarize and visualize the data** so as to maximize managerial insight.
- Students understand the **potential and also the limitations of predictive analytics** to aid decision making. They comprehend when and how business applications can benefit from predictive analytics. Given some decision task, they are able to recommend suitable prediction methods.
- Students are familiar with the fundamentals of predictive modelling. Using standard software packages, they can **develop basic and advanced prediction models and assess their accuracy** in a statistically sound manner.
- Students are able to critically **appraise recent IS trends** and developments using established IS theories and practices.
- Students further develop their ability to **conduct scholarly research**, concentrating on academic writing, information retrieval and literature analysis.

Fachliche Voraussetzungen für die Teilnahme am Modul bzw. bestimmten Lehrveranstaltungen des Moduls: none

Lehrver-anstaltungsart	Präsenzzeit Workload in Stunden	Leistungspunkte, Voraussetzung für deren Erteilung	Themen, Inhalte
Lecture Business Analytics & Predictive Modeling	2 SWS 60 Hours Contact hours: 25 h Course pre-parathion: 35 h	2 LP, Attendance	▪ Fundamentals of Business Analytics ▪ Making data accessible: Tools for summarization, grouping, and visualization ▪ The business case for predictive modeling ▪ Prediction methods for regression and classification ▪ Advanced data types: time series, text, survival, and network data ▪ Fundamentals of intelligent search
Tutorial Business Analytics & Predictive Modeling	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP, Attendance	▪ Further elaboration of lecturing material. ▪ Practical PC exercises using various software packages (e.g., Excel, Matlab, Python)
Seminar Information Systems	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP Attendance	▪ Students work in groups of two to three members and prepare a seminar thesis. The thesis relates to a current topic in the scope of IS. Seminar topics vary each year and will be announced in due course before the start of the seminar. All papers will be presented and discussed in the seminar sessions.

Modulabschluss-prüfung	60 Hours Preparation for written exam (90 min) 30 h Assignments 30 h 30 hours Preparation of seminar thesis: 20 h Literature retrieval and analysis: 5 h Preparation of oral presentation: 5 h	2 LP, Pass written exam Business Analytics & Predictive Modeling (50%), in-course assignments (50%) 1 LP Seminar thesis (50%), Systematic retrieval and analysis of relevant literature (25%), oral presentation (25%)
Dauer des Moduls	☒ 1 Semester	☐ 2 Semester
Beginn des Moduls	☒ WS	☐ SS

<table>
<tr><td colspan="3">Elective Module Business Information Technology and Computer Science: IT Security & Privacy</td><td>Leistungspunkte: 6</td></tr>
<tr><td colspan="4">Learning Objectives:

The module presents an introduction to engineering and management of IT security and privacy in networked organizations. Students have the opportunity to gain knowledge and develop skills in the following areas:

▪ Security and Privacy Requirements
▪ Cryptography
▪ Network Protocols
▪ System, Network and Web Security
▪ Privacy-Enhancing Technologies
▪ Security Management</td></tr>
<tr><td colspan="4">Fachliche Voraussetzungen für die Teilnahme am Modul bzw. bestimmten Lehrveranstaltungen des Moduls: None</td></tr>
<tr><td>Lehrver-anstaltungsart</td><td>Präsenzzeit
Workload in Stunden</td><td>Leistungspunkte, Voraussetzung für deren Erteilung</td><td>Themen, Inhalte</td></tr>
<tr><td>Lecture
IT Security & Privacy</td><td><u>2 SWS</u>

<u>60 Hours</u>
Contact hours: 25 h
Course pre-paration: 35 h</td><td>2 LP,
Attendance</td><td rowspan="2">There will be a lecture-style introduction to IT Security & Privacy.
In parallel, students work together in groups and prepare a seminar thesis. The thesis relates to a current topic or project in the scope of IT Security and Privacy.
Seminar topics vary each year and will be announced in due course before the start of the seminar.
All papers will be presented and discussed in the seminar sessions.</td></tr>
<tr><td>Seminar

IT Security & Privacy</td><td><u>2 SWS</u>

<u>60 Hours</u>
Contact hours: 25 h
Course pre-paration: 35 h</td><td>2 LP,
Attendance</td></tr>
<tr><td>Modulabschluss-prüfung</td><td><u>60 Hours</u>
Preparation of seminar thesis: 30 h
Literature retrieval and analysis: 15 h
Preparation of seminar presentation: 15 h</td><td colspan="2">2 LP;

Seminar thesis (50%), Systematic retrieval and analysis of relevant literature (25%), oral presentation (25%)</td></tr>
<tr><td>Dauer des Moduls</td><td colspan="2">☒ 1 Semester</td><td>☐ 2 Semester</td></tr>
<tr><td>Beginn des Moduls</td><td colspan="2">☒ WS</td><td>☐ SS</td></tr>
</table>

<table>
<tr><td colspan="3">Elective Module Business Information Technology and Computer Science: Applied Predictive Analytics</td><td>Leistungspunkte: 6</td></tr>
<tr><td colspan="4">Learning Objectives:

The model give students an opportunity to participate in a real-world forecasting challenge related to planning problems in business areas such as marketing, finance, or others. In this scope, students have the opportunity to develop a variety of skills, including:

▪ Working in a real-world project setting allows students to further develop their team work and project management abilities.
▪ Students get acquainted with contemporary software packages for predict analytics.
▪ Students are able to develop advanced forecasting models using a variety of techniques from statistics, machine learning, and other domains.
▪ Students advance their knowledge in data integration, preparation, and transformation which allows them to create predictive variables from noisy real-world data sets.</td></tr>
<tr><td colspan="4">Fachliche Voraussetzungen für die Teilnahme am Modul bzw. bestimmten Lehrveranstaltungen des Moduls: Module Business Analytics & Predictive Modeling</td></tr>
<tr><td>Lehrver-anstaltungsart</td><td>Präsenzzeit
Workload in Stunden</td><td>Leistungspunkte, Voraussetzung für deren Erteilung</td><td>Themen, Inhalte</td></tr>
<tr><td>Seminar
Applied Predictive Analytics</td><td>4 SWS

120 Hours
Contact hours: 45 h
Preparation and post-processing: 15 h
Model development and evaluation: 60 h</td><td>4 LP,
Teilnahme</td><td>The module involves participating in a real-world forecasting competition such as the annual data mining cup, the ACM KDD cup, or a kaggle challenge. In this scope, students will experience several typical challenges that arise in real-world modeling projects, and develop the necessary skills to overcome these obstacles.</td></tr>
<tr><td>Modulabschluss-prüfung</td><td>60 Hours
Study of relevant literature: 15 h
Preparation of competition entry: 30 h
Preparation of seminar presentation: 15 h</td><td colspan="2">2 LP;

▪ Development of a competition entry (typically a prediction model) for a specified forecasting challenge (50%), studying relevant literature (25%), preparation of a seminar presentations (25%)</td></tr>
<tr><td>Dauer des Moduls</td><td colspan="2">☒ 1 Semester</td><td>☐ 2 Semester</td></tr>
<tr><td>Beginn des Moduls</td><td colspan="2">☐ WS</td><td>☒ SS</td></tr>
</table>

Elective Module Business Information Technology and Computer Science: Business Process Management	Leistungspunkte: 6

Learning Objectives:

The module is concerned with theories, concepts, methods, and practices to analyze and continuously improve business processes. Students have the opportunity to develop a variety of skills, including:

- Students understand the origins, motivations and **objectives of business process management** and are familiar with the **process management lifecycle**.
- Students appreciate the role and potential of **information and communication technology** to improve business process performance.
- Students are familiar with the basic principles of qualitative and quantitative **process analysis**.
- Students have a sound knowledge of **BPMN** and are able **to create process models** for basic and advanced business processes.
- Students acquaint themselves with methods for assessing the relative merits and demerits of **business process outsourcing**.
- Students have a basic understanding of process mining and recognize the potential and limitations of automatic process detection.

Fachliche Voraussetzungen für die Teilnahme am Modul bzw. bestimmten Lehrveranstaltungen des Moduls: none

Lehrver-anstaltungsart	Präsenzzeit Workload in Stunden	Leistungspunkte, Voraussetzung für deren Erteilung	Themen, Inhalte
Lecture Business Process Management	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP, Attendance	▪ Process management lifecycle ▪ Principles of business process modeling using BPMN ▪ Process analysis ▪ Technologies for business process automation (e.g., BPEL) ▪ Business process outsourcing ▪ Process mining
Tutorial Business Process Management	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP, Attendance	▪ Further elaboration of lecturing material ▪ Exercises from the field of BPM ▪ Solving process modeling tasks using BPMN
Modulabschluss-prüfung	60 Hours Preparation for written exam (90 min)	2 LP, Pass written exam Business Process Management	
Dauer des Moduls	☒ 1 Semester	☐ 2 Semester	
Beginn des Moduls	☐ WS	☐ SS	

Elective Module Business Information Technology and Computer Science: E-Business and Online Marketing	Leistungspunkte: 6

Learning Objectives:

The module is concerned with theories, practices and technologies in the field of E-Business and Online Marketing. Students have the opportunity to develop a variety of skills, including:

- Students appreciate the **state-of-the-art in E-Business and Online Marketing** from a theoretical and practical standpoint.
- Students familiarize themselves with core **E-Business applications** (e.g., SCM, CRM, etc.), understand their origins, and how they depend on information and communication technology. Through generalizing these links, students are able to fully appreciate the relationship between internet technologies and E-Business strategy.
- Students are aware of key **E-Business models**, understand their relative merits and demerits, and are able to judge the appropriateness of these models for specific business applications.
- Students gain an overview of **established and emerging internet technologies** and understand the anatomy of web-based information systems. They also become acquainted with key technologies for system integration.
- Students appreciate the **internet marketing mix**, know about the different digital channels for marketing communication, and understand the concept of **multi-channel management**.
- Students are familiar with the **fundamentals of web analytics** to measure the effectiveness of online marketing initiatives.

