FACULTY OF MANAGEMENT, ECONOMICS AND SOCIAL SCIENCES

UNIVERSITY OF COLOGNE

VICE DEAN OF STUDIES DEPARTMENT

valid for students of the Examination Regulations 2021

(enrolment from winter semester 2021/22)

MODULE CATALOGUE

ECONOMIC RESEARCH

MASTER OF SCIENCE

IN ACCORDANCE WITH THE EXAMINATION REGULATIONS FOR THE SINGLE MAJOR MASTER PROGRAMME IN ECONOMIC RESEARCH

Universität zu Köln

Academic Director	Prof. Dr. Andreas Schabert
Programme Director	Dr. Katharina Laske
Editor	Vice Dean of Studies Department - WiSo Faculty
Student Services	WiSo-Student Service Point (WiSSPo) +49 (0) 221 / 470 - 8818 **www.wiso.uni-koeln.de/enquiry**
Status	Taking effect on 01/10/2022

List of abbreviations

AM	Advanced module	PRES	Presentation
AS	Assignment	SI	Studium Integrale
C	Course	SpM	Specialisation module
CC	Compulsory course	SuM	Supplementary module
CH	Contact hours (= time spent in class)	SPW	Semester period per week
CM	Core module	SSt	Self-study
EC	Elective course	TP	Term paper
ECTS	Credit point (ECTS)	TPF	Time required for preparation and follow-up
OE	Oral examniation	TR	Credit points transferred from an-other university
PCR	Practical component report	WL	Workload
PO	Portfolio	WT	Written test
PR	Project		

Table of content

1   Economic Research

The Master's programme in Economic Research prepares students in particular for a future career in economic research. Graduates are able to understand overall and microeconomic processes and structures, analyze them theoretically and empirically using scientific methods, develop research questions independently and make their own scientific contributions.

1.1 Content and objectives of the programme

The Master's degree corresponds to level 7 of the German Qualifications Framework/European Qualifications Framework, and to the master level of the German Qualifications Framework for University Degrees. The competencies which are acquired during the course of studies are listed below as "Intended Learning Outcomes". These Intended Learning Outcomes are comprised of "Learning Goals" and "Learning Objectives". The former are superordinate goals for the graduates of this study programme, while the latter refer to concrete tasks performed by the students.

	Graduates act as/with…
Subject-related and analytical competencies	**…theory-based econometrics specialists to develop socially relevant economic research.**
	Students apply advanced microeconomic or macroeconomic theories and methods.
	Students apply mathematical and / or econometric and experimental methods to solve economic problems and evaluate causal relationships.
	...strategic thinkers to develop solutions to economic challenges using current research ideas.
	Students derive economic relationships and forecasts theoretically and using appropriate econometric methods.
	Students analyze current research in the field of market design and behavioral economics.
	...experts in economic science issues in order to positively influence future economic challenges.
	Students engage in solution-oriented discussions of positive and normative issues in political economy, finance, and financial market instability.
	Students produce an independent scholarly paper on a selected topic.
Communicative and cooperative competencies	**...reflective discussion leaders in order to critically defend their own positions.**
	Students discuss economic topics with explicit research relevance in diverse teams and in English.
	Students scrutinize current political and social developments with regard to potential research projects.

Personal competencies	...responsible leaders to set scientific accents in the field of Economics.
	Students take a stance on responsible action, taking into account social, ethical, ecological and economic criteria.
	The students design their learning and working processes independently, assess them according to self- and external reflection and develop them continuously.

With the acquired competences, graduates have the opportunity to do a doctorate in the field of economics. Due to their distinctive knowledge of methods, graduates are also qualified for other activities which require a classical economic study. They have a wide range of employment opportunities in specifically economic fields of public institutions: Ministries, central banks, offices and authorities (such as antitrust authorities or regulatory authorities), European institutions (such as the EU Commission), international institutions (such as OECD, IMF or World Bank). In addition, research institutions and economic departments of private institutions (banks, consulting firms, large industrial enterprises, associations, media) offer fields of employment. A combination of certain specialisation modules (e.g. microeconomics, macroeconomics, media or financial market economics) with supplementary business management modules opens up additional opportunities on a job market in the field of business administration. Fields of activity can also be found in consulting companies, scientific research institutes or universities. In addition to a relevant Bachelor's degree, the requirements for admission listed in the regulations for determining special suitability must be fulfilled.

1.2 Requirements

The admission requirement for the study programme is a first professionally qualifying degree in a relevant Bachelor's programme of at least six semesters' duration, in which at least 180 credit points were acquired, or an equivalent successfully completed course of study with a final grade of 2.5 or better. Furthermore, English language skills at level C1 according to the Common European Framework of Reference for Languages are required at the beginning of the programme.

These and other subject-related requirements for the course of study are defined in the **admission regulations.**

1.3 Programme structure

The master programme is modular in its structure and the standard period of study is four terms. Students are required to accumulate 120 ECTS credits. Students first complete the core modules, which contribute a total of 36 ECTS credits. In the supplementary section (supplementary modules), students can complete 18 ECTS credits in further courses of the Master's

programme Economic Research or in the regular Master's programme Economics of the faculty. The specialisation section (specialisation modules) comprise 36 ECTS credits and consist of a selection of 4 out of 6 selectable modules which represent the faculty's economic research focus. In addition, two reading groups must be completed, in which students have the opportunity to present their research ideas to a specialist audience. Students can focus on specific topics. For the final Master's thesis and its defence, 30 LPs are planned.
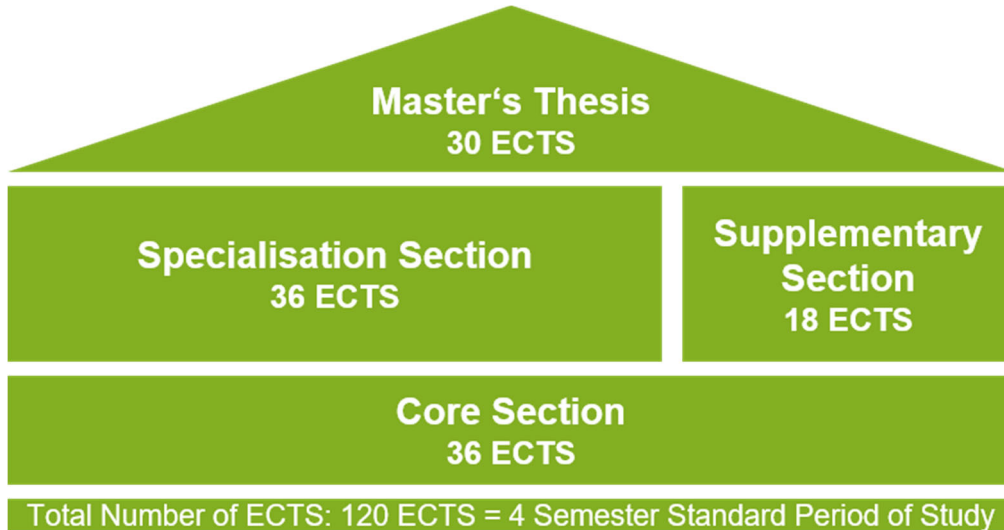
1.4 Study Abroad Option

The WiSo Faculty offers a broad range of study abroad options within an excellent network of prestigious partner universities worldwide. The so-called Study Abroad Programme (STAP) includes ERASMUS exchanges and provides an opportunity for a single-term stay at one of the WiSo Faculty's partner universities.

Successful STAP applicants benefit from direct contact and organisational support at the partner university and are exempt from paying tuition fees there. The range of universities available depends on the master programme in which the student is enrolled – the possible options are listed in the **WiSo EXchange (WEX) International Outgoings Portal** (access through the student's UoC account only), along with detailed information on each university.

In addition to these options offered by the Faculty, master students can also apply for a non-WiSo exchange, offered by Dezernat 9 – Internationales (Central International Office of the University of Cologne) within the 'fakultätsübergreifende Partnerschaften' framework. Further possibilities are going abroad as a freemover (i.e. as a student who organises his or her stay abroad individually) or participating in short-term courses or summer schools offered under separate terms and conditions.

For all study abroad options, the **International Relations Center (ZIB WiSo)** serves as point of information and advice.

The Faculty's Study Abroad Programme (STAP):

Master students should plan and submit their application for a term abroad at the beginning of their master studies. The STAP main selection round takes place once a year with application deadline 15 January and allows for an application either for fall term or spring term of the following academic year. Detailed information on the selection criteria and the best preparation for a STAP application can be found online in the **STAP Master Application Manual**. As an exception, if a certain number of slots are still available for spring term, a secondary STAP selection round will be offered in May, with a limited choice of exchange opportunities.

STAP Master – main selection round (fall term and spring term)

1 DECEMBER	15 JANUARY	MID-FEBRUARY	END OF FEBRUARY	EARLY MARCH	EARLY MARCH	MID-MARCH	15 MARCH**
APPLICATION PERIOD		RESULTS AND ACCEPTANCE PERIOD					
Beginning of STAP application period	Application deadline All applications have to be submitted via WEX	Outcome 1: Offer	Deadline for acceptance				
		or					
		Outcome 2: Alternative offer*		Handing in of new preference list	Selection result based on new preference list	Deadline for acceptance	
		or					
		Outcome 3: No offer					Last possible date for receiving an offer

* Alternative offer: if no offer can be given at one of the five preferred universities and if slots at other universities are available.
** End of main selection round. In case any exchange slots become available after 15 March, these slots will be made available in a secondary selection round.

STAP Master – secondary selection round (for spring term only)
Please note: there is no guarantee that a secondary selection round will take place every year, nor should a wide range of exchange opportunities be expected.

15 APRIL	1 JUNE	END OF JUNE	MID-JULY	MID-JULY	MID-JULY	END OF JULY	15 AUGUST
APPLICATION PERIOD*		RESULTS AND ACCEPTANCE PERIOD					
Beginning of STAP application period	Application deadline All applications have to be submitted via WEX	Outcome 1: Offer	Deadline for acceptance				
		or					
		Outcome 2: Alternative offer**		Handing in of new preference list	Selection result based on new preference list	Deadline for acceptance	
		or					
		Outcome 3: No offer					Last possible date for receiving an offer

* Deadline for handing in TOEFLS/IELTS results (if taken until 1 June): 15 June. ** Alternative offer: if no offer can be given at one of the five preferred universities and if slots at other universities are available.

Credit transfer options from studies abroad:

The WiSo Faculty has put a lot of emphasis on internationalisation in the design of its master courses, offering broad credit transfer options for all kinds of study abroad options. Each master course includes at least one "Studies Abroad" module, with a broad range of courses suitable for credit transfer. In addition, a single course-to-course credit transfer can be considered. For more information on credit transfer rules and regulations, please go to **WiSo Credit Transfer Center** > Information > Studies Abroad. For any questions regarding credit transfer, students can contact the **ZIB WiSo** or the **WiSo Credit Transfer Center**.

1.5 Sample study plans

M.Sc. Programme Economic Research

Semester						CP
1. Semester	Core Module Advanced Mathematics CC 1302MBAMT1 6 CP	Core Module Advanced Microeconomics I EC 6 CP	Core Module Advanced Macroeconomics I EC 6 CP	Core Module Advanced Econometrics I EC 6 CP	Specialisation Module (1/4) EC 6 CP	30
2. Semester	Core Module Advanced Methods EC 6 CP	Core Module II EC 6 CP	Specialisation Module (2/4) EC 6 CP	Specialisation Module (3/4) EC 6 CP	Supplementary Module (1/3) EC 6 CP	30
3. Semester	Reading Group (1/2) EC 6 CP	Reading Group (2/2) EC 6 CP	Specialisation Module (4/4) EC 6 CP	Supplementary Module (2/3) EC 6 CP	Supplementary Module (3/3) EC 6 CP	30
4. Semester	Master Thesis Economic Research & Defence CC 24 + 6 CP					30

Sections: Core | Specialisation | Supplementary

M.Sc. Programme Economic Research (with study abroad option)

Semester						CP
1. Semester	Core Module Advanced Mathematics CC 1302MBAMT1 6 CP	Core Module Advanced Microeconomics I EC 6 CP	Core Module Advanced Macroeconomics I EC 6 CP	Core Module Advanced Econometrics I EC 6 CP	Specialisation Module (1/4) EC 6 CP	30
2. Semester	Advanced Methods EC 6 CP	Core Module II EC 6 CP	Specialisation Module (2/4) EC 6 CP	Specialisation Module (3/4) EC 6 CP	Reading Group (1/2) EC 6 CP	30
3. Semester (semester abroad)	Reading Group (2/2)* EC 6 CP	Specialisation Module (4/4)* EC 6 CP	Studies Abroad in Economic Research I EC 6 CP	Studies Abroad in Economic Research II EC 6 CP	Studies Abroad in Economic Research III EC 6 CP	30
4. Semester	Master Thesis Economic Research & Defence CC 24 + 6 CP					30

Sections: Core | Specialisation | Supplementary

* Individual crediting of successfully completed studies abroad modules is possible.

1.6 Modules with mid-term examinations

Some modules have courses that only run for half a term and usually with twice the normal number of classes. For these modules, the term is divided into two roughly equal halves. In the fall, the mid-term usually ends at the beginning of December; in the spring, it is usually in the middle or at the end of May. Often, the examinations for these courses are held mid-term, enabling students to reduce their examination load at the end of term.

The information in the campus management system (KLIPS) regarding the dates of courses and examinations is relevant in this context.

1.7 Calculation of the overall mark

The marks for core, supplementary as well as specialisation sections are calculated as the weighted arithmetic mean of the marks for the respective modules, based on the weighting system described in the examination regulations. In the case of end-of-module examinations consisting of several components, the mark for the module is calculated as specified in the **examination regulations**.

The overall mark for the degree is calculated as the weighted arithmetic mean of the marks for the subject categories and the mark for the master's thesis. On the Economic Research programme, the weighting for the contributions to the overall mark is as follows:

a) Mark for core section: 36 out of 120 LP

b) Mark for specialisation section: 36 out of 120 LP

c) Mark for supplementary section: 18 out of 120 LP

d) Mark for master's thesis and defence: 30 out of 120 LP

1.8 Rules for failed attempts

Students may retake module examinations that they have failed. The number of attempts is limited to three per module. Modules offered by faculties other than the Faculty of Management, Economics and Social Sciences ("WiSo Faculty") may be subject to different rules.

After failing an exam three times, the **WiSo Student Service Point (WiSSPo)** provides information regarding the possibility and the requirements to receiving additional resit attempts. If none of the first three examination attempts were failed due to cheating or to an offence, further two resit attempts can be granted at any point of the programme. Students who have accumulated at least 90 credit points can be granted a further additional attempt. If a student fails an examination in the two additional attempts and the extra attempt for students with 90 points or more, they are deemed to have failed the programme at the final attempt. Where a module

examination consists of several components, the candidate must obtain a "bestanden" (pass) mark, or at least an "ausreichend (4,0)" (sufficient) mark, in all of the examination components.

All components marked "mangelhaft (5,0)" or "nicht bestanden" (fail) must be retaken.

It is not possible to resit module examinations that have already been passed.

A failed master's thesis can be retaken once, with a new topic. Students must register for their second attempt within six months of the result of their first attempt being announced.

2 Support for students

2.1 Course registration in KLIPS 2.0

KLIPS 2.0 is the central campus management system of the University of Cologne. At the WiSo faculty, KLIPS 2.0 serves as a student organisation tool. Students should use it as an online course catalogue, for registration and deregistration of courses and examinations, as well as an overview of the complete study programme and calendar. Information on current dates and deadlines of the WiSo faculty, as well as video tutorials and FAQs about KLIPS can be found on the homepage of **WiSo-KLIPS-Support**. If you have further questions, feel free to contact WiSo-KLIPS-Support via **e-mail** (klips-wiso@uni-koeln.de). For account questions, contact the central **KLIPS support**.

2.2 Exam registration in KLIPS 2.0

Examinations on the various programmes are always managed via KLIPS 2.0. Students must register for them within specified deadlines. Please note that registration for courses without restriction on participation via KLIPS and registration for the corresponding module examinations are two completely separate processes. In the case of courses which are subject to a restriction on participation, an examination registration is generally only possible if a registration for the course has been submitted beforehand. Most examinations in written test form are offered twice per term. Often, this will be to "space out" the dates, i.e. students can choose the date that best fits their examination schedule. In some cases, however, the second examination may be a genuine repetition of the first, depending on the department/institute concerned.

All WiSo Faculty examination candidates are entitled to see their examination papers after they have been marked. For more information, please visit the WiSo Examination Office website.

2.3 Subject-specific and examination advice

The **WiSSPo** provide general advice on studies, including the possibilities available and the requirements for all programmes offered by the WiSo Faculty. Further services include the issuing of transcripts of records in German and English, ranking certificates and letters of assignment to the appropriate term of the programme and the application for advanced / higher semester. The WiSo Student Services are also the first place to turn to for students with other questions and problems related to their studies. It can be contacted by phone, in person and, of course, via e-mail. The opening hours and contact information can be found on the corresponding website.

Subject-specific advice is provided during the designated consulting hours by the university's faculty members and associated teaching staff ("akademische Mitarbeiterinnen und Mitarbeiter") involved in the teaching of the programme. The designated times are announced by means of notices in the institutes and on the departments'/institutes' websites.

Legally binding information concerning examinations and examination procedures is provided by the **WiSo Faculty Examination Office**.

2.4 Other sources of information and advice

International students who study at the WiSo Faculty for part of their programme can turn to the **International Relations Center** for help with any questions they have. Cologne University students preparing to study abroad can also contact the ZIB for support. The center also runs a variety of summer schools, short programmes and Business English courses. The services, courses and people to contact can all be found on the website.

The Faculty's **Credit Transfer Centre** is responsible for recognising credits accumulated in other institutions. This applies both to credits students have gained at other higher education institutions in Germany or abroad prior to studying at the WiSo Faculty, and to (advance) transfer of credits that students plan to accumulate abroad or have already accumulated abroad as part of a WiSo Faculty programme. This system eliminates the need to make individual inquiries to departments/institutes and examination offices. Students can find out everything they need to know about the transfer process on the corresponding website.

The **WiSo Career Service** offers advice and support, in cooperation with other partners, for students from the WiSo Faculty looking for an internship or profession that is right for them. It also helps them as they plan their career and apply for jobs. In addition, the WiSo Career Service organises seminars, presentations and special events in cooperation with employers and external and internal experts.

The **WiSo IT Service** runs regular courses dealing with standard software and field-specific programmes.

Students who are having difficulties with their studies or their personal lives can seek help from the **Psychosocial Counselling Service** run by the Kölner Studierendenwerk. In addition to counselling, it also provides advice on writing and learning skills plus support for pregnant students and students who have children.

A further service is **Nightline** Köln, the listening and information helpline run by students for students at all of Cologne's institutions of higher education.

The WiSo student council represents the interests of all students from the WiSo faculty. In addition to advice from fellow students it also provides a variety of useful services for studying

at the WiSo faculty. Any information can be found at **wiso-buero.uni-koeln.de** or by directly writing an email to **wiso-buero@uni-koeln.de**.

3 Curriculum and module descriptions

3.1 Core section

In accordance with section 31(1), No. 1 of the Examination Regulations, the examination candidate must obtain 36 ECTS credits in the core section.

Group	Module	ECTS	CC/ EC	Required ECTS	
Core Section Economic Research	CM Advanced Mathematics	6	CC	6	36
	AM Computational Methods	6	EC	6	
	AM Selected Methods in Economics	6	EC		
	CM Advanced Microeconomics I	6	EC	6	
	CM Advanced Microeconomics II	6	EC		
	CM Advanced Macroeconomics I	6	EC	6	
	CM Advanced Macroeconomics II	6	EC		
	CM Advanced Econometrics I	6	EC	6	
	CM Advanced Econometrics II	6	EC		
	AM Computational Methods	6	EC	6	
	AM Selected Methods in Economics	6	EC		
	CM Advanced Microeconomics I	6	EC		
	CM Advanced Microeconomics II	6	EC		
	CM Advanced Macroeconomics I	6	EC		
	CM Advanced Macroeconomics II	6	EC		
	CM Advanced Econometrics I	6	EC		
	CM Advanced Econometrics II	6	EC		

3.2 Specialisation section

In accordance with section 31(1), No. 2 of the Examination Regulations, the examination candidate must obtain 36 ECTS credits in the specialisation section.

Group	Module	ECTS	CC/EC	Required ECTS	
Specialisation Section Economic Research	SpM Advanced Public Economics	6	EC	24	36
	SpM Advanced Behavioural Economics	6	EC		
	SpM Market Design and Mechanism Design	6	EC		
	SpM Political Economy and Media Economics	6	EC		
	SpM Frictions, Technology, and Inequality	6	EC		
	SpM Empirical Methods and Data Analysis II	6	EC		
	SpM Empirical Methods and Data Analysis III	6	EC		
	CM Advanced Microeconomics I	6	EC		
	CM Advanced Microeconomics II	6	EC		
	CM Advanced Macroeconomics I	6	EC		
	CM Advanced Macroeconomics II	6	EC		
	CM Advanced Econometrics I	6	EC		
	CM Advanced Econometrics II	6	EC		
	SpM Selected Issues in Economic Research I	6	EC		
	SpM Selected Issues in Economic Research II	6	EC		
	SpM Selected Issues in Economic Research III	6	WP		
	SpM Reading Group Microeconomics	6	EC	12	
	SpM Reading Group Macroeconomics	6	EC		
	SpM Reading Group Econometrics	6	EC		

3.3 Supplementary section

In accordance with section 31(1), No. 3 of the Examination Regulations, the examination candidate must obtain 18 ECTS credits in a sub-group of the supplementary section.

Group	Module	ECTS	CC/ EC	Required ECTS
Supplementary Section Economic Research	SpM Advanced Public Economics	6	EC	18
	SpM Advanced Behavioural Economics	6	EC	
	SpM Market Design and Mechanism Design	6	EC	
	SpM Political Economy and Media Economics	6	EC	
	SpM Frictions, Technology, and Inequality	6	EC	
	SpM Market Design and Behaviour I	6	EC	
	SpM Market Design and Behaviour III	6	EC	
	SpM Market Design and Behaviour V	6	EC	
	SpM Markets and Economic Policy I	6	EC	
	SpM Markets and Economic Policy II	6	EC	
	SpM Markets and Economic Policy III	6	EC	
	SpM Markets and Economic Policy IV	6	EC	
	SpM Markets and Economic Policy V	6	EC	
	SpM Empirical Methods and Data Analysis I	6	EC	
	SpM Empirical Methods and Data Analysis II	6	EC	
	SpM Empirical Methods and Data Analysis III	6	EC	
	SpM Empirical Methods and Data Analysis IV	6	EC	
	SpM Empirical Methods and Data Analysis V	6	EC	
	SuM Energy and Climate Change I	6	WP	
	SuM Energy and Climate Change II	6	WP	
	SuM Energy and Climate Change III	6	WP	
	SuM Energy and Climate Change IV	6	WP	
	SpM Business Ethics	6	EC	

SpM Strategic Human Resource Management	6	EC	
SpM Strategic Management	6	EC	
CM Comparative Political Economy	6	EC	
CM Democratic Theory and Practice	6	EC	
CM International Relations	6	EC	
CM European Politics	6	EC	
CM Comparative Political Institutions	6	EC	
CM Data Analytics I	6	EC	
CM Data Analytics III	6	EC	
CM Data Analytics V	6	EC	
CM Data Analytics II	6	EC	
CM Data Analytics IV	6	EC	
Studies Abroad I	6	EC	
Studies Abroad II	6	EC	
Studies Abroad III	6	EC	

3.4 Extracurricular course programme

In addition to their regular studies Master's students have the opportunity to take part in extra-curricular courses, in which both academic and vocational skills are taught. Thus, it can have an academic and a professional orientation, which serve the development of professional competences. The extracurricular course programme intends to promote and impart competences that go beyond specialist knowledge or concern basic scientific or personal attitudes: scientific curiosity, systematic and analytical thinking, dealing with complexity, solution-orientation and other skills, e.g. the ability to work in a team and foreign language skills.

The extracurricular course programme is offered jointly by the faculties and the Professional Centre of the University of Cologne and enables students to pursue their own additional interests, to gain insights into other subjects and faculties, to attend events of social importance, to acquire professionally relevant skills and to attend language courses. In addition, students are offered learning and study aids as part of the extracurricular programme, e.g. for scientific work or literature research. Extracurricular courses are not credited, but the participation is noted on the transcript of records.

3.5 Master's thesis

The Master's thesis is intended to prepare the processing of research projects for a doctorate. Within the framework of the Master's thesis, an economic problem must be solved independently within a given period of time (generally 6 months) and in compliance with the principles of scientific work. The aim of the Master's thesis is to develop a first research project with an innovative scientific contribution. The written thesis will be evaluated with 24 credits. The defense of the Master's thesis is evaluated with 6 credits.

To register to do their master's thesis, students must have accumulated a minimum of 60 ECTS credits. They may take no longer than six months to write the thesis. Further, more detailed information on master's theses can be found in the Examination Regulations.

3.6 Module descriptions

3.6.1 Core Section

CM Advanced Mathematics					
Module Code 1302MBAMT1	**Workload** 180h	**ECTS Credits** 6	**Module Language** English	**Module Availability** every 2nd term - winter term	**Duration** 1 Term
1	**Courses** Advanced Mathematics for Economists		**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English
2	**Module Content** • Overview of elementary mathematical concepts • Metric and standardized spaces • Linear algebra • Differential calculus and applications • Convex sets and concave functions • Optimisation				
3	**Learning Objectives** Students... ... apply mathematical argumentation and proof techniques correctly. ... formulate economic problems occurring in research mathematically and solve them.				
4	**Teaching and Learning Methods** lecture practice				
5	**Module Entry Requirements** none				
6	**Mode of End-Of-Module Examination** Written test: WT (90)				
7	**Prerequisites for Awarding of Credit Points** Passing the module examination				
8	**Other Programmes that Use the Module** Master of Science Economic Research: Core Section Economic Research				
9	**Module Manager** Univ.-Prof. Dr. Martin Barbie				
10	**Miscellaneous**				

AM Computational Methods

Module Code 1302MACMT1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Computational Methods			Contact Hours 45h	Self-Studies 135h	Course Language English
2	Module Content • Programming numerical algorithms • Numerical approximation • Numerical solution of zeroing and optimization problems • Application to canonical economic problems • Parametrization, solution and simulation of structural economic models					
3	Learning Objectives Students... ... apply numerical methods and programs for the solution and simulation of quantitative structural economic models. ... interpret results of the application of numerical models. ... use the technical language in a way that is appropriate for the target group.					
4	Teaching and Learning Methods lecture practice					
5	Module Entry Requirements none					
6	Mode of End-Of-Module Examination Written test: WT (60)					
7	Prerequisites for Awarding of Credit Points Passing the module examination					

8	Other Programmes that Use the Module
	Master of Science Economics:
	     Specialisation Section Economics
	Master of Science Economic Research:
	     Core Section Economic Research
	Master of Science Economics:
	     Supplementary Section Economics					

9	Module Manager Univ.-Prof. Dr. Andreas Schabert					
10	Miscellaneous					

valid for students of the ER 2021 (enrolment from winter semester 2021/22)

AM Selected Methods in Economics

Module Code 1289MAEXM1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Experimental Methods		**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Experimental Methods in economics • Experimental designs • Analysing experimental data

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the area of experimental Economics. ... analyse current questions and challenges in the area of Microeconomics. ... assess and discuss findings and research results of specialized methods. ... analyse data for selected scientific questions using quantitative methods. ... present scientific results in a way that is appropriate for the target audience. ... critically evaluate current social developments and develop alternative solutions. ... use techniques of scientific work and good scientific practice.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: Bachelor Level Microeconomics, Macroeconomics, Mathematics

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	     Specialisation Section Economics
	 Master of Science Economic Research:
	     Core Section Economic Research
	 Master of Science Economics:
	     Supplementary Section Economics

9	**Module Manager** Prof. Christopher Roth

10	**Miscellaneous**

CM Advanced Microeconomics I

Module Code 1289MBAMI1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Advanced Microeconomics I		**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Theory of household and demand • Theory of the enterprise and the supply • Market equilibrium

3	**Learning Objectives** Students... ... understand modern microeconomic concepts. ... are proficient in the most important techniques of microeconomic analysis, such as the analysis of individual decision-making behaviour. ... use mathematical models to investigate price formation in markets. ... modify these models to recognize their limitations and to analyse the effects of political interventions.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: Good basic knowledge of microeconomics and mathematics

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Science Economic Research: Core Section Economic Research Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Johannes Münster

10	**Miscellaneous**

CM Advanced Microeconomics II

Module Code 1289MBAMI2		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Advanced Microeconomics II			Contact Hours 60h	Self-Studies 120h	Course Language English

2	**Module Content** • Static games with complete information: Nash Equilibrium, Mixed Strategies • Dynamic games with complete information: subgame perfect Nash Equilibrium, one-shot deviation principle, bargaining, forward induction • Static games with incomplete information: Bayesian Nash Equilibrium, auctions • Dynamic games with incomplete information: Perfect Bayesian Nash Equilibrium and refinements, signalling games • Mechanism design and social preferences aggregation • Current developments in game theory and mechanism design
3	**Learning Objectives** Students... ... acquire and deepen methodological knowledge in the field of modern game theory and mechanism design. ... discuss the latest developments in game theory.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination
8	**Other Programmes that Use the Module** Master of Science Economic Research: 　　　Core Section Economic Research 　　　Specialisation Section Economic Research
9	**Module Manager** Univ.-Prof. Dr. Christoph Schottmüller
10	**Miscellaneous**

CM Advanced Macroeconomics I

Module Code 1302MBAMA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Advanced Macroeconomics I	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Stylized facts: growth and business cycles • Dynamic optimization in continuous time and in discrete time under uncertainty • Stability and uniqueness of dynamic systems • The canonical neoclassical growth model • Exogenous and endogenous growth • Real business cycles (TFP and fiscal policy shocks) • Numeral solutions, simulation and evaluation of structural models • Calibration and introduction in structural estimation of model parameter

3	**Learning Objectives** Students... ... analyse and solve the canonical models of real business cycle and growth theory at an advanced methodological level. ... apply the mathematical and numerical methods necessary to do so. ... tailor and apply these models to answer positive and normative research questions in the areas of growth and business cycle fluctuations. ... discuss the strengths and weaknesses of these models in terms of their assumptions and implications. ... parameterize models using filtered data und assess the goodness of fit. ... develop analytical skills required for research activities and further studies (doctorate). ... gain an understanding of the most important strands of the literature that prepares them for their own research at an advanced level.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Science Economic Research: Core Section Economic Research Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Peter Funk

10	**Miscellaneous** Useful references are: - Acemoglu, Daron (2008). Introduction to modern economic growth. Princeton University Press. - McCandless, George T. (2008). The ABC of RBCs. Harvard University Press. - King, Robert G. and Sergio T. Rebelo (1999). "Resuscitating real business cycles". Handbook of macroeconomics. Ed. by John B. Taylor and Michael Woodford. Vol. 1. Elsevier, 927–1007. - Chow, Gregory C. (1997). Dynamic economics: optimization by the Lagrange method. Oxford: Oxford University Press. - Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive macroeconomic theory. 3rd ed. Cambridge, MA: MIT Press. - Stokey, Nancy, Robert E. Lucas, and Edward C. Prescott (1989). Recursive methods in economic dynamics. Harvard University Press.