Fachliche Voraussetzungen für die Teilnahme am Modul bzw. bestimmten Lehrveranstaltungen des Moduls: none

Lehrver-anstaltungsart	Präsenzzeit Workload in Stunden	Leistungspunkte, Voraussetzung für deren Erteilung	Themen, Inhalte
Lecture E-Business & Online Marketing	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP, Attendance	▪ E-Business strategy ▪ E-Business infrastructure ▪ E-Business applications ▪ Internet marketing mix ▪ Marketing communication using digital channels ▪ Web analytics fundamentals
Seminar E-Business & Online Marketing	2 SWS 60 Hours Contact hours: 25 h Course pre-paration: 35 h	2 LP, Attendance	Based on the content of the lecture, students prepare a seminar thesis on current and emerging trends in E-business and online marketing and give an oral presentation
Modulabschluss-prüfung	60 Hours Preparation for written exam (60 min) 30 h Preparation of seminar thesis 30 h	2 LP, Pass written exam E-Business & Online Marketing (50%), seminar thesis (30%), oral presentation (20%)	
Dauer des Moduls	☒ 1 Semester	☐ 2 Semester	
Beginn des Moduls	☐ WS	☒ SS	

Elective Module QM: Multivariate Statistical Analysis **Responsible: Härdle**			**Study Points: 6-9**
Goals: Data records which are to be analysed by means of statistics often consist of many variables. While the connections between two variables are easily accessible, a group of several variables is not easily examinable in its structure. "Multivariate statistics" imparts procedures which allow an analysis of high-dimensional data records. The course aims to introduce the basic concepts of statistical programming languages as R or Matlab and its application.			
Prerequisites to participate in the module: Knowledge of basis statistical concepts and an understanding of a broad spectrum of statistical methods for data analysis.			
Course	Periods/ Week	SP; work load	Topics
Lecture Multivariate Statistical Analysis I (MVA1)	4	6; Attendance (60 h) Self-study (60 h) Exam preparation (60 h)	MVA1: Graphical display of multidimensional data, Repetition: matrix algebra, linear model, correlation, Multivariate random variables, Multinormal distribution, Maximum likelihood theory, Principal components, Discriminant Analysis, Cluster Analysis.
Lecture Statistical programming languages (XIC)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Data Analysis and programming statistical algorithms in the programming languages R or Matlab
Module examinations		MVA1: written exam (120 min) or working paper and eventually presentation or homework XIC: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

Elective Module QM: Advanced Statistics **Responsible: Härdle**	**Study Points: 6-15**

Goals:

The courses and lectures will give the students a thorough insight into theoretical aspects as well as practical aspects of advanced statistical methods (R, Matlab and/or SPSS). The lectures cover different aspects in statistics:
- The course Statistical Programming Languages aims to introduce the basic concepts of statistical programming languages as R or Matlab and its application.
- The course Non- and Semiparametric Modelling gives an overview over the flexible regression methods.
- The lecture Multivariate Statistical Analysis 2 further develops methods presented in the first part of the lecture and deals with problems which arise in the analysis of real world data as well as some advanced methods. In the tutorial the students apply the methods to multivariate data with statistical software.
- The lecture Selected Topics in Banking and Insurance deals with specific topics connected either with Banking (e.g. the issues of assessment of the quality of a credit to its risk of defaults) or Insurance (e.g. with claim size distributions, ruin problems, heavy tailed risks, premium, principles and risk measures and loss reserving in insurance).
- The seminar Numerical Introductory Course treats problems which arise in the implementation of statistical methods, e.g. Optimization.
- In the seminar What is statistics? – From the historical perspective historical aspects of the development of statistics will be treated.
- The lectures Data analysis I and II focus on practical steps in data analysis with SPSS and R. We cover various topics in uni-, bi- and multivariate descriptive statistics, tests and regression methods.
- The lecture Statistics of High-Dimensional Time Series provides an overview of statistical methods used for the analysis of high-dimensional time series.

Prerequisites to participate in the module: Knowledge of basis statistical concepts and an understanding of a broad spectrum of statistical methods for data analysis and the module „Multivariate Statistical Analysis"

Course	Periods/ Week	SP; work load	Topics
Lecture Statistical programming languages (XIC)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Data Analysis and programming statistical algorithms in the programming languages R or Matlab
Lecture Non- and Semiparametric Modelling (NPM)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	NPM: Histogram, Nonparametric Density Estimation, Nonparametric Regression, Additive Models, Linear Models, Generalized Linear Models, Additive Models, Single-Index Models, Generalized Partial Linear Models, Generalized Additive Models
Lecture Multivariate Statistical Analysis II (MVA2)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	MVA2: decomposition of data matrices by factors, Factor analysis, Multidimensional scaling, Canonical correlations, Correspondence analysis, Projection pursuit, Conjoint measurement analysis, SIR
Tutorial Multivariate Statistical Analysis II (UE MVA2)	2	3; Attendance (30 h), Preparation for tutorial sessions (30 h), Solving problem sets (30 h)	UE MVA2: The tutorial aims at practical exercises done with statistical software packages (R, SPSS, Matlab).
Lecture Selected	2	3; Attendance (30 h) Self-study (30 h)	SCR: Selected Topics either in Banking, e.g. Credit rating, or Insurance. For details see the commented schedule of lectures.

Topics in Banking and Insurance (SCR)		Exam preparation (30 h)	
Seminar Numerical Introductory Course (NIC)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	NIC: Numerical Linear Algebra, Curve Fitting, Optimization, Random Number Generation, Numerical Solutions of Stochastic Differential Equations
Seminar What is statistics? – From the historical perspective (HIST)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	HIST: In the seminar we will investigate elements of the history of statistics, mathematical statistics as well as economical statistics, from the 17th/18th century until the present time.
Seminar Privatissimum Statistik (PRI)	2	3; Attendance (30 h) Preparation of presentation (10 h) Seminar paper (50 h)	PRI: The seminar is a preparation for master thesis.
Vorlesung Datenanalyse I	2	3; Präsenzzeit (30 h) Selbststudium (30 h) Prüfungsvorbereitung (30 h)	DAT1: Wdh. Statistik I&II, Fragebogen-konstruktion, Datenbereinigung, Ausreißer, Fehlende Werte, Univariate und Bivariate Statistik (Grafiken, Kennzahlen und Tests)
Übung Datenanalyse I (UE DAT1)	2	3; Präsenzzeit (30 h) Selbststudium (30 h) Prüfungsvorbereitung (30 h)	UE DAT1: In der Übung werden praktische Aufgaben zum Vorlesungsstoff mit SPSS und/oder R gelöst.
Vorlesung Datenanalyse II	2	3; Präsenzzeit (30 h) Selbststudium (30 h) Prüfungsvorbereitung (30 h)	DAT2: Multivariate Statistik, Lineare Regression, Nicht- und semiparametrische Regression, Item-Response-Modelle, Strukturgleichungsmodelle.
Übung Datenanalyse II (UE DAT2)	2	3; Präsenzzeit (30 h) Selbststudium (30 h) Prüfungsvorbereitung (30 h)	UE DAT2: In der Übung werden praktische Aufgaben zum Vorlesungsstoff mit SPSS und/oder R gelöst.
Seminar Datenanalyse (DAT) (German)	2	3; Attendance (30 h) Preparation of presentation (10 h) Seminar paper (50 h)	DAT: Das Seminar richtet sich an Studierende, die einen konkreten Datensatz mittels statistischer Methoden (z.B. im Rahmen von Projekt- oder Abschlussarbeiten) analysieren wollen.
Lecture Statistics of High-Dimensional Time Series (STS)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Topics include: the dynamic semiparametric factor model, statistics of multivariate time series models, non-parametric and flexible time series estimation, variable selection and empirical pricing kernel estimation.
Module examinations		XIC, NPM, MVA2/UE MVA2, SCR, DAT1, DAT2, STS: Oral exam (30 min) or written exam (90 min) working paper and eventually presentation or homework NIC, HIST, PRI, DAT: Working paper (80%) and presentation (20%)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	

Module can be started in	☒ Fall ☒ Spring Semester Semester or

Elective Module QM: Statistics and Finance **Responsible: Härdle**	**Study Points: 6-15**

Goals:

The course “Statistics of Financial Markets 1” starts with an introduction into the basic concepts of option pricing and its probabilistic foundations. Next, stochastic processes in discrete time are presented and the Wiener process is introduced. Ito’s Lemma is derived and the Black-Scholes (BS) Option model is presented leading to the analytic solution for the BS Option price. Numerical solutions via binomial or trinomial tree constructions are discussed in detail.
The course “Statistics of Financial Markets 2” starts with an introduction into the basic concepts of time series and its application. The course gives an overview over risk management models and reviews the current value at Risk (VaR) methodology.
The course “Selected topics of mathematical statistics” covers a part of mathematical statistics which deals with the limiting behavior of different sample statistics, *U*-statistics, *M*-, *L*- and *R*-Estimates. It is laying a bridge between the probability theory and the mathematical statistics by manipulating with “probability” theorems to obtain “statistical” theorems.
The Seminar “Mathematical Statistics” allows for the presentation of research results from the discipline of mathematical statistics. The Seminar “Economic Risk” allows for the presentation of research results from the discipline of Quantitative Finance.
The lecture “Statistical Tools for Finance and Insurance” introduces modern statistical tools as applied to finance and insurance. Each part of the lecture contains content with a high focus on practical applications.
The course entitled “Advanced Methods in Quantitative Finance” covers material that is beyond the scope of the course “Statistics of Financial Markets”.

Prerequisites to participate in the module: Knowledge of basis statistical concepts and an understanding of a broad spectrum of statistical methods for data analysis.

Course	Periods/ Week	SP; work load	Topics
Lecture Statistics of Financial Markets I (SFM1)	4	6; Attendance (60 h) Self-study (60 h) Exam preparation (60 h)	SFM1: Financial derivative, Option management, Basic concepts of probability theory, Stochastic processes in discrete time, Stochastic Integrals and differential equations, Black-Scholes option pricing model, Binomial model for European options and American options, Exotic options and interest rate derivatives
Lecture Statistics of Financial Markets II (SFM2)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	SFM2: Basic concepts of statistical models, ARIMA model, Time series of stochastic Volatility, Nonparametric model on financial time series, Value at risk and back testing, Copulas, Extreme value, Neuronal network
Lecture Selected topics of mathematical statistics (SMS)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Limiting behavior of different sample statistics U-statistics, M-, L- and R-Estimates. This course gives better understanding for the basic tools learned in the elementary Statistics I and II, like Law of Large Numbers, Central Limit Theorem, Kolmogorov-Smirnov and Cramer-von-Mises tests, sample mean and sample variance behavior, etc.
Lecture Advanced Methods in Quantitative Finance (AMF)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Energy options and knowledge of econometric tools and stochastic finance, robust techniques for financial time series

Lecture Statistical Tools for Finance and Insurande (STF)	2	3 Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Modern statistical tools applied in finance and insurance
Seminar Mathematical Statistics (MSS)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Presentation of research results in topics in mathematical statistics
Seminar Economic Risk (QFS)	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Selected Topics of Economic Risk
Module examinations		SFM1: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework SFM2: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework SMS: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework STF: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework AMF: oral exam (30 min) or written exam (90 min) or working paper and eventually presentation or homework MSS: presentation (30 min) or working paper QFS: presentation (30 min) or working paper	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

<table>
<tr><td colspan="3">Elective Module QM: Privatissimum Statistik
Responsible: Härdle</td><td>Study Points: 18</td></tr>
<tr><td colspan="4">Goals:

The seminar “Privatissimum” is designed to help students in the preparation and completion of their Masters thesis. The thesis must be dedicated to a chosen statistical subject. At the seminar any technical problems or drawbacks are presented and the relevant statistical procedures and results collectively discussed.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Knowledge of basis statistical concepts and an understanding of a broad spectrum of statistical methods for data analysis.</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Seminar

Privatissimum Statistik (PRI)</td><td>2</td><td>30;
Attendance (30 h)
Preparation of presentation (60 h)
Master thesis (450 h)</td><td>PRI: Master Thesis</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">PRI: Master thesis (75%) and presentation (25% of final mark)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☒ 1 Semester</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester or ☒ Spring Semester</td></tr>
</table>

Elective Module QM: Time Series Analysis **Responsible: Hautsch**			**Study Points: 6-9**
Goals: To gain an understanding of econometric time-series methodology The lecture gives an introduction to time series analysis. The focus is on univariate modelling tools. We cover different types of stochastic processes like ARIMA and GARCH models, deal with the unit- root methodology and forecasting procedures. Multivariate extensions are demonstrated, with emphasis on vector autoregressive (VAR) processes and its application in causality and impulse response analyses. Nonstationary systems with integrated and cointegrated variables will also be treated. In the tutorials the time series methods are applied to empirical data. We will intensively make use of econometric software packages. Seminar Economic Risk: Presentation of research results in the field of Quantitative Finance			
Prerequisites to participate in the module: Module „Introduction to Econometrics“ (or equivalent)			
Course	Periods/ Week	SP; work load	Topics
Lecture	3	4,5; Attendance (45 h) Preparation for courses (45 h) Exam preparation (30 h)	Stochastic processes, ARIMA and GARCH models, unit-root methodology, forecasting, VAR processes, Cointegration, Causality and impulse-response analysis
Tutorial	1	1,5; Attendance (15 h) Preparation (15 h) Assignments (30 h)	Use of econometrics software and application of time series methods
Seminar Economic Risk	2	3; Attendance (30 h) Self-study (30 h) Exam preparation (30 h)	Selected Topics of Economic Risk
Module examinations		Lecture + Tutorial: Written exam (90 min, 3/4), assignments (1/4 of final mark) Seminar Economic Risk: Presentation (30 min) or working paper	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester	

<table>
<tr><td colspan="3">Elective Module QM: Selected Topics in Econometrics
Responsible: Hautsch</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

To understand and to learn how to apply advanced methods in certain special fields of econometrics.
The lecture(s) and/or seminar deal with specific topics in Econometrics. Topics may cover nonlinear and nonparametric time series analysis, econometric forecasting, resampling methods or Bayesian econometrics.
The students will learn, for example also in tutorials, how to apply the advanced methods to empirical data.
To this end we will rely on the use of econometric software.
To complete the module students may choose courses of 6 SP.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Module „Econometric Methods“</td></tr>
<tr><td>Course</td><td>Periods/
Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Seminar/
Lecture/
Tutorial</td><td>4</td><td>6;
Attendance (60 h)
Preparation for courses (60 h)
Exam preparation (60 h)</td><td>Presentation of advanced methods in special fields of econometrics;
Use of econometric software and application of econometric methods</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Seminar: Seminar paper and/or oral presentation
Lecture: Written exam (90 min if 4 Periods/Week or 60 min if 2 Periods/Week) or oral exam</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☒ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☒ Spring Semester
<u>and/or</u></td></tr>
</table>

Elective Module QM: Econometric Projects **Responsible: Hautsch**			**Study Points: 6**
Goals: To learn how to apply econometric methods for empirical analysis. During the seminar the students will conduct an own empirical study. The students learn how to apply different econometric methods to real data. This includes empirical data-handling and the ability to translate an economic model framework into an econometric model that can be estimated. Furthermore, the students learn how to present their study in written and oral form.			
Prerequisites to participate in the module: Module “Econometric Methods“ and one other complementary or compulsory course in econometrics			
Course	Periods/ Week	SP; work load	Topics
Seminar	2	6; Attendance (30 h) Seminar paper (90 h) Presentation (45 h) Assignments (15 h)	Conduct own empirical analysis
Module examinations		Seminar paper and oral presentation	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module QM: Analysis of Panel Data **Responsible: Hautsch**			**Study Points: 6**
Goals: The course aims at providing the basic concepts and methods for analysing panel data. The lecture introduces different error component regression models with fixed and random effects. It covers tests of hypotheses with panel data as well as techniques for serial correlation, heteroscedasticity, simultaneous equations, dynamic models and models for qualitative dependent variables. In the tutorials the methods are revisited and applied to empirical data.			
Prerequisites to participate in the module: Module „Econometric Methods“			
Course	Periods/ Week	SP; work load	Topics
Lecture	3	4,5; Attendance (45 h) Preparation (45 h) Exam preparation (45 h)	Basic concepts, error component regression models with fixed and random effects, tests of hypotheses with panel data, serial correlation and heteroscedasticity, simultaneous equations, dynamic models, models for qualitative dependent variables.
Tutorial	1	1,5; Attendance (15 h) Preparation (15 h) Exam preparation (15 h)	Theoretical exercise questions, application of methods to empirical data.
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☐ Fall Semester ☒ Spring Semester	

<table>
<tr><td colspan="3">Elective Module QM: Multiple Time Series Analysis
Responsible: Hautsch</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

To gain a deep understanding of advanced multiple time series methods and their applications.
The lecture gives an introduction to multiple time series techniques and will cover vector autoregressive (VAR) processes, VAR estimation, VAR order selection and model checking. Nonstationary systems with integrated and cointegrated variables will also be treated. The use of VAR models in forecasting, causality and impulse response analysis will be explained and illustrated using empirical examples.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Module „Econometric Methods“</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture</td><td>4</td><td>6;
Attendance (60 h)
Preparation (30 h)
Exam preparation (45 h)
Assignments (45 h)</td><td>Vector autoregressive (VAR) processes, co integrated VAR models, forecasting, causality and impulse-response analysis</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Written exam (90 min)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☒ Spring Semester
Semester or</td></tr>
</table>