CM Advanced Macroeconomics II

Module Code 1302MBAMA2		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Advanced Macroeconomics II			Contact Hours 60h	Self-Studies 120h	Course Language English

2	**Module Content** • Complete markets and representative agents • Incomplete markets and heterogeneous agents • Fiscal policy, public debt, and optimal taxation • Transaction frictions and monetary policy • Open economy macroeconomics • New Keynesian macroeconomics • Labour market frictions and Labour market fluctuations
3	**Learning Objectives** Students... ... master core macroeconomic concepts for solving positive and normative problems and acquire skill for innovative research. ... deepen their knowledge of short- and medium-run macroeconomic developments and of efficient conduct of policy measures. ... evaluate and discuss the impact of empirically relevant frictions in goods, financial and labour markets. ... recognize possibilities to enhance social welfare in a general equilibrium framework with incomplete markets. ... Identify the optimal implementation of macroeconomic instruments under relevant policy trade-offs. ... question and assess societal developments, in particular, inequality and unemployment, and reflect current policy measures with regard to potential research projects.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (90)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Michael Krause, Ph.D. Univ.-Prof. Dr. Andreas Schabert

10	**Miscellaneous** Useful references are Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive mac-roeconomic theory. 3rd ed. Cambridge, MA: MIT Press; Gali, J. (2015) Monetary Policy, Inflation, and the Business Cycle An Introduction to the New Keynesian Framework and Its Applications, 2nd ed., Princeton University Press. Schmitt-Grohe, S., and Uribe M. (2017). Open Economy Macroeconomics, Princeton University Press

CM Advanced Econometrics I

Module Code 1314MBAEM1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Advanced Econometrics: Theory	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • The classic linear model • Tests in the classical linear model • Specification of econometric models • Generalised linear model • Panel data regression • Time series econometric methods • Instrument Variables / GMM • Asymptotic Inference

3	**Learning Objectives** Students... ... have basic knowledge of econometric methods, which enable them to understand scientific contributions in the field of empirical economic research and to assess the properties of quantitative methods. ... model economic relationships econometrically and choose between alternative model specifications. ... estimate parameters with suitable methods and carry out hypothesis tests.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economic Research:
	     Core Section Economic Research
	     Specialisation Section Economic Research
	 Master of Science Business Analytics & Econometrics:
	     Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung

10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

CM Advanced Econometrics II

Module Code 1314MBAEM2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Advanced Econometrics: Applications	Contact Hours 60h	Self-Studies 120h	Course Language English

2	**Module Content** • Evaluation of causal effects • Fixed effects and difference-in-difference estimator • Regression discontinuity designs • Robust standard errors and clustering • Structural estimates with experimental data
3	**Learning Objectives** Students... ... implement estimation methods and test procedures. ... discuss situation estimation and testing procedures. ... apply appropriate econometric models and the corresponding inference methods. ... carry out empirical studies in modern macro- and microeconometrics. ... report on their approach and their results.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research
	Master of Science Business Analytics & Econometrics:
	      Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung
10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

AM Computational Methods

Module Code 1302MACMT1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	**Courses** Computational Methods			**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English
2	**Module Content** • Programming numerical algorithms • Numerical approximation • Numerical solution of zeroing and optimization problems • Application to canonical economic problems • Parametrization, solution and simulation of structural economic models					
3	**Learning Objectives** Students... ... apply numerical methods and programs for the solution and simulation of quantitative structural economic models. ... interpret results of the application of numerical models. ... use the technical language in a way that is appropriate for the target group.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** none					
6	**Mode of End-Of-Module Examination** Written test: WT (60)					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Specialisation Section Economics
	Master of Science Economic Research:
	      Core Section Economic Research
	Master of Science Economics:
	      Supplementary Section Economics					

9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert					
10	**Miscellaneous**					

valid for students of the ER 2021 (enrolment from winter semester 2021/22)

AM Selected Methods in Economics

Module Code 1289MAEXM1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Experimental Methods			Contact Hours 60h	Self-Studies 120h	Course Language English
2	Module Content • Experimental Methods in economics • Experimental designs • Analysing experimental data					
3	Learning Objectives Students... ... understand advanced, specialized theories / methods in the area of experimental Economics. ... analyse current questions and challenges in the area of Microeconomics. ... assess and discuss findings and research results of specialized methods. ... analyse data for selected scientific questions using quantitative methods. ... present scientific results in a way that is appropriate for the target audience. ... critically evaluate current social developments and develop alternative solutions. ... use techniques of scientific work and good scientific practice.					
4	Teaching and Learning Methods lecture practice					
5	Module Entry Requirements Recommendation: Bachelor Level Microeconomics, Macroeconomics, Mathematics					
6	Mode of End-Of-Module Examination Written test: WT (60)					
7	Prerequisites for Awarding of Credit Points Passing the module examination					

8	Other Programmes that Use the Module
	Master of Science Economics:
	      Specialisation Section Economics
	Master of Science Economic Research:
	      Core Section Economic Research
	Master of Science Economics:
	      Supplementary Section Economics					

9	Module Manager Prof. Christopher Roth					
10	Miscellaneous					

CM Advanced Microeconomics I

Module Code		Workload	ECTS Credits	Module Language	Module Availability	Duration
1289MBAMI1		180h	6	English	every 2nd term - winter term	1 Term

1	Courses		Contact Hours	Self-Studies	Course Language
	Advanced Microeconomics I		60h	120h	English

2	**Module Content**
	• Theory of household and demand
	• Theory of the enterprise and the supply
	• Market equilibrium

3	**Learning Objectives**
	Students...
	... understand modern microeconomic concepts.
	... are proficient in the most important techniques of microeconomic analysis, such as the analysis of individual decision-making behaviour.
	... use mathematical models to investigate price formation in markets.
	... modify these models to recognize their limitations and to analyse the effects of political interventions.

4	**Teaching and Learning Methods**
	lecture
	practice

5	**Module Entry Requirements**
	Recommendation: Good basic knowledge of microeconomics and mathematics

6	**Mode of End-Of-Module Examination**
	Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points**
	Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	Core Section Economic Research
	Specialisation Section Economic Research

9	**Module Manager**
	Univ.-Prof. Dr. Johannes Münster

10	**Miscellaneous**

CM Advanced Microeconomics II

Module Code 1289MBAMI2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Advanced Microeconomics II	Contact Hours 60h	Self-Studies 120h	Course Language English

2	**Module Content** • Static games with complete information: Nash Equilibrium, Mixed Strategies • Dynamic games with complete information: subgame perfect Nash Equilibrium, one-shot deviation principle, bargaining, forward induction • Static games with incomplete information: Bayesian Nash Equilibrium, auctions • Dynamic games with incomplete information: Perfect Bayesian Nash Equilibrium and refinements, signalling games • Mechanism design and social preferences aggregation • Current developments in game theory and mechanism design
3	**Learning Objectives** Students... ... acquire and deepen methodological knowledge in the field of modern game theory and mechanism design. ... discuss the latest developments in game theory.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	    Core Section Economic Research
	    Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Christoph Schottmüller
10	**Miscellaneous**

CM Advanced Macroeconomics I

Module Code 1302MBAMA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Advanced Macroeconomics I	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Stylized facts: growth and business cycles • Dynamic optimization in continuous time and in discrete time under uncertainty • Stability and uniqueness of dynamic systems • The canonical neoclassical growth model • Exogenous and endogenous growth • Real business cycles (TFP and fiscal policy shocks) • Numeral solutions, simulation and evaluation of structural models • Calibration and introduction in structural estimation of model parameter

3	**Learning Objectives** Students... ... analyse and solve the canonical models of real business cycle and growth theory at an advanced methodological level. ... apply the mathematical and numerical methods necessary to do so. ... tailor and apply these models to answer positive and normative research questions in the areas of growth and business cycle fluctuations. ... discuss the strengths and weaknesses of these models in terms of their assumptions and implications. ... parameterize models using filtered data und assess the goodness of fit. ... develop analytical skills required for research activities and further studies (doctorate). ... gain an understanding of the most important strands of the literature that prepares them for their own research at an advanced level.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economic Research:
	    Core Section Economic Research
	    Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Peter Funk

10	**Miscellaneous** Useful references are: - Acemoglu, Daron (2008). Introduction to modern economic growth. Princeton University Press. - McCandless, George T. (2008). The ABC of RBCs. Harvard University Press. - King, Robert G. and Sergio T. Rebelo (1999). "Resuscitating real business cycles". Handbook of macroeconomics. Ed. by John B. Taylor and Michael Woodford. Vol. 1. Elsevier, 927–1007. - Chow, Gregory C. (1997). Dynamic economics: optimization by the Lagrange method. Oxford: Oxford University Press. - Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive macroeconomic theory. 3rd ed. Cambridge, MA: MIT Press. - Stokey, Nancy, Robert E. Lucas, and Edward C. Prescott (1989). Recursive methods in economic dynamics. Harvard University Press.

CM Advanced Macroeconomics II

Module Code 1302MBAMA2		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Advanced Macroeconomics II			Contact Hours 60h	Self-Studies 120h	Course Language English
2	Module Content • Complete markets and representative agents • Incomplete markets and heterogeneous agents • Fiscal policy, public debt, and optimal taxation • Transaction frictions and monetary policy • Open economy macroeconomics • New Keynesian macroeconomics • Labour market frictions and Labour market fluctuations					
3	Learning Objectives Students... ... master core macroeconomic concepts for solving positive and normative problems and acquire skill for innovative research. ... deepen their knowledge of short- and medium-run macroeconomic developments and of efficient conduct of policy measures. ... evaluate and discuss the impact of empirically relevant frictions in goods, financial and labour markets. ... recognize possibilities to enhance social welfare in a general equilibrium framework with incomplete markets. ... Identify the optimal implementation of macroeconomic instruments under relevant policy trade-offs. ... question and assess societal developments, in particular, inequality and unemployment, and reflect current policy measures with regard to potential research projects.					
4	Teaching and Learning Methods lecture practice					
5	Module Entry Requirements none					
6	Mode of End-Of-Module Examination Written test: WT (90)					
7	Prerequisites for Awarding of Credit Points Passing the module examination					

8	Other Programmes that Use the Module
	 Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research					

9	Module Manager Univ.-Prof. Michael Krause, Ph.D. Univ.-Prof. Dr. Andreas Schabert					

10	**Miscellaneous**
	Useful references are Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive mac-roeconomic theory. 3rd ed. Cambridge, MA: MIT Press; Gali, J. (2015) Monetary Policy, Inflation, and the Business Cycle An Introduction to the New Keynesian Framework and Its Applications, 2nd ed., Princeton University Press. Schmitt-Grohe, S., and Uribe M. (2017). Open Economy Macroeconomics, Princeton University Press

CM Advanced Econometrics I

Module Code 1314MBAEM1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Advanced Econometrics: Theory			**Contact Hours** 60h	**Self-Stu-dies** 120h	**Course Language** English

2	**Module Content** • The classic linear model • Tests in the classical linear model • Specification of econometric models • Generalised linear model • Panel data regression • Time series econometric methods • Instrument Variables / GMM • Asymptotic Inference
3	**Learning Objectives** Students... ... have basic knowledge of econometric methods, which enable them to understand scientific contributions in the field of empirical economic research and to assess the properties of quantitative methods. ... model economic relationships econometrically and choose between alternative model specifications. ... estimate parameters with suitable methods and carry out hypothesis tests.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	    Core Section Economic Research
	    Specialisation Section Economic Research
	Master of Science Business Analytics & Econometrics:
	    Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung
10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

CM Advanced Econometrics II

Module Code 1314MBAEM2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Advanced Econometrics: Applications	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Evaluation of causal effects • Fixed effects and difference-in-difference estimator • Regression discontinuity designs • Robust standard errors and clustering • Structural estimates with experimental data

3	**Learning Objectives** Students... ... implement estimation methods and test procedures. ... discuss situation estimation and testing procedures. ... apply appropriate econometric models and the corresponding inference methods. ... carry out empirical studies in modern macro- and microeconometrics. ... report on their approach and their results.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	    Core Section Economic Research
	    Specialisation Section Economic Research
	Master of Science Business Analytics & Econometrics:
	    Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung

10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

3.6.2 Specialisation Section

SpM Advanced Public Economics					
Module Code 1302MSAPE1	**Workload** 180h	**ECTS Credits** 6	**Module Language** English	**Module Availability** every 2nd term - winter term	**Duration** 1 Term
1	**Courses** Advanced Public Economics		**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English
2	**Module Content** • Optimal income taxation • Optimum excise duties • Optimal combination of direct and indirect taxes • Taxation of capital income • Corporate taxation • Political economy of redistributive taxes • Sufficient statistics approaches • Perturbation method • Mechanism design				
3	**Learning Objectives** Students... ... analyse tax and expenditure policy. ... discuss conflicts between efficiency and distribution targets. ... apply methods for the formal analysis of optimal tax systems. ... apply methods for the formal analysis of tax reforms.				
4	**Teaching and Learning Methods** lecture practice				
5	**Module Entry Requirements** Recommendation: basic knowledge of differential calculus, optimisation problems with constraints, knowledge of consumer theory, knowledge of game theory				
6	**Mode of End-Of-Module Examination** Written test: PO				
7	**Prerequisites for Awarding of Credit Points** Passing the module examination				

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Supplementary Section Economics
	Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research				

9	**Module Manager** Univ.-Prof. Dr. Felix Bierbrauer				
10	**Miscellaneous**				

SpM Advanced Behavioural Economics

Module Code 1289MSABE1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Behavioural Economics	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** Departing from a general treatment effects framework, this module focuses on econometric methods that are of particular use to behavioural economists. Examples are sampling and power analysis, treatment effects with and without randomisation, discrete choice, mediation analysis, treatment effect decompositions as well as structural behavioural methods.
3	**Learning Objectives** Students... ... understand what statistical/econometric considerations to take into account when generating their own data in a lab or field experiment. ... know how to choose appropriate estimators to tackle behavioural economic questions. ... know how to evaluate societally relevant policies (e.g. social or gender policies) from a behavioural economic perspective. ... know how to read/judge empirical papers in behavioural economics.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: Core Module Advanced Microeconomics I
6	**Mode of End-Of-Module Examination** Written test: PO
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Supplementary Section Economics
	Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr.' Pia Pinger
10	**Miscellaneous**

SpM Market Design and Mechanism Design

Module Code 1289MSMMD1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Matching and Market Design: Theory and Practice	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** Matching Markets, Mechanism Design with and without monetary transfers
3	**Learning Objectives** Students... ... understand leading theoretical models of mechanism market design with and without monetary transfers. ... analyse existing mechanism market designs based on a portfolio of theories, experiments and empirical analyses. ... improve existing mechanism market designs.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: Knowledge of game theory
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	       Supplementary Section Economics
	Master of Science Economic Research:
	       Specialisation Section Economic Research
	       Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Alexander Westkamp
10	**Miscellaneous**

SpM Political Economy and Media Economics

Module Code 1302MSPME1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Political Economics and Media Economics	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Aggregation of preferences and information on socially relevant issues • Models of political competition in democracies, e.g. on social issues, taxation and redistribution • Behavioural economic aspects of political competition • Interaction of media markets and politics

3	**Learning Objectives** Students... ... know classical and current research results in the field of Political Economics. ... understand formal models of political competition in democracies. ... explain empirical findings with the help of these models. ... discuss the current state of research and implications for society.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: Knowledge of game theory, knowledge of consumer behaviour theory

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	      Supplementary Section Economics
	 Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Johannes Münster

10	**Miscellaneous**

SpM Frictions, Technology, and Inequality

Module Code 1302MSFTI1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Technical Change, Labour, and Inequality	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Balanced and imbalanced growth and the dynamics of inequality in standard models with capital, skilled labour, and unskilled labour • Directed technical change, balanced growth and persistent inequality • Automation in models with directed technical change: Causes and implications. Robots: Curse or Blessing? Robots and Taxes • Persistent inequality and the dynamics of skill acquisition and labour supply • Polarization in models with occupations and tasks. Assignment models • Technical change and labour market issues: Reallocation of employment, unemployment and labour market policy • Empirical analysis of the causes and consequences of technological change and earnings inequality • Episodes of fundamental technical change as quasi-experimental settings for causal inference

3	**Learning Objectives** Students... ... develop the analytical skills to apply theoretical models dealing with the issues of this specialization. ... master advanced methods to explain empirical facts and relevant social developments (e.g. automation) and to reflect policy measure. ... discuss distributional aspects of technological change, market incompleteness, and externalities. ... communicate and apply the appropriate methods for the economic and econometric analysis of issues in this specialisation. ... discuss and evaluate empirical results and econometric methods for hypothesis testing and causal inference.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommended: CM Advanced Macroeconomics I, CM Advanced Econometrics I; CM Advanced Macroeconomics II can be attended simultaneously

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Supplementary Section Economics
	Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Peter Funk Univ.-Prof. Dr. Erik Hornung Univ.-Prof. Michael Krause, Ph.D.
10	**Miscellaneous**

SpM Empirical Methods and Data Analysis II

Module Code 1314MSEMD2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses a) Microeconometrics b) Machine Learning for Economists c) Topics in Econometrics and Statistics II	Contact Hours a) 45h b) 45h c) 45h	Self-Studies a) 135h b) 135h c) 135h	Course Language a) English b) English c) English
2	**Module Content** • Limited dependent variables • Evaluation of treatment effects • Duration analysis • Panel data and factor models			
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods. ... discuss scientific topics in a professional manner and appropriate to the situation with (non-) specialists. ... use techniques of scientific work and good scientific practice.			
4	**Teaching and Learning Methods** lecture			
5	**Module Entry Requirements** Recommendation: CM Econometrics or CM Applied Econometrics (Business Administration) or CM Advanced Econometrics			
6	**Mode of End-Of-Module Examination** Written test: WT (60)			
7	**Prerequisites for Awarding of Credit Points** Passing the examination. One course is to be attended; the examination relates to the content of one course.			

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Specialisation Section Economics
	      Supplementary Section Economics
	Master of Science Economic Research:
	      Specialisation Section Economic Research
	Master of Science Mathematik:
	      Economics
	Master of Science Wirtschaftsmathematik:
	      Economics
	Master of Science Informatik:
	      Anwendungsfeld
	Master of Science International Management:
	      Supplementary Section International Management			

		Master of Science Business Analytics & Econometrics:
		          Specialication Section Business Analytics & Econometrics
		          Supplementary Section Business Analytics & Econometrics
		Master of Science Business Administration - Supply Chain Management:
		          Supplementary Section Supply Chain Management
		Master of Science Business Administration - Marketing:
		          Supplementary Section Marketing
		Master of Science Business Administration - Finance:
		          Supplementary Section Finance
		Master of Science Information Systems:
		          Supplementary Section Information Systems
		Master of Science Business Administration - Accounting and Taxation:
		          Supplementary Section Accounting and Taxation
		Master of Science Business Administration - Corporate Development:
		          Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung	
10	**Miscellaneous**	

SpM Empirical Methods and Data Analysis III

Module Code 1314MSEMD3	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses a) Time Series Econometrics b) Stochastic Models and Processes c) Topics in Econometrics and Statistics III	Contact Hours a) 45h b) 45h c) 45h	Self-Studies a) 135h b) 135h c) 135h	Course Language a) English b) English c) English

2	**Module Content** a)Time Series Econometrics: • ARMA Models • State-Space Models • Models for Non-Stationary Time Series • Multivariate Time Series Models • Non-Stationarity in Multivariate Time Series b) Stochastic Models and Processes: • Deepening topics in statistical inference • bootstrap • nonparametric density estimation • nonparametric tests (e.g. for independence) • Brownian motions • Poisson processes • Markov processes

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: Solid basic knowledge of probability theory

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the written examination of one course. A course is to be attended; the written examination relates to the content of one course.

8	**Other Programmes that Use the Module**
	Master of Science Business Administration - Marketing:
	    Core Section Marketing
	Master of Science Economics:
	    Specialisation Section Economics
	    Supplementary Section Economics

	Master of Science Economic Research:
	     Specialisation Section Economic Research
	     Supplementary Section Economic Research
	Master of Science Mathematik:
	     Economics
	Master of Science Wirtschaftsmathematik:
	     Economics
	Master of Science Informatik:
	     Anwendungsfeld
	Master of Science International Management:
	     Supplementary Section International Management
	Master of Science Business Analytics & Econometrics:
	     Supplementary Section Business Analytics & Econometrics
	Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	     Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	Master of Science Information Systems:
	     Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	     Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	     Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Dominik Wied
10	**Miscellaneous**

CM Advanced Microeconomics I

Module Code 1289MBAMI1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term
1	**Courses** Advanced Microeconomics I			**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English
2	**Module Content** • Theory of household and demand • Theory of the enterprise and the supply • Market equilibrium					
3	**Learning Objectives** Students... ... understand modern microeconomic concepts. ... are proficient in the most important techniques of microeconomic analysis, such as the analysis of individual decision-making behaviour. ... use mathematical models to investigate price formation in markets. ... modify these models to recognize their limitations and to analyse the effects of political interventions.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** Recommendation: Good basic knowledge of microeconomics and mathematics					
6	**Mode of End-Of-Module Examination** Written test: WT (60)					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research					

9	**Module Manager** Univ.-Prof. Dr. Johannes Münster					
10	**Miscellaneous**					

CM Advanced Microeconomics II

Module Code 1289MBAMI2		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Advanced Microeconomics II			Contact Hours 60h	Self-Studies 120h	Course Language English
2	**Module Content** • Static games with complete information: Nash Equilibrium, Mixed Strategies • Dynamic games with complete information: subgame perfect Nash Equilibrium, one-shot deviation principle, bargaining, forward induction • Static games with incomplete information: Bayesian Nash Equilibrium, auctions • Dynamic games with incomplete information: Perfect Bayesian Nash Equilibrium and refinements, signalling games • Mechanism design and social preferences aggregation • Current developments in game theory and mechanism design					
3	**Learning Objectives** Students... ... acquire and deepen methodological knowledge in the field of modern game theory and mechanism design. ... discuss the latest developments in game theory.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** none					
6	**Mode of End-Of-Module Examination** Written test: WT (60)					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					

8	**Other Programmes that Use the Module**
	 Master of Science Economic Research:
	     Core Section Economic Research
	     Specialisation Section Economic Research					

9	**Module Manager** Univ.-Prof. Dr. Christoph Schottmüller					
10	**Miscellaneous**					

CM Advanced Macroeconomics I

Module Code 1302MBAMA1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term
1	**Courses** Advanced Macroeconomics I			**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Stylized facts: growth and business cycles • Dynamic optimization in continuous time and in discrete time under uncertainty • Stability and uniqueness of dynamic systems • The canonical neoclassical growth model • Exogenous and endogenous growth • Real business cycles (TFP and fiscal policy shocks) • Numeral solutions, simulation and evaluation of structural models • Calibration and introduction in structural estimation of model parameter
3	**Learning Objectives** Students... ... analyse and solve the canonical models of real business cycle and growth theory at an advanced methodological level. ... apply the mathematical and numerical methods necessary to do so. ... tailor and apply these models to answer positive and normative research questions in the areas of growth and business cycle fluctuations. ... discuss the strengths and weaknesses of these models in terms of their assumptions and implications. ... parameterize models using filtered data und assess the goodness of fit. ... develop analytical skills required for research activities and further studies (doctorate). ... gain an understanding of the most important strands of the literature that prepares them for their own research at an advanced level.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (90)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination
8	**Other Programmes that Use the Module** Master of Science Economic Research: Core Section Economic Research Specialisation Section Economic Research
9	**Module Manager** Univ.-Prof. Dr. Peter Funk

10	**Miscellaneous**
	Useful references are: - Acemoglu, Daron (2008). Introduction to modern economic growth. Princeton University Press. - McCandless, George T. (2008). The ABC of RBCs. Harvard University Press. - King, Robert G. and Sergio T. Rebelo (1999). "Resuscitating real business cycles". Handbook of macroeconomics. Ed. by John B. Taylor and Michael Woodford. Vol. 1. Elsevier, 927–1007. - Chow, Gregory C. (1997). Dynamic economics: optimization by the Lagrange method. Oxford: Oxford University Press. - Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive macroeconomic theory. 3rd ed. Cambridge, MA: MIT Press. - Stokey, Nancy, Robert E. Lucas, and Edward C. Prescott (1989). Recursive methods in economic dynamics. Harvard University Press.

CM Advanced Macroeconomics II

Module Code 1302MBAMA2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Advanced Macroeconomics II		**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content**
	• Complete markets and representative agents
	• Incomplete markets and heterogeneous agents
	• Fiscal policy, public debt, and optimal taxation
	• Transaction frictions and monetary policy
	• Open economy macroeconomics
	• New Keynesian macroeconomics
	• Labour market frictions and Labour market fluctuations

3	**Learning Objectives**
	Students...
	... master core macroeconomic concepts for solving positive and normative problems and acquire skill for innovative research.
	... deepen their knowledge of short- and medium-run macroeconomic developments and of efficient conduct of policy measures.
	... evaluate and discuss the impact of empirically relevant frictions in goods, financial and labour markets.
	... recognize possibilities to enhance social welfare in a general equilibrium framework with incomplete markets.
	... Identify the optimal implementation of macroeconomic instruments under relevant policy trade-offs.
	... question and assess societal developments, in particular, inequality and unemployment, and reflect current policy measures with regard to potential research projects.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Science Economic Research: Core Section Economic Research Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Michael Krause, Ph.D. Univ.-Prof. Dr. Andreas Schabert

10	**Miscellaneous**
	Useful references are Ljungqvist, Lars and Thomas J. Sargent (2012). Recursive mac-roeconomic theory. 3rd ed. Cambridge, MA: MIT Press; Gali, J. (2015) Monetary Policy, Inflation, and the Business Cycle An Introduction to the New Keynesian Framework and Its Applications, 2nd ed., Princeton University Press. Schmitt-Grohe, S., and Uribe M. (2017). Open Economy Macroeconomics, Princeton University Press

CM Advanced Econometrics I

Module Code 1314MBAEM1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses Advanced Econometrics: Theory		Contact Hours 60h	Self-Studies 120h	Course Language English

2	**Module Content** • The classic linear model • Tests in the classical linear model • Specification of econometric models • Generalised linear model • Panel data regression • Time series econometric methods • Instrument Variables / GMM • Asymptotic Inference
3	**Learning Objectives** Students... ... have basic knowledge of econometric methods, which enable them to understand scientific contributions in the field of empirical economic research and to assess the properties of quantitative methods. ... model economic relationships econometrically and choose between alternative model specifications. ... estimate parameters with suitable methods and carry out hypothesis tests.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research
	Master of Science Business Analytics & Econometrics:
	      Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung
10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

CM Advanced Econometrics II

Module Code 1314MBAEM2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Advanced Econometrics: Applications	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Evaluation of causal effects • Fixed effects and difference-in-difference estimator • Regression discontinuity designs • Robust standard errors and clustering • Structural estimates with experimental data

3	**Learning Objectives** Students... ... implement estimation methods and test procedures. ... discuss situation estimation and testing procedures. ... apply appropriate econometric models and the corresponding inference methods. ... carry out empirical studies in modern macro- and microeconometrics. ... report on their approach and their results.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economic Research:
	      Core Section Economic Research
	      Specialisation Section Economic Research
	Master of Science Business Analytics & Econometrics:
	      Supplementary Section Business Analytics & Econometrics

9	**Module Manager** Univ.-Prof. Dr. Jörg Breitung

10	**Miscellaneous** This module presents econometric tools for the analysis of cross-sectional data, time series and panel data at doctoral level.

SpM Selected Issues in Economic Research I

Module Code 1287MSSIE1	Workload 180h	ECTS Credits 6	Module Language German and English	Module Availability irregular	Duration 1 Term

1	**Courses** a) People Analytics & Econometrics b) Economic Engineering	**Contact Hours** a) 30h b) 45h	**Self-Stud-ies** a) 150h b) 135h	**Course Language** a) English b) English

| 2 | **Module Content** People Analytics & Econometrics: The module trains students to analyze company data using statistical software in order to evaluate the impact of management practices.

Economic Engineering: • Evaluation of the roles of theory and laboratory/field experiments in the development of markets and incentive systems • Analysis of relevant behavioural phenomena and institutional details of particular importance for specific designs • Discussion of practical applications of economic engineering in matching markets, auctions and other markets |
|---|---|
| 3 | **Learning Objectives** Students... ... acquire knowledge and skills depending on course choice. |
| 4 | **Teaching and Learning Methods** lecture practice |
| 5 | **Module Entry Requirements** Recommendation: depends on chosen course |
| 6 | **Mode of End-Of-Module Examination** Combined examination: PRES, TP |
| 7 | **Prerequisites for Awarding of Credit Points** Passing the module examination in one of the courses offered. |
| 8 | **Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research |
| 9 | **Module Manager** Univ.-Prof. Dr. Andreas Schabert |
| 10 | **Miscellaneous** |

SpM Selected Issues in Economic Research II

Module Code 1287MSSIE2	Workload 180h	ECTS Credits 6	Module Language German and English	Module Availability irregular	Duration 1 Term
1	**Courses** a) Auction Theory b) Fragile Financial Markets	**Contact Hours** a) 60h b) 45h	**Self-Studies** a) 120h b) 135h	**Course Language** a) English b) English	

2	**Module Content** Fragile Financial Markets: • Asymmetric information and financial acceleration • Limited enforcement und endogenous financial constraints • Pecuniary externalities in financial markets and fire sales • Financal regulation and corrective policies Auction Theory (winter semester, until 2022/23): • Auctions with "private values": second-price auctions, first-price auctions, reservation prices, revenue equivalence theorem, extensions • Mechanism design: revelation principle, optimal mechanisms, efficient mechanisms • Auctions with "interdependent values": comparisons of auction proceeds , linkage principle
3	**Learning Objectives** Students... ... acquire knowledge and skills depending on course choice.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: depends on chosen course
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination in one of the courses offered.
8	**Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research
9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert
10	**Miscellaneous**

SpM Selected Issues in Economic Research III

Module Code 1287MSSIE3		Workload 180h	ECTS Credits 6	Module Language German and English	Module Availability irregular	Duration 1 Term
1	**Courses**			**Contact Hours**	**Self-Studies**	**Course Language**
2	**Module Content**					
3	**Learning Objectives** Students... ... acquire knowledge and skills depending on course choice.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** Recommendation: depends on chosen course					
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					
8	**Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research					
9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert					
10	**Miscellaneous**					

SpM Reading Group Microeconomics

Module Code 1289MSGMI1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	**Courses** Reading Group Microeconomics			**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English
2	**Module Content** Current literature					
3	**Learning Objectives** Students... ... discuss current research in the field of microeconomics. ... judge academic professional articles. ... develop their own research designs against the background of existing literature.					
4	**Teaching and Learning Methods** seminar					
5	**Module Entry Requirements** Recommendation: Core Modules Advanced Mathematics, Advanced Microeconomics I					
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					
8	**Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research					
9	**Module Manager** Univ.-Prof. Dr. Alexander Westkamp					
10	**Miscellaneous**					

SpM Reading Group Macroeconomics

Module Code 1302MSGMA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Reading Group Macroeconomics	**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English

2	**Module Content** The contents are oriented towards fundamental or current scientific questions of macroeconomics.

3	**Learning Objectives** Students... ... independently deal with current scientific questions in the field of macroeconomics. ... apply the theoretical and empirical methodological knowledge gained during their studies. ... critically examine the topic-related scientific literature. ... present their state of knowledge in a lecture and discuss it with the other seminar participants. ... draft an independent scientific contribution and develop first innovative project results. ... are engaged in a scientific discourse.