Elective Module QM: Microeconometrics **Responsible: Hautsch**			**Study Points: 6**
Goals: To gain a deep understanding of models and methods for qualitative and limited dependent variables and their applications. The lecture gives an introduction to models for qualitative and limited dependent variables and will cover logit and probit models for binary dependent variables, multinomial logit and probit models for unordered and ordered categories. In addition, models for censored and truncated data and models with sample selection problems as well as models for duration and count data will be discussed. The use of these models will be explained and illustrated using empirical examples.			
Prerequisites to participate in the module: Module „Introduction to Econometrics“ (or equivalent)			
Course	Periods/ Week	SP; work load	Topics
Lecture	3	4,5; Attendance (45 h) Preparation (45 h) Exam preparation (45 h)	Models for limited dependent variables including logit and probit models, models for censored and truncated data, sample selection problems and models for duration and count data
Tutorial	1	1,5; Attendance (15 h) Preparation (30 h)	Solving problems and computer tutorials
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module QM: Financial Econometrics **Responsible: Hautsch**			**Study Points: 6-9**
Goals: To gain an understanding of econometrics methods for the analysis of financial market data The lecture deals with the statistical properties of financial market data and econometric methods that can be used to analyse these data. We will study procedures to test for the efficient market hypothesis and become familiar with methods to model the mean and the volatility of financial data series. Besides the application of nonparametric and classical test procedures, the focus will be on time series methods and models. In particular, ARMA and GARCH models will be covered. Empirical illustrations and exercises are incorporated into the lecture. Seminar Economic Risk: Presentation of research results in the field of Quantitative Finance			
Empfohlene Voraussetzung für die Teilnahme am Modul: Modul „Econometric Methods“			
Course	Periods/ Week	SP; work load	Topics
Lecture	4	6; Visiting the lecture (60 h), Preparation for courses (45 h), Exam preparations (45 h) Assignments (30 h)	Basic concepts and properties of financial returns, Foundations in time series analysis, Modelling time - varying volatility, Estimating and testing asset pricing models, Modelling high-frequency financial data
Seminar Economic Risk (QFS) (German)	2	3; Attendance(30 h) Preparation (30 h) Exam preparation (30 h)	Presentation of research results in Economic Risk
Module examinations		Lecture: Written Examination (90 minutes) Seminar Economic Risk: Presentation (30 min) or working paper	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module QM: Advanced Econometrics **Responsible: Hautsch**			**Study Points: 6**
Goals: This course deals with advanced estimation techniques in modern econometrics. Main topics include generalized methods of moments (GMM) estimation for single-equation models and multiple-equation models, information theoretic approaches, pseudo-maximum likelihood methods as well as empirical likelihood techniques. Furthermore, an introduction to Bayesian econometric methods will be given. Here the focus is on fundamental principles of Bayesian inference, Markov chain Monte-Carlo (MCMC) methods as well as different applications of Bayesian inference. Finally, non- and semiparametric methods in econometrics are covered. We will study basic Kernel density estimation, nonparametric regression techniques and estimation of partially linear and additive models. A deep knowledge of the techniques conveyed in this course is extremely useful since they are applied in various areas in modern econometrics, including time series econometrics, micro econometrics, panel econometrics as well as financial econometrics.			
Prerequisites to participate in the module: Module „Econometric Methods“			
Course	Periods/ Week	SP; work load	Topics
Lecture	4	6 ; Attendance (60 h) Preparation (60 h) Exam preparation (60 h)	GMM estimation, multiple-equation models, pseudo-maximum likelihood and empirical likelihood methods, Bayesian inference, MCMC techniques, nonparametric regression, partially linear and additive models
Module examinations		Written exam (90 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Administration: General Management			**Study Points: 6-30**
Goals: The mandatory module General Management aims at equipping students with necessary backgrounds in all relevant areas of management science, including finance and accounting. Students are suggested to select courses so that they obtain advanced background knowledge in the areas where they did not acquire sufficient skills in their undergraduate studies.			
Prerequisites to participate in the module: none			
Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial Introduction to Financial Accounting	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h).	The goal of the course is to present students the basics of financial accounting. The course comprises three main parts. The first part deals with the objectives of financial accounting and the question why and how financial accounting is regulated. The second part provides an introduction to group accounting including details on consolidation methods and cash flow statements. The third part focuses on specific accounting rules under International Financial Reporting Standards (IFRS).
Lecture/ Tutorial Financial Statement Analysis	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h).	The goal of the course is to offer students the foundations of financial statement analysis. It covers theoretical foundations as well as practical aspects. The course introduces corporate reporting as one of the main information sources for financial statement analysis, and covers topics related to strategy analysis, financial analysis, forecasting methods and valuation models. The last part of the course presents equity security analysis and credit analysis.
Lecture Economics of Entrepreneurship	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	The lecture aims at investigating entrepreneurship and innovation from an economic point of view. It covers venture financing, running and terminating a venture, and government policy.
Lecture International Financial Management (German)	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Institutionelle und theoretische Analyse internationaler Finanzmärkte und ihrer Bedeutung für Finanzierungsentscheidungen
Lecture Marketing Management	2	3; Attendance (30 h) Required readings (30 h) Exam preparation (30 h)	Theories and strategies of marketing management and their corresponding instruments
Integrated Lecture Corporate Finance	4	6; Class attendance (60 h) Literature study (30 h) Preparation of and participation in tutorial sessions (60 h) Exam preparation (30 h)	Corporate financing, corporate cash management, capital structure, dividend policy, Company & project valuation

Lecture Grundzüge der Besteuerung (German)	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Grundprinzipien der Besteuerung; Grundzüge des deutschen Unternehmensteuerrechts (Einkommen-, Körperschaft- und Gewerbesteuer)
Module examinations		Written exam (60 min) Corporate Finance: Written exam (90 min)	
Duration of the module		☐ 1 Semester ☒ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester or	

Elective Module Business Administration: Entrepreneurship and Innovation **Responsible: Schade**	**Study Points: 6-18**

Goals:

Lecture and Tutorial 1:
Students learn what the psychological characteristics of entrepreneurs are, and how entrepreneurial decisions are made. Theories span optimization, decision making under risk and uncertainty, and game theoretic approaches. Normative perspectives and descriptive findings are confronted. Decision anomalies in entrepreneurial behavior are covered. The lecture covers empirical findings on the entrepreneurial personality and basic models of (descriptive) game and decision theory.
The tutorials re-examine theories, models and methods introduced during lectures and make intensive use of assignments (e.g. questionnaire experiments) to empirically analyse the issues covered by this course. The tutorials provide an introduction into analysis of data on entrepreneurial decisions with SPSS.

Lecture 2:
Entrepreneurs as well as established companies may want to forecast innovation spread and effectively manage the marketing of an innovation. The lecture aims at introducing students to basic theories of and statistical approaches to the marketing of innovations.

Lecture and Tutorial 3:
The lecture covers the scientific basics of experimentation and experimental design with a special emphasis on experimental economics. Examples analyzed are predominately from the area of entrepreneurship and innovation. The course will also cover an introduction into programming of experiments and statistic / econometric analysis of experimental data. A second focus will be on modeling scenarios relevant to entrepereneurship and innovation as predictions for experiments.
The tutorials provide exercises on the basis of the underlying experimental designs and models as well as discuss statistical methods to evaluate experimental data. The tutorials introduce and practice the experimental data analysis techniques with SPSS software during computer sessions.

Lecture 4 covers application of advanced economic and management research to entrepreneurship and innovation.

Prerequisites to participate in the module: none
In order to successfully complete this module, you have to accomplish 6 SP (180h).

Course	Periods/ Week	SP; work load	Topics
Lecture + Tutorial 1 Entrepreneurial Decision Making	4	6; Lecture: Visiting the lecture (30 h) Preparation for courses (30 h) Exam preparation (30 h) Tutorial: Attendance of sessions (30 h) Preparation for tutorial sessions (15 h) Assignments (45 h)	Lecture: Differential psychology of entrepreneurs, decision and game theoretic models of entrepreneurship Tutorial: Exercise questions, empirical studies, analysis of data on entrepreneurial decisions with SPSS
Lecture 2 Marketing of Innovations	2	3; Visiting the lecture (30 h) Preparation for courses (30 h) Exam preparation (30 h)	Theories of innovation diffusion, innovation adoption and innovation marketing
Lecture + Tutorial 3 Design of Decision Experiments	4	6; Lecture: Visiting the lecture (30 h) Preparation for the courses (30 h) Exam preparation (30 h)	Lecture: Theory and modern research on design of decision experiments, using models to derive predictions, statistical analysis of experimental data

		Tutorial: Attendance of sessions (30 h), Preparation for tutorial sessions (60 h)	Tutorial: Exercises applying the knowledge of the lecture, analysis of experimental data with SPSS
Lecture 4 Advanced Research on Entrepreneurship and Innovation (irregular schedule, depending on the availability of guest professors; see the precise name of the lecture in schedule)	2 - 4	3 - 6; Lecture: Visiting the lecture (30 h) Preparation for courses (30 h) Exam preparation (30 h) Depending on the instructor the lecture might be accompanied by a tutorial, in this case: Attendance of sessions (30 h) Preparation for tutorial sessions (15 h) Assignments (45 h)	Lecture: Application of economic and management research to entrepreneurship. Tutorial: Exercises and model application; small empirical studies
Module examinations		Lecture and Tutorial 1: Written Examination (90 minutes, 70% of final mark); Assignments (30% of final mark) Lecture 2: Written Examination (60 minutes) Lecture and Tutorial 3: Written Examination (90 minutes) Lecture 4 (depending on the lecturer): Written exam (60 minutes if 3 SP, 90 minutes if 6 SP) **or** assignment and presentation of results **or** assignment and written exam (60 minutes if 3 SP, 90 minutes if 6 SP)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

<table>
<tr><td colspan="3">Elective Module Business Administration: Research-Seminar on Entrepreneurship and Innovation

Responsible: Schade</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

In the seminar, students will either design and conduct an experiment or work extensively on an economic or econometric model. Results are presented at a joint retreat out of Berlin.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: none</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Research-Seminar</td><td>2</td><td>6;
Seminar attendance (30 h)
Study of the relevant literature (30 h)
Preparation, presentation and discussion of the seminar paper (120 h)</td><td>Conducting a small research project</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Seminar paper + presentation and discussion</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☒ Spring Semester
Semester or</td></tr>
</table>

Elective Module Business Administration: Finance **Responsible: Müller**	**Study Points: 6-27**

Goals:

To gain a deep understanding of advanced issues in financial decision making.

The lecture "International Financial Management" will focus on how to model financial problems and solve them using both national and international financial markets.

The lecture "Finanzierungstheorie" aims at broadening the understanding of financial decision making through the application of normative and descriptive decision and game theoretic models. The tutorials will revisit these models and apply them to problems and discuss them in the financial context.

The seminar "Market Microstructure" covers recent developments in trading rules at organized exchanges and trading platforms, both theoretically und experimentally.

During the seminar "Finance" students will do some research on their own by applying these methods of lectures and tutorials to complex cases.

During the seminar "Topics in Finance: Leasing" students will do some research on their own by applying these methods of lectures and tutorials to problems of Leasing.