4	**Teaching and Learning Methods** seminar

5	**Module Entry Requirements** Recommendation: Core Module Macroeconomics I

6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert

10	**Miscellaneous**

SpM Reading Group Econometrics

Module Code 1314MSGEM1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Reading Group Econometrics			**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English

2	**Module Content** The module deals with selected contents from econometrics and statistics, covering both methods and applications. A course can be based on a specialized textbook and recently published research papers. The module should prepare the students for their own research (which can also be the content of the respective course).
3	**Learning Objectives** Students... ... discuss current research in the field of microeconomics. ... judge academic professional articles. ... develop their own research designs against the background of existing literature.
4	**Teaching and Learning Methods** seminar
5	**Module Entry Requirements** Recommendation: Advanced Econometrics
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP
7	**Prerequisites for Awarding of Credit Points** Passing the module examination
8	**Other Programmes that Use the Module** Master of Science Economic Research: Specialisation Section Economic Research
9	**Module Manager** Univ.-Prof. Dr.' Anna Bindler
10	**Miscellaneous**

3.6.3 Supplementary Section

SpM Advanced Public Economics					
Module Code 1302MSAPE1	**Workload** 180h	**ECTS Credits** 6	**Module Language** English	**Module Availability** every 2nd term - winter term	**Duration** 1 Term
1	**Courses** Advanced Public Economics		**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English
2	**Module Content** • Optimal income taxation • Optimum excise duties • Optimal combination of direct and indirect taxes • Taxation of capital income • Corporate taxation • Political economy of redistributive taxes • Sufficient statistics approaches • Perturbation method • Mechanism design				
3	**Learning Objectives** Students... ... analyse tax and expenditure policy. ... discuss conflicts between efficiency and distribution targets. ... apply methods for the formal analysis of optimal tax systems. ... apply methods for the formal analysis of tax reforms.				
4	**Teaching and Learning Methods** lecture practice				
5	**Module Entry Requirements** Recommendation: basic knowledge of differential calculus, optimisation problems with constraints, knowledge of consumer theory, knowledge of game theory				
6	**Mode of End-Of-Module Examination** Written test: PO				
7	**Prerequisites for Awarding of Credit Points** Passing the module examination				

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	       Supplementary Section Economics
	Master of Science Economic Research:
	       Specialisation Section Economic Research
	       Supplementary Section Economic Research				

9	**Module Manager** Univ.-Prof. Dr. Felix Bierbrauer				
10	**Miscellaneous**				

SpM Advanced Behavioural Economics

Module Code 1289MSABE1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Behavioural Economics			Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** Departing from a general treatment effects framework, this module focuses on econometric methods that are of particular use to behavioural economists. Examples are sampling and power analysis, treatment effects with and without randomisation, discrete choice, mediation analysis, treatment effect decompositions as well as structural behavioural methods.
3	**Learning Objectives** Students... ... understand what statistical/econometric considerations to take into account when generating their own data in a lab or field experiment. ... know how to choose appropriate estimators to tackle behavioural economic questions. ... know how to evaluate societally relevant policies (e.g. social or gender policies) from a behavioural economic perspective. ... know how to read/judge empirical papers in behavioural economics.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: Core Module Advanced Microeconomics I
6	**Mode of End-Of-Module Examination** Written test: PO
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	       Supplementary Section Economics
	 Master of Science Economic Research:
	       Specialisation Section Economic Research
	       Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr.' Pia Pinger
10	**Miscellaneous**

SpM Market Design and Mechanism Design

Module Code 1289MSMMD1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Matching and Market Design: Theory and Practice	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** Matching Markets, Mechanism Design with and without monetary transfers
3	**Learning Objectives** Students... ... understand leading theoretical models of mechanism market design with and without monetary transfers. ... analyse existing mechanism market designs based on a portfolio of theories, experiments and empirical analyses. ... improve existing mechanism market designs.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: Knowledge of game theory
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	      Supplementary Section Economics
	Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Alexander Westkamp
10	**Miscellaneous**

SpM Political Economy and Media Economics

Module Code 1302MSPME1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Political Economics and Media Economics	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Aggregation of preferences and information on socially relevant issues • Models of political competition in democracies, e.g. on social issues, taxation and redistribution • Behavioural economic aspects of political competition • Interaction of media markets and politics

3	**Learning Objectives** Students... ... know classical and current research results in the field of Political Economics. ... understand formal models of political competition in democracies. ... explain empirical findings with the help of these models. ... discuss the current state of research and implications for society.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: Knowledge of game theory, knowledge of consumer behaviour theory

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	      Supplementary Section Economics
	 Master of Science Economic Research:
	      Specialisation Section Economic Research
	      Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Johannes Münster

10	**Miscellaneous**

SpM Frictions, Technology, and Inequality

Module Code 1302MSFTI1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Technical Change, Labour, and Inequality	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content**
	• Balanced and imbalanced growth and the dynamics of inequality in standard models with capital, skilled labour, and unskilled labour
	• Directed technical change, balanced growth and persistent inequality
	• Automation in models with directed technical change: Causes and implications. Robots: Curse or Blessing? Robots and Taxes
	• Persistent inequality and the dynamics of skill acquisition and labour supply
	• Polarization in models with occupations and tasks. Assignment models
	• Technical change and labour market issues: Reallocation of employment, unemployment and labour market policy
	• Empirical analysis of the causes and consequences of technological change and earnings inequality
	• Episodes of fundamental technical change as quasi-experimental settings for causal inference

3	**Learning Objectives**
	Students...
	... develop the analytical skills to apply theoretical models dealing with the issues of this specialization.
	... master advanced methods to explain empirical facts and relevant social developments (e.g. automation) and to reflect policy measure.
	... discuss distributional aspects of technological change, market incompleteness, and externalities.
	... communicate and apply the appropriate methods for the economic and econometric analysis of issues in this specialisation.
	... discuss and evaluate empirical results and econometric methods for hypothesis testing and causal inference.

4	**Teaching and Learning Methods**
	lecture
	practice

5	**Module Entry Requirements**
	Recommended: CM Advanced Macroeconomics I, CM Advanced Econometrics I; CM Advanced Macroeconomics II can be attended simultaneously

6	**Mode of End-Of-Module Examination**
	Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points**
	Passing the module examination.

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	Supplementary Section Economics
	Master of Science Economic Research:
	Specialisation Section Economic Research
	Supplementary Section Economic Research

9	**Module Manager** Univ.-Prof. Dr. Peter Funk Univ.-Prof. Dr. Erik Hornung Univ.-Prof. Michael Krause, Ph.D.
10	**Miscellaneous**

SpM Market Design and Behaviour I

Module Code 1289MSMDB1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Information and Strategy			**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** This module introduces students to the economics of information. It deals with strategic decisions in light of asymmetric information and also with the design of information systems. Possible topics include strategic communication, persuasion, reputation or social learning.

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the area of information economics. ... assess and discuss findings and research results of specialized theories / methods. ... discuss scientific topics in a professional manner and appropriate to the situation with (non-) specialists. ... present scientific results in a way that is appropriate for the target audience.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: CM Microeconomics or CM Microeconomics (Business Administration)

6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre: Ergänzungsbereich Economics Master of Arts Regionalstudien China - Volkswirtschaftslehre: Ergänzungsbereich Volkswirtschaftslehre Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre: Ergänzungsbereich Volkswirtschaftslehre Master of Science Geographie: Wahlpflichtfach Management & Social Sciences Master of Science Economics: Specialisation Section Economics Supplementary Section Economics Master of Science Sociology: Social Research: Supplementary Section Sociology and Social Research Master of Science Sociology: Social and Economic Psychology: Supplementary Section Sociology: Social and Economic Psychology Master of Science Economic Research: Supplementary Section Economic Research Master of Science Mathematik: Economics

	Master of Science Wirtschaftsmathematik:
	    Economics
	Master of Science Informatik:
	    Anwendungsfeld
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Arts Politikwissenschaft:
	    Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Christoph Schottmüller
10	**Miscellaneous**

SM Market Design and Behavior III

Kennnummer 1289MSMDB3	Workload 180h	LP 6	Modulspra-che Englisch	Modulbe-ginn jedes 2. Se-mester - Sommerse-mester	Moduldauer 1 Semester

1	Lehrveranstaltungen Economics of Innovation	Kontaktzeit 45h	Selbststu-dium 135h	LV-Sprache Englisch

2	**Inhalte des Moduls** Grundlegende und aktuelle Forschung im Fachgebiet Economics of Innovation: • Ideen- und Wissensproduktion, Adoption und Verbreitung von Technologien • Wettbewerb in Produktmärkten, Marktzutritt, Innovation und ökonomisches Wachstum • Innovation, Produktivität und Reallokation • Rechte an geistigem Eigentum, Wissenschaft und Grundlagenforschung • Mobilität von erfinderisch aktiven und hochqualifizierten Individuen • Entscheidungsfindung von erfinderisch und unternehmerisch aktiven Individuen • Künstliche Intelligenz, Automatisierung und digitale Transformation Empirische Modellierung und ökonometrische Methoden: • Potential Outcomes, Treatments, Zuweisungsmechanismen und Identifikation kausaler Effekte • Differenz-in-Differenzen-Methoden, Methoden mit Nutzung von Instrumentalvariablen • Propensity-Score- und Matching-Methoden, nicht- und semiparametrische Modelle, maschinelles Lernen

3	**Lernziele des Moduls** Die Studierenden... ... verstehen fortgeschrittene Methoden in Fachgebiet Economics of Innovation. ... erweitern und nutzen ihr Wissen über Ökonometrie, Wirtschaftstheorie und Datenquellen. ... beurteilen und bewerten quantitative Erkenntnisse und Forschungsergebnisse. ... präsentieren und diskutieren wissenschaftliche Beiträge, inklusive ihrer eigenen Beiträge. ... werden in neue Forschungsfragen eingeführt. ... wenden Techniken des wissenschaftlichen Arbeitens und guter wissenschaftlicher Praxis an.

4	**Lehr- und Lernformen** Vorlesung Übung

5	**Modulvoraussetzungen** Empfehlung: BM Econometrics, Microeconomics und Macroeconomics und AM Empirical Methods im M.Sc. Economics oder BM Advanced Econometrics I und II, Advanced Microeconomics I, und Advanced Macroeconomics I im M.Sc. Economic Research

6	**Form der Modulabschlussprüfung** Schriftliche Prüfung: PO

7	**Voraussetzungen für die Vergabe von Leistungspunkten** Bestehen der Modulabschlussprüfung

8	**Verwendung des Moduls (in anderen Studiengängen)**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre

	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	    Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	    Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	    Schwerpunktbereich Economics
	    Ergänzungsbereich Economics
	Master of Science Economic Research:
	    Ergänzungsbereich Economic Research
	Master of Science Mathematik:
	    Economics
	Master of Science Wirtschaftsmathematik:
	    Economics
	Master of Science Informatik:
	    Anwendungsfeld
	Master of Science Business Administration - Supply Chain Management:
	    Ergänzungsbereich Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Ergänzungsbereich Marketing
	Master of Science Business Administration - Finance:
	    Ergänzungsbereich Finance
	Master of Science Information Systems:
	    Ergänzungsbereich Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Ergänzungsbereich Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Ergänzungsbereich Corporate Development

9	**Modulbeauftragte/r** Univ.-Prof. Dr.' Susanne Prantl
10	**Sonstige Informationen** Bereitstellung weiterer Informationen in den relevanten Online-Systemen.

SpM Market Design and Behaviour V

Module Code 1289MSMDB5		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	**Courses** Corporate Taxation			**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English
2	**Module Content** • Tax competition between jurisdictions • Digitisation and Tax Policy • Reform options for corporate taxation • Cash flow based taxation, border adjustments and trade policy • Carbon pricing and border adjustments • Corporate taxation and corporate finance					
3	**Learning Objectives** Students... ... understand the implications of the digital transformation of the economy for tax policy. ... can analyse reform options for corporate taxation. ... develop a conceptual framework to think through the interdependencies of corporate taxation, trade policy and environmental policy. ... learn to communicate about policy relevant research to an academic audience. ... learn to communicate about policy relevant research to non-academic audience. ... engage in a discourse about reform options for policy design. ... analyse public policy taking account of ethical, ecological and social concerns. ... assess current tax policy debates and proposed solutions. ... use the techniques of empirical and theoretical research in applied public finance.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** Recommendation: CM Microeconomics or CM Microeconomics (Business Administration)					
6	**Mode of End-Of-Module Examination** Written test: WT (60)					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					

8	**Other Programmes that Use the Module**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	     Specialisation Section Economics
	     Supplementary Section Economics					

	Master of Science Economic Research:
	      Supplementary Section Economic Research
	Master of Science Mathematik:
	      Economics
	Master of Science Wirtschaftsmathematik:
	      Economics
	Master of Science Informatik:
	      Anwendungsfeld
	Master of Science International Management:
	      Supplementary Section International Management
	Master of Science Business Administration - Supply Chain Management:
	      Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	      Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	      Supplementary Section Finance
	Master of Science Information Systems:
	      Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	      Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	      Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Felix Bierbrauer
10	**Miscellaneous**

SpM Markets and Economic Policy I

Module Code 1302MSMEP1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term
1	**Courses** Growth, Inequality and Structural Change			**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Neoclassical Growth • The Rate and the Direction of Technical Change • Automation, Work and Leisure • Men, Robots, and Artificial Intelligence • Sectorial Change (Deindustrialisation, Services, Real Estate, Rise of the State) • Technical Change and Inequality • The Affluent Society and its Economic Problems
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... assess and discuss findings and research results of specialized theories / methods.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: CM Macroeconomics or CM Advanced Macroeconomics I
6	**Mode of End-Of-Module Examination** Written test: WT (90)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	     Specialisation Section Economics
	     Supplementary Section Economics
	Master of Science Economic Research:
	     Supplementary Section Economic Research
	Master of Science Mathematik:
	     Economics
	Master of Science Wirtschaftsmathematik:
	     Economics

	Master of Science Informatik:
	        Anwendungsfeld
	Master of Science International Management:
	        Supplementary Section International Management
	Master of Science Business Administration - Supply Chain Management:
	        Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	        Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	        Supplementary Section Finance
	Master of Science Information Systems:
	        Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	        Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	        Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Peter Funk
10	**Miscellaneous**

SpM Markets and Economic Policy II

Module Code 1302MSMEP2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability irregular	Duration 1 Term

1	Courses Money and Financial Markets	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Empirical Evidence on monetary policy effects • Transaction frictions and money demand • Financial intermediation, banks, and liquidity • Monetary policy and banking • Financial contracts • Financial acceleration • Unconventional monetary policy and interbank markets
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the area of monetary theory, policy and financial markets. ... analyse current questions and challenges in the area of monetary theory, policy and financial markets. ... assess and discuss findings and research results of specialized theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... critically evaluate current social developments and develop alternative solutions.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: CM Macroeconomics or CM Advanced Macroeconomics
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	    Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	    Ergänzungsbereich Volkswirtschaftslehre
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	    Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	    Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	    Specialisation Section Economics
	    Supplementary Section Economics
	Master of Science Sociology: Social Research:
	    Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	    Supplementary Section Sociology: Social and Economic Psychology

	Master of Science Economic Research:
	      Supplementary Section Economic Research
	 Master of Science Mathematik:
	      Economics
	 Master of Science Wirtschaftsmathematik:
	      Economics
	 Master of Science Informatik:
	      Anwendungsfeld
	 Master of Science International Management:
	      Supplementary Section International Management
	 Master of Science Business Administration - Finance:
	      Core Section Finance
	 Master of Arts Politikwissenschaft:
	      Supplementary Section Political Science
	 Master of Science Business Administration - Supply Chain Management:
	      Supplementary Section Supply Chain Management
	 Master of Science Business Administration - Marketing:
	      Supplementary Section Marketing
	 Master of Science Business Administration - Finance:
	      Supplementary Section Finance
	 Master of Science Information Systems:
	      Supplementary Section Information Systems
	 Master of Science Business Administration - Accounting and Taxation:
	      Supplementary Section Accounting and Taxation
	 Master of Science Business Administration - Corporate Development:
	      Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert
10	**Miscellaneous**

SpM Markets and Economic Policy III

Module Code 1302MSMEP3	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses Development Economics			Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Introduction to development economics based on theoretical and empirical research • Causes and consequences of poverty, underinvestment in health, education, and wealth • Risk and insurance • Methods to evaluate development projects and policies

3	**Learning Objectives** Students... ... assess and discuss findings and research results of specialized theories / methods. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: CM Econometrics or CM Applied Econometrics (Business Administration)

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	     Specialisation Section Economics
	     Supplementary Section Economics
	Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	Master of Science Economic Research:
	     Supplementary Section Economic Research

	Master of Science Mathematik:
	        Economics
	Master of Science Wirtschaftsmathematik:
	        Economics
	Master of Science Informatik:
	        Anwendungsfeld
	Master of Science International Management:
	        Supplementary Section International Management
	Master of Arts Politikwissenschaft:
	        Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	        Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	        Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	        Supplementary Section Finance
	Master of Science Information Systems:
	        Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	        Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	        Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Erik Hornung
10	**Miscellaneous**

SpM Markets and Economic Policy IV

Module Code 1302MSMEP4	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Macroeconomics of the Labour Market	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Labour Market Dynamics: job creation and destruction • Theory of Search Unemployment • The Search and Matching Model of the Labour Market • Structural Labour Market Policy: Employment Protection and Unemployment Insurance • Labour Markets and the Business Cycle • Specific Topics in Macroeconomics of the Labour Market

3	**Learning Objectives** Students... ... assess and discuss findings and research results of specialized theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... discuss scientific topics in a professional manner and appropriate to the situation with (non-) specialists. ... critically evaluate current social developments and develop alternative solutions.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: CM Macroeconomics or CM Advanced Macroeconomics; CM Microeconomics or CM Microeconomics (Business Administration) or CM Advanced Microeconomics; CM Mathematics or CM Advanced Mathematics

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	     Specialisation Section Economics
	     Supplementary Section Economics
	Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:

	Supplementary Section Sociology: Social and Economic Psychology
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science Mathematik:
	    Economics
	Master of Science Wirtschaftsmathematik:
	    Economics
	Master of Science Informatik:
	    Anwendungsfeld
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Arts Politikwissenschaft:
	    Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Michael Krause, Ph.D.
10	**Miscellaneous**

SpM Markets and Economic Policy V

Module Code 1302MSMEP5	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Determinants of Growth in Economic History	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Introduction to the determinants of long-term development and growth in economic history, especially geography, institutions and cultural factors • Methods for assessing causal relationships between the determinants and current economic development

3	**Learning Objectives** Students... ... assess and discuss findings and research results of specialized theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: CM Econometrics or CM Applied Econometrics (Business Administration)

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Arts Regionalstudien Lateinamerika - Volkswirtschaftslehre:
	     Ergänzungsbereich Economics
	 Master of Arts Regionalstudien China - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	 Master of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:
	     Ergänzungsbereich Volkswirtschaftslehre
	 Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	 Master of Science Economics:
	     Specialisation Section Economics
	     Supplementary Section Economics
	 Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	 Master of Science Economic Research:
	     Supplementary Section Economic Research
	 Master of Science Mathematik:
	     Economics

	Master of Science Wirtschaftsmathematik:
	          Economics
	Master of Science Informatik:
	          Anwendungsfeld
	Master of Arts Politikwissenschaft:
	          Supplementary Section Political Science

9	**Module Manager** Univ.-Prof. Dr. Erik Hornung
10	**Miscellaneous**

SpM Empirical Methods and Data Analysis I

Module Code 1314MSEMD1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** a) Statistical Inference b) Topics in Econometrics and Statistics I	**Contact Hours** a) 45h b) 45h	**Self-Studies** a) 135h b) 135h	**Course Language** a) English b) English

2	**Module Content** • Foundations of probability theory • Theory of point estimation and estimation techniques (e.g. maximum likelihood) • Theory of hypothesis testing and selected tests • Interval estimation

3	**Learning Objectives** Students... ... understand advanced, specialised theories / methods.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** Recommendation: solid basic knowledge of probability theory

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the written examination of one course. A course is to be attended; the written examination relates to the content of one course.

8	**Other Programmes that Use the Module**
	Master of Science Business Administration - Marketing:
	    Core Section Marketing
	Master of Science Economics:
	    Specialisation Section Economics
	    Supplementary Section Economics
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science Mathematik:
	    Economics
	Master of Science Wirtschaftsmathematik:
	    Economics
	Master of Science Informatik:
	    Anwendungsfeld
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Science Business Analytics & Econometrics:
	    Specialication Section Business Analytics & Econometrics
	    Supplementary Section Business Analytics & Econometrics
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management

	Master of Science Business Administration - Marketing:
	      Supplementary Section Marketing
	 Master of Science Business Administration - Finance:
	      Supplementary Section Finance
	 Master of Science Information Systems:
	      Supplementary Section Information Systems
	 Master of Science Business Administration - Accounting and Taxation:
	      Supplementary Section Accounting and Taxation
	 Master of Science Business Administration - Corporate Development:
	      Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Dominik Wied
10	**Miscellaneous**

SpM Empirical Methods and Data Analysis III

Module Code 1314MSEMD3	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses a) Time Series Econometrics b) Stochastic Models and Processes c) Topics in Econometrics and Statistics III	Contact Hours a) 45h b) 45h c) 45h	Self-Studies a) 135h b) 135h c) 135h	Course Language a) English b) English c) English
2	**Module Content** a)Time Series Econometrics: • ARMA Models • State-Space Models • Models for Non-Stationary Time Series • Multivariate Time Series Models • Non-Stationarity in Multivariate Time Series b) Stochastic Models and Processes: • Deepening topics in statistical inference • bootstrap • nonparametric density estimation • nonparametric tests (e.g. for independence) • Brownian motions • Poisson processes • Markov processes			
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods.			
4	**Teaching and Learning Methods** lecture practice			
5	**Module Entry Requirements** Recommendation: Solid basic knowledge of probability theory			
6	**Mode of End-Of-Module Examination** Written test: WT (90)			
7	**Prerequisites for Awarding of Credit Points** Passing the written examination of one course. A course is to be attended; the written examination relates to the content of one course.			

8	**Other Programmes that Use the Module**
	Master of Science Business Administration - Marketing:
	    Core Section Marketing
	Master of Science Economics:
	    Specialisation Section Economics
	    Supplementary Section Economics			

	Master of Science Economic Research:
	     Specialisation Section Economic Research
	     Supplementary Section Economic Research
	Master of Science Mathematik:
	     Economics
	Master of Science Wirtschaftsmathematik:
	     Economics
	Master of Science Informatik:
	     Anwendungsfeld
	Master of Science International Management:
	     Supplementary Section International Management
	Master of Science Business Analytics & Econometrics:
	     Supplementary Section Business Analytics & Econometrics
	Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	     Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	Master of Science Information Systems:
	     Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	     Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	     Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Dominik Wied
10	**Miscellaneous**

SpM Empirical Methods and Data Analysis IV

Module Code 1314MSEMD4	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term
1	**Courses** a) Statistical Analysis of Financial Data b) Topics in Econometrics and Statistics IV	**Contact Hours** a) 45h b) 45h	**Self-Studies** a) 135h b) 135h	**Course Language** a) English b) English	
2	**Module Content** • Properties of financial time series • Time series models • Efficiency of financial markets • Empirical analysis of the capital asset pricing model • Empirical analysis of intertemporal asset pricing models • Volatility models • Market Microstructure and high-frequency data				
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods. ... justify and defend (independently developed) positions or problem solutions.				
4	**Teaching and Learning Methods** lecture practice				
5	**Module Entry Requirements** Recommendation: Solid knowledge of statistical and econometric methods; CM Econometrics or CM Applied Econometrics (Business Administration) or CM Advanced Econometrics				
6	**Mode of End-Of-Module Examination** Written test: WT (90)				
7	**Prerequisites for Awarding of Credit Points** Passing the written examination of one course. A course is to be attended; the written examination relates to the content of one course.				

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	       Specialisation Section Economics
	       Supplementary Section Economics
	Master of Science Economic Research:
	       Supplementary Section Economic Research
	Master of Science Mathematik:
	       Economics
	Master of Science Wirtschaftsmathematik:
	       Economics
	Master of Science Informatik:
	       Anwendungsfeld
	Master of Science International Management:				

	Supplementary Section International Management
	Master of Science Business Administration - Finance:
	    Core Section Finance
	Master of Science Business Analytics & Econometrics:
	    Specialication Section Business Analytics & Econometrics
	    Supplementary Section Business Analytics & Econometrics
	Master of Science Business Administration - Accounting and Taxation:
	    Core Section Accounting and Taxation
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Roman Liesenfeld
10	**Miscellaneous**

SpM Empirical Methods and Data Analysis V

Module Code 1314MSEMD5	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** a) Multivariate Statistics b) Panel Data Analysis c) Bayesian Econometrics d) Topics in Econometrics and Statistics V	**Contact Hours** a) 45h b) 45h c) 45h d) 45h	**Self-Studies** a) 135h b) 135h c) 135h d) 135h	**Course Language** a) English b) English c) English d) English

2	**Module Content** a) Multivariate Statistics: • Analysis of Variance • Eigenvalues • Principal Component Analysis • Factor Analysis • Discriminant Analysis • Cluster Analysis • Multivariate Testing • Correlation Analysis b) Panel Data Analysis: • Static Panel Data Model • Dynamic Panel Data Model • Extensions • Factor Analysis c) Bayesian Econometrics: • Basic Principles of Bayesian Econometrics • Bayesian Estimators and Numerical Integration • Importance Sampling and Markov-Chain-Monte-Carlo • Gaussian Linear Regression Model with Conjugate Priors • Gaussian Linear Regression Model with Non-Conjugate Priors • Linear Regression Model with General Error Covariance Matrix • Time Series Models • Models for discrete dependent variables • Students will practice the use of the methods using econometric software to analyse economic data d) Topics in Econometrics and Statistics 5: • Recent statistical and econometric methods • Applications in business administration, management studies and economics and social sciences

3	**Learning Objectives** Students... ... understand advanced, specialized methods in Statistics and Econometrics. ... analyse current questions and challenges in Statistics and Econometrics. ... analyse data material for selected scientific questions using statistical and econometric methods. ... justify and defend (independently developed) positions or problem solutions. ... discuss scientific topics in a professional manner and appropriate to the situation with specialists. ... use techniques of scientific work and good scientific practice.

4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** Recommendation: CM Econometrics or CM Applied Econometrics (Business Administration) or CM Advanced Econometrics
6	**Mode of End-Of-Module Examination** Oral examination: OE
7	**Prerequisites for Awarding of Credit Points** Passing the oral examination of one course. A course is to be attended; the oral examination relates to the content of one course.

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	    Specialisation Section Economics
	    Supplementary Section Economics
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science Mathematik:
	    Economics
	Master of Science Wirtschaftsmathematik:
	    Economics
	Master of Science Informatik:
	    Anwendungsfeld
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Science Business Administration - Finance:
	    Core Section Finance
	Master of Science Business Analytics & Econometrics:
	    Supplementary Section Business Analytics & Econometrics
	Master of Science Business Administration - Accounting and Taxation:
	    Core Section Accounting and Taxation
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Dr. Bastian Gribisch
10	**Miscellaneous**

SuM Energy and Climate Change I

Module Code 1289MEECC1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Energy Markets and Regulation			**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Economic models of energy markets and infrastructure • Short- and long-term equilibria • Market design and regulation • Institutions and policies • New technologies

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the area of energy economics. ... discuss scientific topics in a professional manner and appropriate to the situation with (non-) specialists. ... act responsibly considering ecological, social and ethical criteria. ... critically evaluate current political, institutional, technological, and social developments.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	        Supplementary Section Economics
	 Master of Science Sociology: Social Research:
	        Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	        Supplementary Section Sociology: Social and Economic Psychology
	 Master of Science Economic Research:
	        Supplementary Section Economic Research
	 Master of Science International Management:
	        Supplementary Section International Management
	 Master of Arts Politikwissenschaft:
	        Supplementary Section Political Science
	 Master of Science Business Administration - Supply Chain Management:
	        Supplementary Section Supply Chain Management
	 Master of Science Business Administration - Marketing:
	        Supplementary Section Marketing
	 Master of Science Business Administration - Finance:

		Supplementary Section Finance Master of Science Information Systems: 　　　Supplementary Section Information Systems Master of Science Business Administration - Accounting and Taxation: 　　　Supplementary Section Accounting and Taxation Master of Science Business Administration - Corporate Development: 　　　Supplementary Section Corporate Development
9	**Module Manager** Univ.-Prof. Dr. Marc Oliver Bettzüge	
10	**Miscellaneous**	

SuM Energy and Climate Change II

Module Code 1289MEECC2	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Growth, Energy, Climate Change	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** This module sheds light on the interrelation between energy use, economic growth, and environmental impacts like climate change. It starts with an introduction on natural science foundations, especially the laws of thermodynamics and their relevance for economics. On this basis, the course covers resource economics, capital theory, the role of energy in production and economic growth, and selected issues in climate policy.

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the area of energy economics. ... analyse current questions and challenges in the area of energy economics. ... communicate continuously and purposefully in diverse teams. ... act responsibly considering ecological, social and ethical criteria.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	    Supplementary Section Economics
	Master of Science Sociology: Social Research:
	    Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	    Supplementary Section Sociology: Social and Economic Psychology
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science International Management:
	    Supplementary Section International Management
	International Master of Environmental Sciences:
	    Environmental Economics
	Master of Arts Politikwissenschaft:
	    Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing

		Master of Science Business Administration - Finance: 　　　Supplementary Section Finance Master of Science Information Systems: 　　　Supplementary Section Information Systems Master of Science Business Administration - Accounting and Taxation: 　　　Supplementary Section Accounting and Taxation Master of Science Business Administration - Corporate Development: 　　　Supplementary Section Corporate Development
9	**Module Manager** PD Dr. Dietmar Lindenberger	
10	**Miscellaneous**	

SuM Energy and Climate Change III

Module Code 1289MEECC3	Workload 180h	ECTS Credits 6	Module Language English	Module Availability irregular	Duration 1 Term

1	Courses Quantitative Methods in Energy Economics	Contact Hours 30h	Self-Studies 150h	Course Language English

2	**Module Content** • Numerical approaches to energy market modelling • Optimisation problems in energy economics • Empirical methods in energy economics

3	**Learning Objectives** Students... ... learn how to apply quantitative methods for analysing problems in energy economics. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods. ... write an academic paper on a selected topic and achieve thereby their own scientific contribution. ... present scientific results in a way that is appropriate for the target audience. ... use techniques of scientific work and good scientific practice.

4	**Teaching and Learning Methods** seminar

5	**Module Entry Requirements** Recommendation: SuM Energy and Climate Change I

6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	    Supplementary Section Economics
	Master of Science Sociology: Social Research:
	    Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	    Supplementary Section Sociology: Social and Economic Psychology
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Arts Politikwissenschaft:
	    Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	    Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	    Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:

	Supplementary Section Accounting and Taxation Master of Science Business Administration - Corporate Development: Supplementary Section Corporate Development
9	**Module Manager** Univ.-Prof. Dr. Marc Oliver Bettzüge
10	**Miscellaneous**

SuM Energy and Climate Change IV

Module Code 1289MEECC4	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** Model UNFCCC - Climate Change Strategy	**Contact Hours** 45h	**Self-Studies** 135h	**Course Language** English

2	**Module Content** • Economics of climate change • Resource economics • Fundamentals of energy economics • Environmental economics • Economics and politics of international climate change agreements

3	**Learning Objectives** Students... ... analyse current questions and challenges in the area of energy economics and climate policy. ... write an academic paper on a selected topic and achieve thereby their own scientific contribution. ... communicate continuously and purposefully in diverse teams. ... justify and defend (independently developed) positions or problem solutions. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** None

6	**Mode of End-Of-Module Examination** Written test: PO

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Economics:
	       Supplementary Section Economics
	Master of Science Sociology: Social Research:
	       Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	       Supplementary Section Sociology: Social and Economic Psychology
	Master of Science Economic Research:
	       Supplementary Section Economic Research
	Master of Science International Management:
	       Supplementary Section International Management
	Master of Arts Politikwissenschaft:
	       Supplementary Section Political Science
	Master of Science Business Administration - Supply Chain Management:
	       Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	       Supplementary Section Marketing
	Master of Science Business Administration - Finance:

	Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Marc Oliver Bettzüge
10	**Miscellaneous**

CM Comparative Political Economy

Module Code 1335MBCPE1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - summer term	Duration 1 Term

1	Courses Comparative Political Economy	Contact Hours 30h	Self-Studies 150h	Course Language English

2	**Module Content** • Approaches used in political economy and comparative research into government activity • International comparison of the political economy of markets • International comparison of political and institutional change in various areas • Specific research methods in comparative political economy

3	**Learning Objectives** Students... ... understand advanced, specialised theories / methods. ... assess and discuss findings and research results of specialised theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.