In the lecture "Börsen und ausserbörsliche Handelsplattformen" students will learn about the latest and relevant developments in trading at exchanges and other trading platforms.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture International Financial Management	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	National and International Financial Markets, the International Corporation, Valuations of Securities, Decision, Problems of International Corporations
Lecture Finanzierungstheorie (German)	2	3; Attendance (30 h) Preparation (30 h) Exam preparation (30 h)	Valuation of Investments under Uncertainty, Capital Budgeting with Taxes and Inflation, Modigliani/Miller Model with Taxes, Optimal Dividend Policy, Agency Models Dealing with Separation of Ownership and Management, Leasing
Tutorial Finanzierungstheorie (German)	2	3; Attendance (30 h) Preparation (15 h) Assignments (45 h)	Exercises and Model Application
Seminar Market Micro-structure	2	6; Attendance (30h), Seminar paper (60 h) Preparation (courses, exam) (90 h)	Market Microstructure
Seminar Finance	4	6; Attendance (60 h) Seminar paper and presentation (120 h)	Topics in Finance
Seminar	2	3; Attendance (30 h)	Topics in Finance: Leasing

Topics in Finance: Leasing		Seminar paper and presentation (60 h)	
Lecture Börsen und ausserbörsliche Handelsplattformen (German)	2	3; Visiting the lecture (30h), Preparation for courses (30h) Exam preparations (30h)	Exchanges and Trading Platforms
Module examinations		International Financial Management: Written exam (60 minutes) Finanzierungstheorie: Written exam (90 minutes) Seminar Market Microstructure: seminar paper and written exam (60 minutes) Seminar Finance: seminar paper (50 %) and presentation (50 %) Seminar Topics in Finance: Leasing: seminar paper and presentation Börsen und ausserbörsliche Handelsplattformen: Written exam (60 minutes)	
Duration of the module		☐ 1 Semester ☒2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module Business Administration: Management **Responsible: Prof. Dr. Beham**	**Study Points: 6-21**

Lecture International Management (Dr. Anna-Maria Schneider)
Das Ziel der Lehrveranstaltung ist das Themenfeld des Internationalen Managements vertiefend zu betrachten. Neben der kritischen Reflexion von Theorien und empirischen Studienergebnisse wird durch Fallstudien der Praxisbezug hergestellt. Die Komplexität und Unterschiedlichkeit der Internationalisierungsprozesse soll aufgezeigt werden. Verschiedene alternative Internationalisierungsmodelle und Markteintrittsformen werden behandelt und kritisch hinterfragt. Ferner thematisiert die Lehrveranstaltung den internationalen Wettbewerb und mögliche Kooperationsformen zwischen den Unternehmen. Des Weiteren werden unternehmensinterne Handlungsfelder wie die das Wissens- & Innovationsmanagement und der Zuliefererauswahlprozess im Rahmen der Lehrveranstaltung näher beleuchtet. Sprache: deutsch

Seminar Supply Chain Management (Dr. Anna-Maria Schneider)
Das Ziel der Lehrveranstaltung ist sich spezifisch mit relevanten Themen des Supply Chain Managements zur beschäftigen. Anderseits sollen die Fähigkeiten der Studierenden in Bezug auf das wissenschaftliche Arbeiten, das Diskutieren theoretischer Ansätze und praxisbezogener Problemfelder sowie die Präsentation der eigenen Forschungsergebnisse gefestigt werden. Themenfelder wie die Globalisierung von Zuliefernetzwerken, Beschaffungsstrategien von Unternehmen, Supplier Relationship Management und Sustainable Supply Chain Management werden im Rahmen des Seminars analysiert und diskutiert.
Sprache: deutsch

Seminar Management (Dr. Sarah Jastram)
Das Seminar behandelt aktuelle Themen in der Managment-Lehre. Die Studierenden werden vornehmlich englische wissenschaftliche Fachpublikationen auswerten und die erlernte Theorie anhand von praktischen Fallstudien anwenden und vertiefen.

Research seminar Leadership (Prof. Dr. Barbara Beham)
Students develop and conduct their own research project on an actual topic in leadership research. Sprache: englisch/deutsch

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture International Management	2	3; Attendance (30 h) Required readings (30 h) Exam preparation (30 h)	Vertiefung von Themenfeldern des internationalen Managements (Theorien und Fallbeispiele)
Seminar Supply Chain Management	2	6; Attendance (30 h) preparation and follow-up (30 h) preparation of presentation (30h) seminar paper (90 h)	Seminar zu spezifischen Forschungsgebieten des Supply Chain Managements
Seminar Management	2	6; Attendance (30 h) (written) preparation and follow-up (30 h) preparation of presentation (30h) seminar paper (90 h)	Seminar zu spezifischen Forschungsgebieten der Management-Lehre
Reseach Seminar Leadership	2	6; Attendance (30 h) preparation and follow-up (30 h) preparation of presentation (30h) seminar paper (90 h)	Research methods in contemporary leadership research

Module examinations	Lecture International Management: Written exam (60 min) Seminar Supply Chain Management: seminar paper (60%), presentation (40%) Seminar Management: seminar paper (50%), presentation (50%) Research Seminar Leadership: Project report (75%), presentation (25%)
Duration of the module	☒ 1 Semester ☐ 2 Semesters
Module can be started in	☒ Fall ☐ Spring Semester

Elective Module Business Administration: Marketing **Responsible: Klapper**	**Study Points: 6-21**

Goals:

Advanced Marketing Modelling:
Teaching and in depth discussion of advanced methods to empirically determine the causal relationship between marketing activities and firms' objectives. Special attention is given to modelling the effects of marketing on sales and market share data with discrete choice models for individual purchase data and aggregate sales data. In exercise courses students learn how to apply these methods to real data. Successful participation in this class will enable students to quantify the impact of marketing on key performance measures and to evaluate the success of marketing activities.

Customer Analytics and Customer Insights:
Teaching and in depth discussion of the basic concepts and methods to gain detailed understanding about firms' (potential) customers and their preferences. These insights will provide the basis for brand management and for strategic marketing decisions, especially the design of new products and the management of products over their life cycle. Students will also learn how to measure costumer needs, understand how customers perceive the product and service offerings of a firm and its competitors. We particular focus on estimating consumer preferences for product characteristics and brands within the framework of discrete choice models and conjoint analysis.

Marketing Management (if not selected in the General Management):
Teaching and in depth discussion of the marketing management process. Special attention is given to strategic marketing and the management of the marketing instruments. Successful participation in this class will enable students to evaluate marketing activities and to understand how marketing affects firms competitive position in the market.

Prerequisites to participate in the module: none

Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial Advanced Marketing Modelling	4	6; Attendance (30h + 30h) Preparation & homework (30h + 60h) Assignment Preparation (30h)	Lecture: quantitative models of consumer behavior, modelling the effects of marketing on market outcomes and firms' profitability Tutorial: Pc-based exercises
Lecture/ Tutorial Customer Analytics and Customer Insights	4	6; Attendance (60h) Preparation & homework (90h) Exam Preparation (30h)	Lecture: Concepts and methods for understanding customers need and preferences as the basis for strategic marketing. Special emphasis new product design, measuring customers preferences and conjoint analysis Tutorial: PC-based exercises
Lecture Marketing Management	2	3; Attendance (30 h) Required readings (30 h) Exam preparation (30 h)	Theories and strategies of marketing management and their corresponding instruments
Project Seminar **or** Seminar Marketing	4	6; Project seminar: project work and documentation (180h) **or** Seminar paper and presentation (180 h)	Project work **or** Recent topics in marketing management

Module examinations	Advanced Marketing Modelling: 100% Assignments Customer Analytics and Customer Insights: 100% Assignments Marketing Management: Written exam (60 min) Project Seminar: Project work and documentation (80%) and presentation and in-class discussion (20%) Seminars: Seminar paper (70%) and presentation (30%)
Duration of the module	☒ 1 Semester ☐ 2 Semesters
Module can be started in	☒ Fall Semester ☒ Spring Semester or

Elective Module Business Administration: Accounting Courses **Responsible: Gassen / Maiterth**			**Study Points: 6-18**
Goals: This module contains elective classes for master students. Students do not have to be enrolled into the accounting specialization in order to enroll into these classes.			
Prerequisites to participate in the module: Students need a thorough understanding of financial accounting, both based on HGB and on IFRS, of financial statement analysis and of group accounting.			
Course	Periods/ Week	SP; work load	Topics
Lecture/ Tutorial Introduction to Financial Accounting	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h).	The goal of the course is to present students the basics of financial accounting. The course comprises three main parts. The first part deals with the objectives of financial accounting and the question why and how financial accounting is regulated. The second part provides an introduction to group accounting including details on consolidation methods and cash flow statements. The third part focuses on specific accounting rules under International Financial Reporting Standards (IFRS).
Lecture/ Tutorial Financial Statement Analysis	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h).	The goal of the course is to offer students the foundations of financial statement analysis. It covers theoretical foundations as well as practical aspects. The course introduces corporate reporting as one of the main information sources for financial statement analysis, and covers topics related to strategy analysis, financial analysis, forecasting methods and valuation models. The last part of the course presents equity security analysis and credit analysis.
Lecture/ Tutorial Accounting Theory and Earnings Management	3	6; Attendance (30 h) Literature study (30 h) Preparation of and participation in Tutorial sessions (45 h) Homework (45 h) Exam preparation (30 h)	Institutions of accounting; the role of accounting based information from a valuation and from a contracting perspective; accounting and capital market based asset pricing, incentives and earnings management
Lecture/ Tutorial Advanced Topics in Accounting	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h)	Topics include but are not limited to: accounting for lease transactions, accounting for financial instruments, hedge accounting, accounting for stock based compensation, accounting for special purpose entities, special industry accounting, recent regulative changes in standard setting, auditing and corporate governance, valuation based on accounting information, earnings management.
Applied Seminar Advanced Cases in Accounting and Auditing	2	6; Seminar attendance (30h), Literature study (30 h) Preparation, presentation and discussion of the team case-study (60 h), Preparation of other cases and	The cases discussed in this seminar encompass a wide variety of subject, ranging from specific problems in accounting measurement over valuation related problems in IPO or merger and acquisitions settings to problems related to the identification of fraudulent earnings