4	**Teaching and Learning Methods** lecture

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	Master of Science Geographie:
	    Wahlpflichtfach Management & Social Sciences
	Master of Science Economics:
	    Supplementary Section Management & Social Sciences
	Master of Science Sociology: Social Research:
	    Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	    Supplementary Section Sociology: Social and Economic Psychology
	Master of Arts Regionalstudien Lateinamerika - Sozialwissenschaften:
	    Ergänzung Sozialwissenschaften
	Master of Arts Regionalstudien Ost- und Mitteleuropa - Sozialwissenschaften:
	    Ergänzungsbereich Sozialwissenschaften
	Master of Science Economic Research:
	    Supplementary Section Economic Research
	Master of Science International Management:
	    Supplementary Section International Management
	Master of Science Business Administration - Finance:
	    Supplementary Section Finance
	Master of Science Information Systems:

	Supplementary Section Information Systems
	Master of Arts Regionalstudien China - Sozialwissenschaften:
	    Ergänzungsbereich Sozialwissenschaften
	Master of Arts Politikwissenschaft:
	    Core Section Political Science

9	**Module Manager** Univ.-Prof. Dr.' Christine Trampusch
10	**Miscellaneous**

CM Democratic Theory and Practice

Module Code 1335MBDTP1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Democratic Theory and Practice			**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English

2	**Module Content** • Survey of classical and contemporary democratic theory • Conceptualizing, justifying and critiquing the democratic ideal • Assessing real-world challenges to the democratic ideal, e.g. inequality, multiculturalism, globalization • Evaluating and comparing the performance of democracies and non-democracies

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... assess and discuss findings and research results of specialized theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.

4	**Teaching and Learning Methods** lecture

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	        Supplementary Section Management & Social Sciences
	 Master of Science Sociology: Social Research:
	        Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	        Supplementary Section Sociology: Social and Economic Psychology
	 Master of Arts Regionalstudien Lateinamerika - Sozialwissenschaften:
	        Ergänzung Sozialwissenschaften
	 Master of Arts Regionalstudien Ost- und Mitteleuropa - Sozialwissenschaften:
	        Ergänzungsbereich Sozialwissenschaften
	 Master of Science Economic Research:
	        Supplementary Section Economic Research
	 Master of Science International Management:
	        Supplementary Section International Management
	 Master of Science Business Administration - Finance:
	        Supplementary Section Finance
	 Master of Science Information Systems:
	        Supplementary Section Information Systems

		Master of Arts Regionalstudien China - Sozialwissenschaften:
		        Ergänzungsbereich Sozialwissenschaften
		Master of Arts Politikwissenschaft:
		        Core Section Political Science
		Master of Science Geographie:
		        Wahlpflichtfach Management & Social Sciences

9		**Module Manager** Jun.-Prof.' Chitralekha Basu, Ph.D
10		**Miscellaneous**

CM International Relations

Module Code 1335MBIRE1	Workload 180h	ECTS Credits 6	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term

1	**Courses** International Relations			**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** German and English

2	**Module Content** • International Politics • Foreign Policy • Transnational Politics • Peace and conflict studies • Security Policy • Information and Communication • Multi-level analysis
3	**Learning Objectives** Students... ... understand advanced, specialised theories / methods. ... assess and discuss findings and research results of specialised theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.
4	**Teaching and Learning Methods** seminar
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Combined examination: PRES, TP
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Geographie:
	       Wahlpflichtfach Management & Social Sciences
	 Master of Science Economics:
	       Supplementary Section Management & Social Sciences
	 Master of Science Sociology: Social Research:
	       Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	       Supplementary Section Sociology: Social and Economic Psychology
	 Master of Arts Regionalstudien Lateinamerika - Sozialwissenschaften:
	       Ergänzung Sozialwissenschaften
	 Master of Arts Regionalstudien Ost- und Mitteleuropa - Sozialwissenschaften:
	       Ergänzungsbereich Sozialwissenschaften
	 Master of Science Economic Research:
	       Supplementary Section Economic Research
	 Master of Science International Management:
	       Supplementary Section International Management

	Master of Science Business Administration - Finance:
	        Supplementary Section Finance
	 Master of Science Information Systems:
	        Supplementary Section Information Systems
	 Master of Arts Regionalstudien China - Sozialwissenschaften:
	        Ergänzungsbereich Sozialwissenschaften
	 Master of Arts Politikwissenschaft:
	        Core Section Political Science

9	**Module Manager** Univ.-Prof. Dr. Thomas Jäger
10	**Miscellaneous**

CM European Politics

Module Code 1335MBCED1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses European Politics			Contact Hours 30h	Self-Studies 150h	Course Language English

2	**Module Content** • Analytical models of European politics • Functioning of democracy in European nation states and in the European Union • Parties and Party Competition in Europe • Comparative Analysis of Political Institutions in Europe • Current Developments in Research on European Politics
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... assess and discuss findings and research results of specialized theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.
4	**Teaching and Learning Methods** lecture
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Written test: WT (60)
7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Geographie:
	     Wahlpflichtfach Management & Social Sciences
	 Master of Science Economics:
	     Supplementary Section Management & Social Sciences
	 Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	 Master of Science Economic Research:
	     Supplementary Section Economic Research
	 Master of Science International Management:
	     Supplementary Section International Management
	 Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	 Master of Science Information Systems:
	     Supplementary Section Information Systems
	 Master of Arts Regionalstudien China - Sozialwissenschaften:
	     Ergänzungsbereich Sozialwissenschaften

	Master of Arts Politikwissenschaft: Core Section Political Science
9	**Module Manager** Univ.-Prof. Dr. Sven-Oliver Proksch
10	**Miscellaneous**

CM Comparative Political Institutions

Module Code 1335MBCPI1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Comparative Political Institutions	**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English

2	**Module Content** • Institutionalism and neoinstitutionalism • Veto player and veto point theory • Theory of structure-induced equilibria • Problem areas: aggregation of individual preferences, coordination of individual decisions, collective action, delegation relationships and risk of "agency loss" • Time consistency and commitments • Endogeneity of institutions and institutional reform • Empirical findings of conventional international comparative studies

3	**Learning Objectives** Students... ... understand advanced, specialised theories / methods. ... assess and discuss findings and research results of specialised theories / methods. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials.

4	**Teaching and Learning Methods** lecture

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Written test: WT (60)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module**
	 Master of Science Geographie:
	        Wahlpflichtfach Management & Social Sciences
	 Master of Science Economics:
	        Supplementary Section Management & Social Sciences
	 Master of Science Sociology: Social Research:
	        Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	        Supplementary Section Sociology: Social and Economic Psychology
	 Master of Arts Regionalstudien Lateinamerika - Sozialwissenschaften:
	        Ergänzung Sozialwissenschaften
	 Master of Arts Regionalstudien Ost- und Mitteleuropa - Sozialwissenschaften:
	        Ergänzungsbereich Sozialwissenschaften
	 Master of Science Economic Research:
	        Supplementary Section Economic Research
	 Master of Science International Management:

	Supplementary Section International Management
	Master of Science Business Administration - Finance:
	      Supplementary Section Finance
	Master of Science Information Systems:
	      Supplementary Section Information Systems
	Master of Arts Regionalstudien China - Sozialwissenschaften:
	      Ergänzungsbereich Sozialwissenschaften
	Master of Arts Politikwissenschaft:
	      Core Section Political Science

9	**Module Manager** Univ.-Prof. Dr. André Kaiser
10	**Miscellaneous**

SpM Business Ethics

Module Code 1253MSBET1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term
1	**Courses** Managing Business Ethics in Markets and Organisations			**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English
2	**Module Content** This module introduces basic business ethics concepts and applies them to decision making of managers and employees. It draws on standard ethics theories, like teleology, deontology, virtue ethics and fairness concepts. Business decisions in organisations and markets are discussed and evaluated in the light of these foundations. Case studies are employed to illustrate and apply the theoretical concepts.					
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... assess and discuss findings and research results of specialized theories / methods. ... solve team-internal conflicts and target divergences independently. ... justify and defend (independently developed) positions or problem solutions. ... evaluate their own action processes in self- and external reflection and identify development potentials. ... act responsibly considering ecological, social and ethical criteria. ... critically evaluate current social developments and develop alternative solutions.					
4	**Teaching and Learning Methods** lecture practice					
5	**Module Entry Requirements** none					
6	**Mode of End-Of-Module Examination** Written test: WT (60)					
7	**Prerequisites for Awarding of Credit Points** Passing the module examination					

8	**Other Programmes that Use the Module**
	Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	     Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	Master of Science Information Systems:
	     Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	     Supplementary Section Accounting and Taxation
	Master of Science Informatik:
	     Anwendungsfeld
	Master of Science Geographie:					

		Wahlpflichtfach Management & Social Sciences
		Master of Science Economics:
		    Supplementary Section Management & Social Sciences
		Master of Science Sociology: Social Research:
		    Supplementary Section Sociology and Social Research
		Master of Science Sociology: Social and Economic Psychology:
		    Supplementary Section Sociology: Social and Economic Psychology
		Master of Science Economic Research:
		    Supplementary Section Economic Research
		Master of Science Gesundheitsökonomie:
		    Supplementary Section Health Economics
		Master of Arts Medienwissenschaft:
		    Ergänzungsbereich Medienmanagement und Medienökonomie
		Master of Science Mathematik:
		    Economics Sciences
		Master of Science Wirtschaftsmathematik:
		    Economics Sciences
		Master of Science International Management:
		    Supplementary Section International Management
		Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs:
		    Ergänzungbereich Wirtschaftspädagogik
		Master of Arts Regionalstudien China - Betriebswirtschaftslehre:
		    Ergänzungsbereich Business Administration
		Master of Science Business Administration - Corporate Development:
		    Specialisation Section Corporate Development

9		**Module Manager** Univ.-Prof. Dr. Bernd Irlenbusch
10		**Miscellaneous** This module can contain courses which takes place either until the middle of the semester (1. term) or from the middle of the semester (2. term). The required examinations are generally offered after the respective term.

SpM Strategic Human Resource Management

Module Code 1253MSSHR1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Strategic Human Resource Management	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** The module teaches how Human Resource Management creates economic value and contributes to the implementation of corporate strategies.

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods. ... analyse current questions and challenges. ... communicate continuously and purposefully in diverse teams. ... solve team-internal conflicts and target divergences independently. ... justify and defend (independently developed) positions or problem solutions. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** none

6	**Mode of End-Of-Module Examination** Combined examination: WT (60), PRES

7	**Prerequisites for Awarding of Credit Points** Passing the module examination

8	**Other Programmes that Use the Module** Master of Science Business Administration - Supply Chain Management: Supplementary Section Supply Chain Management Master of Science Business Administration - Marketing: Supplementary Section Marketing Master of Science Business Administration - Finance: Supplementary Section Finance Master of Science Information Systems: Supplementary Section Information Systems Master of Science Business Administration - Accounting and Taxation: Supplementary Section Accounting and Taxation Master of Science Informatik: Anwendungsfeld Master of Science Geographie: Wahlpflichtfach Management & Social Sciences Master of Science Economics: Supplementary Section Management & Social Sciences Master of Science Sociology: Social Research: Supplementary Section Sociology and Social Research

	Master of Science Sociology: Social and Economic Psychology: 　　Supplementary Section Sociology: Social and Economic Psychology Master of Science Economic Research: 　　Supplementary Section Economic Research Master of Science Gesundheitsökonomie: 　　Supplementary Section Health Economics Master of Arts Medienwissenschaft: 　　Ergänzungsbereich Medienmanagement und Medienökonomie Master of Science Mathematik: 　　Economics Sciences Master of Science Wirtschaftsmathematik: 　　Economics Sciences Master of Science International Management: 　　Supplementary Section International Management Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs: 　　Ergänzungbereich Wirtschaftspädagogik Master of Arts Regionalstudien China - Betriebswirtschaftslehre: 　　Ergänzungsbereich Business Administration Master of Science Business Administration - Corporate Development: 　　Specialisation Section Corporate Development
9	**Module Manager** Univ.-Prof. Dr. Dirk Sliwka
10	**Miscellaneous**

SpM Strategic Management

Module Code 1253MSSMG1		Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Strategic Management (1. Term)			Contact Hours 60h	Self-Studies 120h	Course Language English
2	Module Content • Fundamentals of strategic management • Basic concepts and tools for analysing strategic positioning for companies on the market • Basic concepts and tools for analysing competition • Applying theoretical concepts on strategic positioning and competition in case studies					
3	Learning Objectives Students... ... analyse current questions and challenges. ... assess and discuss findings and research results of specialized theories / methods. ... collect and analyse data material for selected scientific questions using quantitative / qualitative methods. ... communicate continuously and purposefully in diverse teams. ... solve team-internal conflicts and target divergences independently. ... justify and defend (independently developed) positions or problem solutions. ... present scientific results in a way that is appropriate for the target audience. ... evaluate their own action processes in self- and external reflection and identify development potentials. ... act responsibly considering ecological, social and ethical criteria. ... critically evaluate current social developments and develop alternative solutions. ... develop work processes for real problems and challenges.					
4	Teaching and Learning Methods lecture practice					
5	Module Entry Requirements none					
6	Mode of End-Of-Module Examination Written test: WT (60)					
7	Prerequisites for Awarding of Credit Points Passing the module examination					

8	Other Programmes that Use the Module
	Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	     Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	Master of Science Information Systems:
	     Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	     Supplementary Section Accounting and Taxation					

		Master of Science Informatik:
		     Anwendungsfeld
		 Master of Science Geographie:
		     Wahlpflichtfach Management & Social Sciences
		 Master of Science Economics:
		     Supplementary Section Management & Social Sciences
		 Master of Science Sociology: Social Research:
		     Supplementary Section Sociology and Social Research
		 Master of Science Sociology: Social and Economic Psychology:
		     Supplementary Section Sociology: Social and Economic Psychology
		 Master of Science Economic Research:
		     Supplementary Section Economic Research
		 Master of Science Gesundheitsökonomie:
		     Supplementary Section Health Economics
		 Master of Arts Medienwissenschaft:
		     Ergänzungsbereich Medienmanagement und Medienökonomie
		 Master of Science Mathematik:
		     Economics Sciences
		 Master of Science Wirtschaftsmathematik:
		     Economics Sciences
		 Master of Science International Management:
		     Supplementary Section International Management
		 Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs:
		     Ergänzungbereich Wirtschaftspädagogik
		 Master of Arts Regionalstudien China - Betriebswirtschaftslehre:
		     Ergänzungsbereich Business Administration
		 Master of Science Business Administration - Corporate Development:
		     Specialisation Section Corporate Development

9		**Module Manager** Univ.-Prof. Dr. Matthias Heinz
10		**Miscellaneous**

CM Data Analytics I

Module Code 1314MBSTC1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses Statistics for Data Analytics		Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Probability theory: Probabiltity distributions, (conditional) density functions • Linear (multiple) regression, conditional expectation function • Assumptions, model selection, hypotheses test • Maximum Likelihood • Time Series
3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the field of statistics. ... analyse current questions and challenges in the field of statistics. ... assess and discuss findings and research results of specialized theories / methods. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.
4	**Teaching and Learning Methods** lecture practice
5	**Module Entry Requirements** none
6	**Mode of End-Of-Module Examination** Combined examination: WT (60), PRES
7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module**
	Master of Science Business Analytics & Econometrics:
	      Core Section Business Analytics & Econometrics
	Master of Science Economics:
	      Supplementary Section Management & Social Sciences
	Master of Arts Politikwissenschaft:
	      Supplementary Section Political Science
	Master of Science Sociology: Social Research:
	      Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	      Supplementary Section Sociology: Social and Economic Psychology
	Master of Science International Management:
	      Supplementary Section International Management
	Master of Science Economic Research:
	      Supplementary Section Economic Research
	Master of Science Business Administration - Supply Chain Management:
	      Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:

		Supplementary Section Marketing
		Master of Science Business Administration - Finance:
		      Supplementary Section Finance
		Master of Science Information Systems:
		      Supplementary Section Information Systems
		Master of Science Business Administration - Accounting and Taxation:
		      Supplementary Section Accounting and Taxation
		Master of Science Business Administration - Corporate Development:
		      Supplementary Section Corporate Development

9		**Module Manager** Univ.-Prof. Dr. Markus Weinmann
10		**Miscellaneous** Literature: Wooldridge, "Introductory Econometrics" (chapter 1-9)

CM Data Analytics II

Module Code 1277MBPDA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Programming for Data Analytics	**Contact Hours** 30h	**Self-Studies** 150h	**Course Language** English

2	**Module Content** • Introduction to the statistical software R, including statistical modelling in R • Use of R for data analysis and presentation • Introduction to programming in R and the design of user-defined statistical diagrams

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the field of programming and data analytics. ... analyse current questions and challenges in the field of programming and data analytics. ... assess and discuss findings and research results of specialized theories / methods. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture

5	**Module Entry Requirements** None

6	**Mode of End-Of-Module Examination** Written test: PO

7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module** Master of Science Business Analytics & Econometrics: Core Section Business Analytics & Econometrics Master of Science Economics: Supplementary Section Management & Social Sciences Master of Arts Politikwissenschaft: Supplementary Section Political Science Master of Science Sociology: Social Research: Supplementary Section Sociology and Social Research Master of Science Sociology: Social and Economic Psychology: Supplementary Section Sociology: Social and Economic Psychology Master of Science International Management: Supplementary Section International Management Master of Science Economic Research: Supplementary Section Economic Research Master of Science Business Administration - Supply Chain Management: Supplementary Section Supply Chain Management Master of Science Business Administration - Marketing: Supplementary Section Marketing Master of Science Business Administration - Finance:

	Supplementary Section Finance
	Master of Science Information Systems:
	    Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	    Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	    Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Markus Weinmann
10	**Miscellaneous** Literature: Wickham, "R for Data Science"

CM Data Analytics III

Module Code 1277MBMLA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	**Courses** Machine Learning and Artificial Intelligence	**Contact Hours** 60h	**Self-Studies** 120h	**Course Language** English

2	**Module Content** • Basics of the methods of Machine Learning and Artificial Intelligence (AI) • Basics of both supervised and unsupervised methods (e.g. decision trees, random forests, boosting, support vector machines, neural networks, deep and opponent learning, ensemble learning, principal component analysis, factor analysis and diverse learning or multidimensional scaling) • Translation of business problems into machine learning use cases; feasibility and impact • Responsible implementation of machine learning projects in compliance with ethical standards

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the field of machine learning and AI. ... analyse current questions and challenges in the field of machine learning and AI. ... assess and discuss findings and research results of specialized theories / methods. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** None

6	**Mode of End-Of-Module Examination** Written test: PO

7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module**
	 Master of Science Business Analytics & Econometrics:
	     Core Section Business Analytics & Econometrics
	 Master of Science Economics:
	     Supplementary Section Management & Social Sciences
	 Master of Arts Politikwissenschaft:
	     Supplementary Section Political Science
	 Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	 Master of Science International Management:
	     Supplementary Section International Management
	 Master of Science Economic Research:
	     Supplementary Section Economic Research
	 Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management

	Master of Science Business Administration - Marketing:
	        Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	        Supplementary Section Finance
	Master of Science Information Systems:
	        Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	        Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	        Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Markus Weinmann
10	**Miscellaneous** Literature: James, Witten, Hastie, Tibshirani, "Intorduction to statistical learning"

CM Data Analytics IV

Module Code 1314MBAST1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses Advanced Statistics for Data Analysis	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Potential Outcomes and Treatment Effects • Randomized Experiments • Matching Estimators • Regression Discontinuity • Instrumental Variables • Difference-in-Differences Estimation

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the field of advanced statistics. ... analyse current questions and challenges in the field of advanced statistics. ... assess and discuss findings and research results of specialized theories / methods. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** None

6	**Mode of End-Of-Module Examination** Written test: PO

7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module**
	Master of Science Business Analytics & Econometrics:
	     Core Section Business Analytics & Econometrics
	Master of Science Economics:
	     Supplementary Section Management & Social Sciences
	Master of Arts Politikwissenschaft:
	     Supplementary Section Political Science
	Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	Master of Science International Management:
	     Supplementary Section International Management
	Master of Science Economic Research:
	     Supplementary Section Economic Research
	Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management

	Master of Science Business Administration - Marketing:
	      Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	      Supplementary Section Finance
	Master of Science Information Systems:
	      Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	      Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	      Supplementary Section Corporate Development

9	**Module Manager** Univ.-Prof. Dr. Markus Weinmann
10	**Miscellaneous** Literature: Angrist and Pischke, "Mostly Harmless Econometrics"

CM Data Analytics V

Module Code 1277MBDMA1	Workload 180h	ECTS Credits 6	Module Language English	Module Availability every 2nd term - winter term	Duration 1 Term

1	Courses Data Management and Data Visualization	Contact Hours 45h	Self-Studies 135h	Course Language English

2	**Module Content** • Fundamentals of data storage, data cleansing and retrieval; data use and data quality for data analysis • Fundamentals of metadata; methods of data integration; data models and software architectures for the integration of different data types • Data management methods and practices (e.g. relational databases, SQL, NoSQL databases, data manipulation, access to data sources, Web APIs, scraping/crawling and parsing of text data) • Basics of data visualization (e.g. cognition, design principles for diagrams and graphics, visualization of different data types) • Methods and techniques of data visualization (e.g. tableau, R, dashboards, digital presentations)

3	**Learning Objectives** Students... ... understand advanced, specialized theories / methods in the field of programming and data analytics. ... analyse current questions and challenges in the field of programming and data analytics. ... assess and discuss findings and research results of specialized theories / methods. ... act responsibly considering ecological, social and ethical criteria. ... develop work processes for real problems and challenges.

4	**Teaching and Learning Methods** lecture practice

5	**Module Entry Requirements** None

6	**Mode of End-Of-Module Examination** Written test: WT (90)

7	**Prerequisites for Awarding of Credit Points** Passing the module examination.

8	**Other Programmes that Use the Module**
	Master of Science Business Analytics & Econometrics:
	      Core Section Business Analytics & Econometrics
	Master of Science Economics:
	      Supplementary Section Management & Social Sciences
	Master of Arts Politikwissenschaft:
	      Supplementary Section Political Science
	Master of Science Sociology: Social Research:
	      Supplementary Section Sociology and Social Research
	Master of Science Sociology: Social and Economic Psychology:
	      Supplementary Section Sociology: Social and Economic Psychology
	Master of Science International Management:
	      Supplementary Section International Management

	Master of Science Economic Research:
	Supplementary Section Economic Research
	Master of Science Business Administration - Supply Chain Management:
	Supplementary Section Supply Chain Management
	Master of Science Business Administration - Marketing:
	Supplementary Section Marketing
	Master of Science Business Administration - Finance:
	Supplementary Section Finance
	Master of Science Information Systems:
	Supplementary Section Information Systems
	Master of Science Business Administration - Accounting and Taxation:
	Supplementary Section Accounting and Taxation
	Master of Science Business Administration - Corporate Development:
	Supplementary Section Corporate Development
9	**Module Manager** Univ.-Prof. Dr. Markus Weinmann
10	**Miscellaneous**

Studies Abroad I

Module Code 1014MESAb1	Workload 180h	ECTS Credits 6	Module Language selected language	Module Availability every term	Duration 1 Term
1	**Courses**		Contact Hours	Self-Studies	Course Language

2	**Module Content** depends on course selection
3	**Learning Objectives** Students... ... acquire knowledge and skills depending on their choice of course.
4	**Teaching and Learning Methods** depending on course choice
5	**Module Entry Requirements** depends on course selection
6	**Mode of End-Of-Module Examination** TR - depending on course selection
7	**Prerequisites for Awarding of Credit Points** depends on course selection

8	**Other Programmes that Use the Module**
	 Master of Science Economics:
	     Supplementary Section Management & Social Sciences
	 Master of Science Sociology: Social Research:
	     Supplementary Section Sociology and Social Research
	 Master of Science Sociology: Social and Economic Psychology:
	     Supplementary Section Sociology: Social and Economic Psychology
	 Master of Science Economic Research:
	     Supplementary Section Economic Research
	 Master of Science International Management:
	     Supplementary Section International Management
	 Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs:
	     Ergänzungbereich Wirtschaftspädagogik
	 Master of Arts Politikwissenschaft:
	     Supplementary Section Political Science
	 Master of Science Business Analytics & Econometrics:
	     Supplementary Section Business Analytics & Econometrics
	 Master of Science Business Administration - Supply Chain Management:
	     Supplementary Section Supply Chain Management
	 Master of Science Business Administration - Marketing:
	     Supplementary Section Marketing
	 Master of Science Business Administration - Finance:
	     Supplementary Section Finance
	 Master of Science Information Systems:
	     Supplementary Section Information Systems
	 Master of Science Business Administration - Accounting and Taxation:
	     Supplementary Section Accounting and Taxation
	 Master of Science Business Administration - Corporate Development:
	     Supplementary Section Corporate Development

9	**Module Manager**
10	**Miscellaneous** Language: can be held in English or in any language offered at the host university. This module can be studied at a higher education institution in another country. There is a standardised crediting procedure for such cases. Information about course crediting (deadlines and procedures) can be obtained from the Credit Transfer Centre (WiSo Credit Transfer Centre: https://www.anrechnungwiso.uni-koeln.de/) This module can also be taken as part of a summer school organised by the WiSo Faculty. In this case, students must register for the examination in accordance with the rules of the WiSo Faculty prior to embarking on the module.

Studies Abroad II

Module Code 1014MESAb2		Workload 180h	ECTS Credits 6	Module Language selected language	Module Availability every term	Duration 1 Term
1	**Courses**			**Contact Hours**	**Self-Studies**	**Course Language**
2	**Module Content** depends on course selection					
3	**Learning Objectives** Students... ... acquire knowledge and skills depending on their choice of course.					
4	**Teaching and Learning Methods** depending on course choice					
5	**Module Entry Requirements** depends on course selection					
6	**Mode of End-Of-Module Examination** TR - depending on course selection					
7	**Prerequisites for Awarding of Credit Points** depends on course selection					
8	**Other Programmes that Use the Module** Master of Science Business Administration - Supply Chain Management: Supplementary Section Supply Chain Management Master of Science Business Administration - Marketing: Supplementary Section Marketing Master of Science Business Administration - Finance: Supplementary Section Finance Master of Science Information Systems: Supplementary Section Information Systems Master of Science Business Administration - Accounting and Taxation: Supplementary Section Accounting and Taxation Master of Science Business Administration - Corporate Development: Supplementary Section Corporate Development Master of Science Economics: Supplementary Section Management & Social Sciences Master of Science Sociology: Social Research: Supplementary Section Sociology and Social Research Master of Science Sociology: Social and Economic Psychology: Supplementary Section Sociology: Social and Economic Psychology Master of Science Economic Research: Supplementary Section Economic Research Master of Science International Management: Supplementary Section International Management Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs: Ergänzungbereich Wirtschaftspädagogik Master of Arts Politikwissenschaft: Supplementary Section Political Science Master of Science Business Analytics & Econometrics: Supplementary Section Business Analytics & Econometrics					

9	**Module Manager**
10	**Miscellaneous** Language: can be held in English or in any language offered at the host university. This module can be studied at a higher education institution in another country. There is a standardised crediting procedure for such cases. Information about course crediting (deadlines and procedures) can be obtained from the Credit Transfer Centre (WiSo Credit Transfer Centre: https://www.anrechnungwiso.uni-koeln.de/) This module can also be taken as part of a summer school organised by the WiSo Faculty. In this case, students must register for the examination in accordance with the rules of the WiSo Faculty prior to embarking on the module.

Studies Abroad III

Module Code 1014MESAb3		Workload 180h	ECTS Credits 6	Module Language selected language	Module Availability every term	Duration 1 Term
1	**Courses**			**Contact Hours**	**Self-Studies**	**Course Language**
2	**Module Content** depends on course selection					
3	**Learning Objectives** Students... ... acquire knowledge and skills depending on their choice of course.					
4	**Teaching and Learning Methods** depending on course choice					
5	**Module Entry Requirements** depends on course selection					
6	**Mode of End-Of-Module Examination** TR - depending on course selection					
7	**Prerequisites for Awarding of Credit Points** depends on course selection					
8	**Other Programmes that Use the Module** Master of Science Business Administration - Supply Chain Management: Supplementary Section Supply Chain Management Master of Science Business Administration - Marketing: Supplementary Section Marketing Master of Science Business Administration - Finance: Supplementary Section Finance Master of Science Information Systems: Supplementary Section Information Systems Master of Science Business Administration - Accounting and Taxation: Supplementary Section Accounting and Taxation Master of Science Business Administration - Corporate Development: Supplementary Section Corporate Development Master of Science Sociology: Social Research: Supplementary Section Sociology and Social Research Master of Science Sociology: Social and Economic Psychology: Supplementary Section Sociology: Social and Economic Psychology Master of Science Economic Research: Supplementary Section Economic Research Master of Science International Management: Supplementary Section International Management Master of Education Wirtschaftspädagogik/Lehramt an Berufskollegs: Ergänzungbereich Wirtschaftspädagogik Master of Arts Politikwissenschaft: Supplementary Section Political Science					
9	**Module Manager**					

10	**Miscellaneous** Language: can be held in English or in any language offered at the host university. This module can be studied at a higher education institution in another country. There is a standardised crediting procedure for such cases. Information about course crediting (deadlines and procedures) can be obtained from the Credit Transfer Centre (WiSo Credit Transfer Centre: https://www.anrech-nungwiso.uni-koeln.de/) This module can also be taken as part of a summer school organised by the WiSo Faculty. In this case, students must register for the examination in accordance with the rules of the WiSo Faculty prior to embarking on the module.

3.6.4 Master Thesis

Master thesis in Economic Research and Colloquium					
Module Code 1287MMERE1	**Workload** 900h	**ECTS Credits** 30	**Module Language** German and English	**Module Availability** every term	**Duration** 1 Term
1	**Courses**		**Contact Hours**	**Self-Studies**	**Course Language**
2	**Module Content** The topic of the Master's thesis must emphasize the methods of economics learned during the course of study.				
3	**Learning Objectives** Students... ... know the current state of the theoretical and methodical discussions of the subject and use it through independent scientific work. ... identify scientifically viable questions and problems. ... work on these questions independently on the basis of the relevant primary and secondary literature. ... formulate theoretical and methodical (qualitative and/or quantitative) approaches for scientific research work. ... draw up a research plan and implement it independently. ... organise and design a scientific research process. ... collect relevant data on their own responsibility and evaluate them methodically and competently. ... discuss theoretical and methodical problems in depth in exchange with teachers, other students and those interested in the subject. ... critically evaluate research results and develop scientifically and socially relevant conclusions from research results.				
4	**Teaching and Learning Methods** Master's thesis defense Master's Thesis				
5	**Module Entry Requirements** 60 ECTS credits obtained				
6	**Mode of End-Of-Module Examination** Kombinierte Prüfung: RE, schriftliche Abschlussarbeit 6 Monate				
7	**Prerequisites for Awarding of Credit Points** Passing the module examination				
8	**Other Programmes that Use the Module** Master of Science Economic Research: Master Thesis in Economic Research				
9	**Module Manager** Univ.-Prof. Dr. Andreas Schabert				
10	**Miscellaneous**				