		participation in the course (60 h).	management
Research Seminar Empirical Methods in Accounting and Finance	2	6; Seminar attendance (30h), study of the relevant literature (30 h), preparation, presentation and discussion of the group assignments (90 h), exam preparation (30 h).	This course aims at equipping students with the skill-set to design and conduct empirical studies based on observational (archival) data in the fields of accounting and finance. After successful completion of the course students should understand the fundamentals and common pitfalls of quasi-experimental research design, be familiar with matching mechanisms, instrumental variable and panel data approaches which help with causal inference, be aware of limitations of these research designs, and, using the statistical software packages STATA and/or SAS, have gathered experiences in designing and conducting large-scale research projects.
Research Seminar Financial Accounting Research Group	2	6; Seminar attendance (30 h), study of the relevant literature (30 h), preparation and discussion of the assignments (120 h).	This seminar is targeted at interested students which have an active interest in current financial accounting topics and in cutting-edge financial accounting research. The main objective of this seminar is to introduce eligible students to current research in the area of financial accounting and auditing. In this context, we will provide participants with the necessary skills to comprehend common research design choices and to identify shortcomings of these choices. To achieve this, participants of the seminar will be invited to several lectures, tutorials and talks of international guests, which will take place at the institute. Since it is common to discuss the content of these talks beforehand, participants will also be invited to the corresponding discussion meetings at the institute. In addition, we will invite leading industry experts to discuss current financial accounting topics with us in a small colloquial atmosphere. Each seminar period will last for one academic year and we expect participating students to commit to the full year.
Lecture/ Tutorial Umwandlung von Unter-nehmen und Besteuerung (German)	3	4,5; Attendance (30 h), Literature study (30 h), Preparation and participation in tutorial sessions (45 h); Exam preparation (30 h)	Taxation of restructuring of enterprises according to the German Reorganisation Tax Law; tax-optimal design of reorganisation processes, effects of taxation on the company purchase. The classes are held in German.
Lecture Steuerwir-kungslehre (German)	2	3; Attendance (30 h), Literature study (30 h), Exam preparation (30 h)	Integration of the German profit taxes (income tax, corporation tax and trade tax) in common management decision models to analyse the effects of taxation on business decisions; the focus is on the impact of taxation on corporate investment and financing decisions in a national and international context. The classes are held in German.
Lecture/Tuto rial	4	6; Attendance (60 h),	Taxation of inbound and outbound investments, double taxation agreements, controlled foreign corporation rules,

Internationale Unternehmensbesteuerung (German)		literature study, preparation (60 h); exam preparation (60 h)	optimal policy of investment and financing decisions taking into account taxation. The classes are held in German.
Seminar Fallstudien zur Steuerwirkungslehre (German)	2	4,5; Attendance (30 h), Literature study (30 h), Exam preparation (30 h)	The effects of German profit taxes (income tax, corporation tax and trade tax) are analysed applying complex practice-oriented case studies. The classes are held in German.
Lecture/ Tutorial Steuerliche Gewinnermittlung (German)	3	4,5; Attendance (30 h), literature study (30 h), preparation and participation in tutorial sessions (45 h); exam preparation (30 h)	Tax accounting regulations, relation between tax and financial accounting, taxation of formation and liquidation of an enterprise and tax specifics of partnerships. The classes are held in German.
Guest lecture Umsatzsteuer und steuerliches Verfahrensrecht (German)	2	3; Participation in Course (30 h), Self-study (30 h), Exam preparation (30 h)	Students learn about the German value added tax system on the basis of practical examples of tax jurisdiction and tax issues of firms. They get familiar with systematic aspects of German value added tax law. Main topics are deliveries and services, group taxation, input tax deduction and correction of input tax deduction. In procedural tax law students learn to apply the procedural rules of the German fiscal code. In addition, they get to know the interaction of procedural and substantive law. Key points are the tax bill, legal means, the tax appointment period and modification regulations. Furthermore the students are introduced to the German criminal code for tax offences.
Guest lecture Internationale Steuerplanung in der Praxis (German)	2	3; Participation in Course (30 h), Self-study (30 h), Exam preparation (30 h)	Variable topics The classes are held in German.
Module examinations		Lecture/Tutorial: Written exam (60 - 120 min) or oral exam, Applied Seminar Advanced Cases in Accounting and Auditing: Preparation, presentation and discussion of the team case-study, participation in the seminar Research Seminar Empirical Methods in Accounting and Finance: Assignments (40 %) and written exam (60 %) Research Seminar Financial Accounting Research Group: Written Reviews Case study seminar: Written or oral exam (60 min)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☒ Spring Semester Semester or	

Elective Module Business Administration: Accounting Research Seminar (Master thesis seminar Accounting) **Responsible: Gassen**			**Study Points: 6**
Goals: This seminar aims at developing the research skills which Master students need to develop and write a master thesis in the area of accounting. Students, who wish to write a master thesis at the Institute of Accounting and Auditing, have to enrol in and successfully complete this seminar.			
Prerequisites to participate in the module: Students need a thorough understanding of the underpinnings of accounting, and have to complete the Master module Accounting as a field of specialization.			
Course	SWS	SP; work load	Topics
Accounting Research Seminar	2	6; Attendance (30 h) preparation of a replication study with given data (90 h) presentation of influential articles of the field (30 h) preparation of a reviewer report for a working paper (30 h)	Students have to identify their own research question and develop a research exposé which provides the motivation for the research question and also explains the methodology the student will be using to address the research question. Based on this research exposé students can apply for a slot in the Seminar (acceptance to the seminar is limited). In the seminar, students will be presented with a methodological walk-through of different areas of accounting research. Also, students will be required to present and summarize influential papers in their respective research areas.
Module examinations		Exposé development (40%), paper presentation (20%), homework (20%), class discussion (20% of final mark)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Administration: Master Tax Seminar (Master thesis seminar Tax) **Responsible: Maiterth**			**Study Points: 6-12**
Goals: The seminar aims at developing the research skills which Master students need to write a master thesis in the area of business taxation. Students, who intend to write their master thesis at the Institute of Business Taxation, are required to complete this seminar successfully.			
Requirements for participation: Students need a profound knowledge of institutional details and economic effects of business taxation, and have to complete the Master module Accounting as a field of specialization.			
Course	Periods/ Week	SP; work load	Topics
Master Tax Seminar (German)	2	6; Seminar attendance (30h), preparation of the seminar paper (90h), presentation of the seminar paper, preparation and discussion of other seminar papers (60h)	During the seminar students deal with current tax issues and tax reforms respectively tax reform proposals in a national and international context. The classes are held in German.
Current Issues in Tax Accounting (German)	2	6; Seminar attendance (30h), Preparation of the seminar paper (90h), Presentation of the seminar paper, preparation and discussion of other seminar papers (60h)	Ín this seminar we discuss varying issues in taxation. The classes are held in German.
Module examinations		Seminar paper (50 %), presentation of the seminar paper and discussion of other seminar papers (50 %)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Administration: Financial Economics **Responsible: Adam, Stomper**			**Studienpunkte: 6-18**
Goals: This module contains elective classes for master students interested in finance. All courses are taught in English.			
Prerequisites: Knowledge of the principals of finance theory: capital asset pricing model (CAPM), efficient market hypothesis, Markowitz portfolio selection, Modigliani-Miller theorem, DCF valuation. The last two concepts are covered in the IV Corporate Finance.			
Course	Periods/ Week	SP; work load	Topics
Integrated Lecture Corporate Finance	4	6; Class attendance (60 h) Literature study (30 h) Preparation of and participation in tutorial sessions (60 h) Exam preparation (30 h)	Corporate financing, corporate cash management, capital structure, dividend policy, company & project valuation
Lecture/ Tutorial Financial Engineering	4	6; Class attendance (60 h) Literature study (30 h) Preparation of tutorial sessions (60 h) Exam preparation (30 h)	Forwards and futures, option pricing in the binomial model and the Black Scholes model, estimation of risk-neutral densities, and applications
Lecture/ Tutorial Asset Management	4	6; Class attendance (60 h) Literature study (30 h) Preparation for tutorial sessions (60 h) Exam preparation (30 h)	Portfolio theory, the Capital Asset Pricing Model, Arbitrage Pricing Theory, Stock Valuation
Lecture Real Effects of Finance	2	3; Class attendance (30 h) Literature study (30 h) Exam preparation (30 h)	Effects of financial market development(s) on non-financial markets such as product and labor markets
Seminar Real Effects of Finance	2	6; Class attendance (30 h) Literature study (60 h) Preparation of the seminar paper and presentation (90 h)	Effects of financial market development(s) on non-financial markets such as product and labor markets
Lecture/ Tutorial Advanced Corporate Finance	4	6; Class attendance (60 h) Literature study (30 h) Preparation for tutorial sessions (60 h) Exam preparation (30 h)	Impact of agency costs and information asymmetries on optimal capital structure, bankruptcy, project finance, payout policy, corporate governance, executive compensation
Lecture Private Equity	2	3; Class attendance (30 h) Literature study (30 h) Exam preparation (30 h)	Mergers & acquisitions, private equity, venture capital. This course builds on the materials covered in Advanced Corporate Finance.
Case Seminar Corporate Finance	3	6; Class attendance (45 h) Preparation, presentation and discussion of the team case-study (135 h)	This seminar discusses case studies that relate to the materials covered in Corporate Finance and Advanced Corporate Finance

Seminar Advanced Financial Economics – Asset Pricing	2	6; Class attendance (60 h) Literature study (60 h) Preparation of the seminar paper (60 h)	The seminar discusses papers on asset pricing and market microstructure at an introductory PhD level
Lecture/ Tutorial Advanced Financial Economics – Corporate Finance	3	6; Class attendance (45 h) Literature study (90 h) Exam preparation (45 h)	The seminar discusses papers on corporate finance at an introductory PhD level
Lecture Financial Markets Regulation (PhD Course) **or** Seminar Financial Markets Regulation (PhD Course)	2 2	6; Class attendance (30 h) Preparation for Courses (30 h) Literature Study (90 h) Exam preparation (30 h) 6; Class attendance (30 h) Literature study (90 h) Preparation of research proposals (60 h)	This course introduces students to the regulation of financial markets and the participants in these markets at the PhD level. Topics: Impact of financial disclosure requirements on corporate policies, financial market frictions, economics of financial crises
Module examinations		Lectures: Written exams (60 or 90 min) Lecture or Seminar Financial Markets Regulation (Ph.D. Course): Written exam (120 min) or several research proposals Case Seminar: Case reports (80 %), presentations (20 %) Seminars Advanced Financial Economics II and III: Seminar paper (100 %) Other seminars: Seminar paper (80 %), presentations (20 %)	
Duration of the module		☒ 1 Semester ☐ 2 Semester	
Module can be started in		☒ WS <u>or</u> ☒ SS	

<table>
<tr><td colspan="3">Elective Module Business Administration:
Thesis Seminar Corporate Finance
Responsible: Adam</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

This seminar is designed for students who wish to write a master thesis at the institute of corporate finance. Most theses will be of an empirical nature. Therefore, sound econometrical and programming skills are essential. Before selecting this modul , students should have successfully completed the mandatory courses of the Mandatory Elective Modul: Financial Economics</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Seminar

Hauptseminar/Thesis Seminar Corporate Finance</td><td>4</td><td>6;
Seminar attendance (60 h)
Literature study (30 h)
Preparation, presentation and discussion of the seminar paper (90 h)</td><td>This course covers advanced topics in corporate finance, as well as major econometric techniques used in empirical corporate finance research. The goal is to prepare students for writing a master thesis at the Institute of Corporate Finance.</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Seminar paper (50 %), presentations (50 %)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester or ☒ Spring Semester</td></tr>
</table>

Elective Module Business Administration: **Thesis Seminar Financial Economics** **Responsible: Stomper**			**Study Points: 6**
Goals: This seminar is designed for students who wish to write a master thesis in financial economics at the institute of financial economics. Most theses will be of an empirical nature. Therefore, sound econometrical and programming skills are essential. Before selecting this modul , students should have successfully completed the mandatory courses of the Mandatory Elective Modul: Financial Economics			
Course	Periods/ Week	SP; work load	Topics
Seminar Hauptseminar/Thesis Seminar Financial Economics	4	6; Seminar attendance (60 h) Literature study (30 h) Preparation, presentation and discussion of the seminar paper (90 h)	Preparation for writing a master thesis. The seminar will discuss papers on financial economics.
Module examinations		Seminar paper (50 %), presentations (50 %)	
Duration of the module		☒ 1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

<table>
<tr><td colspan="3">Elective Module Business Administration: Strategic Management
Responsible: Hubert</td><td>Study Points: 6</td></tr>
<tr><td colspan="4">Goals:

The course gives an introduction into the analytical tools of strategic analysis and applies these to decisions like boundaries of the firm, strategic interaction with competitors, market entry etc.

In the tutorials students solve exercises and discuss examples.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: none</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture + Tutorial

Strategic Management</td><td>4</td><td>6;
Attendance (60 h)
Reading (30 h)
Assignments (45 h)
Preparation for tutorial sessions (15 h)
Exam preparation (30 h)</td><td>Basic notions of game theory, boundaries of the firm, strategic interaction with competitors and complementors, market entry, tools for analyzing strategic situations.</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Written exam (90 min)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semester</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ WS ☐ SS</td></tr>
</table>

<table>
<tr><td colspan="3">Elective Module Business Administration: Financial Contracting
Responsible: Hubert</td><td>Study Points: 6-12</td></tr>
<tr><td colspan="4">Goals:

Derive fundamental relations between incentives, cash-flow rights and control rights from first assumptions (security design). Apply the insights from optimal contracts to more complex situations.
The lecture provides an introduction into the main theoretical tools and some basic models of financial contracting. In class students solve exercises and discuss examples. In the seminar students apply the tools to selected problems and deepen their understanding by analyzing more complex situations.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: A good background in microeconomics and game theory</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture

Financial Contracting</td><td>2</td><td>3;
Attendance (30 h)
Reading paper (30 h)
Exam preparation (30 h)</td><td rowspan="3">Effort and risk incentives, security design, screening, optimality of debt and equity, moral hazard, signaling through capital structure, recontracting, control rights, number of creditors, voting rights.</td></tr>
<tr><td>Tutorial

Financial Contracting</td><td>2</td><td>3;
Attendance (30 h)
Preparation for Tutorial Sessions (15 h)
Assignments (45 h)</td></tr>
<tr><td>Seminar</td><td>2</td><td>6;
Attendance (30h),
Preparation and presentation of Seminar paper (150 h)</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Lecture and Tutorials: Written exam (60 min)
Seminar: Seminar Paper (60%), presentation (30%), active participation (10% of final mark)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☐ Fall Semester ☒ Spring Semester</td></tr>
</table>

<table>
<tr><td colspan="3">Elective Module Business Administration: Topics in Theory of Markets and Organizations I / II (Ph.D. – Level)

Responsible: Hubert</td><td>Study Points: 9-18</td></tr>
<tr><td colspan="4">Goals:

The courses cover recent developments in the theory of coordination within organizations and markets. The focus is on research methodology.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: Solid background in microeconomics</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture 1</td><td>4</td><td>9;
Attendance (60 h)
Reading paper(120 h)
Preparation of presentations and examination (90 h)</td><td>Agency problems, incentive contracts, performance measurement, multitask agency relationship, asset ownership and job design, executive compensation, contests, bargaining theory and coalition formation, merger analysis</td></tr>
<tr><td>Lecture 2</td><td>4</td><td>9;
Attendance (60 h)
Reading paper(120 h)
Preparation of presentations and examination (90 h)</td><td>Vertical structures, hierarchy und decision making in committees, bounded rationality, economic psychology and experiments.</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Lecture 1: Written exam (90 min, 50 %), presentation (50 % of final mark)
Lecture 2: Written exam (90 min, 50 %), presentation (50 % of final mark)</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester or ☒ Spring Semester</td></tr>
</table>

Elective Module Business Administration: Topics in Energy and Network Economics **Responsible: Hubert**	**Study Points: 6 - 15**

Goals:

In many countries network based supply systems (electric power and gas) have seen a major structural change from heavily regulated, vertically integrated monopolies towards systems in which coordination over markets and competition play a larger role. We take these industries as an example to analyze market design and strategic behavior.

Students should first take the lecture “network based energy systems”. As an option they may complement the lecture with the seminar “energy systems” (presentations only) which is offered in parallel. In the following term, they can choose between one of the main seminars.

Prerequisites to participate in the module: The module is for students who have a (MA-level) background in microeconomics, industrial organization, and game theory. The courses “analysis of competition” in combination with “microeconomics” provide the necessary background.

Course	Periods/ Week	SP; work load	Topics
Lecture and Tutorial Network based energy systems	4	6 Attendance (60 h), Preparation (120 h)	Energy an overview, network based energy systems: gas & power, reform of the industry, restructuring and access rights, market design, gaming power markets, nodal pricing, zonal pricing, market coupling, strategic investment in international energy transport systems, energy security, investment and third party access, contracts and competition
Seminar A Energy Systems	2	3; Attendance (30h), Preparation (60h)	Each student makes several presentations on on different aspects of energy systems. The focus is on presentation skills.
Seminar B ‘Gaming’ and designing energy markets	2	6; Attendance (30h), Preparation (150 h)	Students make presentations and write a thesis paper either on a theoretical topic or on an empirical assessment related to strategic behaviour in energy markets, usually starting from one academic paper.
Seminar B Energy Policy	2	6; Attendance (30h), Preparation (150 h)	Students make presentations and write a thesis paper on a broader topic in energy policy.
Module examinations		Lecture: Written examination, 90 minutes Seminar A: Presentation (70%), Discussion (30%) Seminar B: Seminar Paper (60%), Presentation (30%), Discussion (10%)	
Duration of the module		☒1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Administration: Real Estate Economics **Responsible: Hubert**			**Study Points: 6**
Goals: For most people buying or not buying a house is the single most important investment decision in their life. It is taken in an environment which is quite different from the “perfect market set up” which is often investigated in finance. Students shall learn how to address the particularities of real estate investments working with selected contributions from the theoretical and/or empirical literature. Students are expected to write a seminar paper, make a presentation, and participate in the discussion.			
Prerequisites to participate in the module: This seminar is for students who have a solid background in finance and econometrics and some basic knowledge in real estate economics. It covers a wide range of theoretical and empirical issues in real estate valuation, dynamics of real estate markets and institutional features.			
Course	Periods/ Week	SP; work load	Topics
Seminar “Real Estate Economics”	2	6; Attendance (30h), Preparation and Presentation of Seminar paper (150 h)	Selected topics e.g.: Real estate prices and price risk, transaction behaviour, real estate in portfolio, renting versus owning, mobility, real estate and the aggregate economy
Module examinations		Seminar: Seminar Paper (70%), Presentation (30% of final mark)	
Duration of the module		☒1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester or ☒ Spring Semester	

Elective Module Business Administration: Analysis of Competition **Responsible: Hubert**			**Study Points: 6**
Goals: The course covers models and tools for the analysis of strategic interaction with competitors and `complementors'. It is similar to a course in industrial economics, but topics are selected according to their relevance for the study of network based energy-systems (electric power and gas-industry). The course is designed for students in their first semester master studies. It prepares students for the modul: "Topics in Energy and Network Economics".			
Prerequisites to participate in the module: Previous exposure microeconomics and game theory is useful but not indispensable, as the basic notions of non-cooperative and cooperative game theory will be explained when needed. You should not take the course if you already have taken (master level) courses in microeconomics, game theory and industrial organization.			
Course	Periods/ Week	SP; work load	Topics
Lecture and Tutorial Analysis of Competition	4	6 Attendance (60 h), Preparation (120 h)	`Co-opetition' & PARTS, using market power, strategic interaction with competitors & complementors, market entry, commitment, vertical chains & networks, boundaries of the firm.
Module examinations		Lecture: Written examination, 60 minutes	
Duration of the module		☒1 Semester ☐ 2 Semesters	
Module can be started in		☒ Fall Semester ☐ Spring Semester or	

<table>
<tr><td colspan="3">Elective Module: Variable Module for completing courses inside the economic department

Responsible: Examinations Commission</td><td>Study Points: 3-12</td></tr>
<tr><td colspan="4">Goals:

Acquirement of knowledge in the fields of business administration and/or economics and/or quantitative methods.

Students may fill the difference between the points acquired in the mandatory, mandatory elective and elective modules and the total amount of 120 SP with this module. The maximum admissible amount is 12 SP.

The approvable courses for this module are courses within the Economics Department which are not part of a mandatory module and are rewarded with less than 6 SP.</td></tr>
<tr><td colspan="4">Prerequisites to participate in the module: none</td></tr>
<tr><td>Course</td><td>Periods/ Week</td><td>SP; work load</td><td>Topics</td></tr>
<tr><td>Lecture or Tutorial or Seminar</td><td>2-8</td><td>1 Period/Week generally relates to 1,5 SP or 1,5 ECTS.
The work load is partitioned, 1 SP matches 30h.</td><td>Various
(Courses at large, from other courses of studies as well)</td></tr>
<tr><td colspan="2">Module examinations</td><td colspan="2">Written exam, seminar paper and presentation, oral exam
The required examinations will be announced at the beginning of the semester.</td></tr>
<tr><td colspan="2">Duration of the module</td><td colspan="2">☒ 1 Semester ☐ 2 Semesters</td></tr>
<tr><td colspan="2">Module can be started in</td><td colspan="2">☒ Fall Semester ☒ Spring Semester
Semester or</td></tr>
</table>

<table>
<tr><td colspan="3">Wahlmodul: Variables Modul zur Ergänzung des Wahlbereiches
Verantwortlich: Prüfungsausschuss</td><td>Studienpunkte: 3-12</td></tr>
<tr><td colspan="4">Goals:

Erwerb von Kenntnissen in Betriebs- und/oder Volkswirtschaftslehre und/oder in quantitativen Methoden.

Durch dieses Modul können Studienpunkte im Umfang der Differenz der in Pflicht-, Wahlpflicht-, bzw. Wahlmodulen erworbenen Studienpunkte zu dem Gesamtumfang von 120 Studienpunkten erworben werden. In diesem Modul sind maximal 12 SP zulässig.

In diesem Modul sind ausschließlich Lehrveranstaltungen der Wirtschaftswissenschaftlichen Fakultät enthalten, für die weniger als 6 SP vergeben werden und die nicht Bestandteil eines Pflichtmoduls sind.</td></tr>
<tr><td colspan="4">Voraussetzungen für die Teilnahme am Modul: keine</td></tr>
<tr><td>Lehr- und Lernformen</td><td>Präsenz-SWS</td><td>Anzahl der SP/ Arbeitsleistungen</td><td>Lernziele, Themen, Inhalte</td></tr>
<tr><td>Vorlesung oder Übung oder Seminar</td><td>2-8</td><td>1 SWS entspricht in der Regel 1,5 SP sowie 1,5 ECTS.
Die Arbeitsleistung ist differenziert und wird mit 30 h je SP angesetzt.</td><td>Differenziert
(Lehrveranstaltungen, auch fachfremder Studiengänge)</td></tr>
<tr><td colspan="2">Modulprüfungen</td><td colspan="2">Klausur, Seminararbeit und Präsentation, mündliche Prüfung
Die relevanten Prüfungsleistungen werden spätestens zu Semesterbeginn bekannt gegeben.</td></tr>
<tr><td colspan="2">Dauer des Moduls</td><td colspan="2">☒ 1 Semester ☐ 2 Semester</td></tr>
<tr><td colspan="2">Beginn des Moduls</td><td colspan="2">☒ WS und/oder ☐ SS</td></tr>
</table>

Elective Module for courses outside of the economic department which students may select on their own initiative **Responsible: Examinations Commission**	**Study Points: 3-33**

Goals:

According to § 6 Abs. 2 of the study regulations students may take courses, up to a total of 33 SP, outside of the Economic Department. The goal of this is to enable students to acquire further qualifications which are either subject-specific, or are foreign to the field of economics, or are interdisciplinary, so that they may further their professional orientation.

The prerequisites for attendance and participation are to be found in the regulations of the respective departments

When considering the examinations, tests and study points, the examinations commission for the Master Program in Ecomomics will decide on the basis of the following criteria:

1. Only examinations, tests and study points can be taken into consideration which were acquired in the course of academic studies. Both completed modules or individual courses from modules may be taken, in as much as the regulations of the respective course of studies allow this. In particular, academic achievements, examinations and study points for language courses, sports courses and courses taken at the Career Centre, as well as study points for courses which were not acquired within a degree programme cannot be taken into account.

2. Only those study points from courses which were successfully completed with coursework or an examination can be taken into consideration. Those courses for which the student received study points only on the basis of attendance cannot be taken into consideration.

3. Only examinations, tests and study points, can be taken into consideration, which are documented by a Transcript of Records or by a certificate of achievement. The certificate verifying this must contain the following information:

    - Title and form of the course or courses
    - Level of these courses (Master, diploma - main studies, Ph.D. program)
    - Form of the coursework done in the course and/or of the examinations
    - grade
    - SP or ECTS-points (if in the regulations or stipulations of the respective course of studies nothing is said regarding SP or ECTS-points, then alternately proof of the semester week hours will suffice).

4. Those study points which were acquired in one and the same course, cannot be divided among different modules.

5. Examinations, tests and study points which were acquired outside of the Humboldt University, will be accredited according to the stipulations of the ASSP. In addition, numbers 1 – 4 (see above) still apply. Those examinations, tests and study points which were acquired in courses, the basic and essential content of which were already successfully completed in courses taken at the Economics Department cannot be taken into consideration.

Module examinations	The examination regulations of the other departments apply in regard to the examinations.

Außerhalb der Wirtschaftswissenschaftlichen Fakultät frei wählbare Lehrveranstaltungen	**Studienpunkte: 3 - 33**

Lern- und Qualifikationsziele:

Gemäß § 6 Abs. 2 Studienordnung können im Umfang bis zu 33 SP auch außerhalb der Wirtschaftswissenschaftlichen Fakultät Lehrveranstaltungen frei gewählt werden. Ziel ist es, fachspezifische, fachfremde oder fächerübergreifende Qualifikationen im Hinblick auf die weitere berufliche Orientierung zu erwerben.

Voraussetzungen für die Teilnahme: gemäß Bestimmungen der jeweiligen Fächer

Über die Berücksichtigung der Studienleistungen, Prüfungen und SP entscheidet der Prüfungsausschuss Volkswirtschaftslehre nach folgenden Maßgaben:

1. Berücksichtigt werden Studienleistungen, Prüfungen und SP, die in Studiengängen erworben wurden. Es können ganze Module oder einzelne Lehrveranstaltungen aus Modulen belegt werden, sofern die Bestimmungen des jeweiligen Studienganges dies zulassen. Nicht berücksichtigungsfähig sind insbesondere Studienleistungen, Prüfungen und SP aus Sprachkursen, Sportkursen und Kursen des Career Centers sowie aus Kursen, die nicht in Studiengängen erworben wurden.

2. Berücksichtigt werden nur SP aus Lehrveranstaltungen, die mit einer Arbeitsleistung oder Prüfung abgeschlossen wurden. Nicht berücksichtigt werden SP, die ausschließlich für die Anwesenheit in Lehrveranstaltungen erworben wurden.

3. Berücksichtigt werden nur Studienleistungen, Prüfungen und SP, die in einem Transcript of Records bzw. Leistungsnachweis dokumentiert wurden. Der Nachweis muss folgende Angaben enthalten:

    - Titel und Art der Lehrveranstaltung(en)
    - Studienniveau (Master, Diplom Hauptstudium, Doktorandenprogramme)
    - Form der Arbeits- und/oder Prüfungsleistung(en)
    - Note
    - SP bzw. ECTS-Punkte (falls in den Bestimmungen des jeweiligen Studienganges keine SP oder ECTS-Punkte ausgewiesen sind, alternativ Nachweis der Semesterwochenstunden).

4. Bei der Berücksichtigung sind SP, die in ein und derselben Lehrveranstaltung erworben wurden, nicht auf mehrere Module aufteilbar.

5. Studienleistungen, Prüfungen und SP, die außerhalb der Humboldt-Universität zu Berlin erworben wurden, werden nach Maßgabe der ASSP anerkannt. Ergänzend gelten die Ziffern 1 bis 4. Nicht berücksichtigt werden Studienleistungen, Prüfungsleistungen und SP aus Lehrveranstaltungen, deren Inhalte im Wesentlichen bereits erfolgreich an der Wirtschaftswissenschaftlichen Fakultät absolviert wurden.

Modulprüfungen	Für die Prüfungen gelten die Prüfungsbestimmungen der anderen Fächer.