

**School of Business and Economics** 

# **International Module Handbook for Exchange Students**

Academic Year 2023/24

# Introduction

#### **Modules**

The International Module Handbook compiles all English-taught modules that are available at the School of Business and Economics. The full list of the modules offered at the School of Business and Economics can be found in our module handbooks (German):

- Module handbook: Bachelor
- Module handbook: Master

Alternatively, have a look at our <u>University Course Catalogue in ALMA</u>. You can switch to English by clicking on the flag in the upper right hand corner.

As an exchange student, you are free to choose from all of our modules, provided that you meet the respective language and academic requirements of the course. Please note that some courses have a limited attendance. You need to apply for these courses and, as for our degree students, we are unable to guarantee your application will be successful.

The module number of Business modules starts with a B, the module number of Economics modules starts with an E. Statistics modules start with S and Data Science modules with DS. Undergraduate modules have numbers starting with 1 to 3, indicating in which year of studies students should participate (e.g. B290 is a business course recommended for second year Bachelor students). Modules on Master level have module numbers starting with 4 and 5. "Cycle" indicates in which term a module is offered. WS means that the class takes place in winter term and SS means that the class takes place in summer term.

For each class, you will receive 3, 6 or 9 ECTS credits, depending on the workload of the course. The workload per credit is about 30 hours, including the time of attendance, preparation for the course and studying for the exam.

As an incoming exchange student at the School of Business and Economics, you can also register for courses from the Transdisciplinary Course Programme or study languages:

- <u>Transdisciplinary Course Programme</u>
- Learn German and find out about Germany
- Learning languages at the Foreign Language Center

#### Learning Agreement

All ERASMUS and CIVIS students need to complete a learning agreement and have it approved and signed by the Erasmus Office of the School of Business and Economics. The learning agreement includes a list of courses you will attend during the period of study you are staying here as an exchange student.

Our Student Mobility Coordinator handles these learning agreements and you are very welcome to contact her, should you have any questions regarding your course selection. Please use the following contact details for the University of Tübingen, when completing your Learning Agreement:

Contact person: Sarah Düring, Student Mobility Coordinator,

exchange@wiwi.uni-tuebingen.de

Responsible person: Prof. Dr. Frank Stähler, Departmental Erasmus Coordinator,

erasmus@wiwi.uni-tuebingen.de

Please note that since the Learning Agreement is created well in advance of your stay, it can only be considered a preliminary course selection and is NOT an automatic course enrollment. You will always have to check double-check with the <u>University Course Catalogue</u>, that the courses you wish to take actually take place in the respective semester.

### **Course Registration**

Registration modalities vary from course to course. Please check the course entry in the <u>University Course Catalogue in ALMA</u> as well as on the departmental websites if registration is required. Generally, no registration is necessary for lectures ("Vorlesung"), but sometimes for the accompanying tutorials ("Übung"). Colloquiums and seminars often require registration. The registration usually remains open until the first week of lectures.

#### **Exams**

In order to receive ECTS credits, you have to pass an exam or assignment. The exam period usually starts in the last week of lectures and lasts until the end of the second week of the semester break. Please consider this when planning your stay in Tübingen.

**EXAM REGISTRATION:** You need to register for all of your exams which shall be included on your transcript during the exam registration period. Exam registration also applies for classes which do not have an official final exam but where you submit regular coursework during the lecture period or participate actively. The regular exam registration period takes place 2 months after the semester start:

• Winter semester: 1st Monday in December – mid-January

Summer semester: 1st Monday in June – mid-July

You will be informed about the exact dates of the exam registration period for each semester via email. Where possible, you need to register for all of your exams directly in ALMA. If exam registration is not possible via ALMA, please use the special exam registration form for exchange students. Details can be found on the website for exam registration of exchange students by the Central Examination Office.

#### **Transcript**

Please note: No credits (ECTS) are granted for attendance. You usually have to pass an oral or written exam or hand in a paper. In order to find and download your transcript from ALMA go to: *alma > My Studies > "My Achievements" and there the box "Transcript of Records for Incoming Exchange students"* 

This transcript shows all examination results provided to the Central Examination Office at that specific point of time. Be aware, that it can take some time until your lecturer/examiner has corrected and uploaded your exam results. Generally, your transcript can only contain exam results processed via ALMA. The standard transcript you can download from ALMA yourself as a student shows all passed and failed exams. You can request a transcript with only passed exams when requesting your directly transferred final transcript. Once all your results are complete in ALMA, you (not your home university) can request your final transcript by sending the form Request for digitaly transferred final transcript to exchange-exams@uni-tuebingen.de.

# Important Contacts at the School of Business and Economics

#### **Departmental Erasmus Coordinator**

Prof. Dr. Frank Stähler Strategic questions in the area of international relations

#### exchange@wiwi.uni-tuebingen.de

+49 (0) 7071/78185

Nauklerstraße 47, 72074 Tübingen

#### **Student Mobility Coordinator**

Sarah Düring

(Online) Learning Agreements, questions regarding academic matters of your exchange

#### exchange@wiwi.uni-tuebingen.de

+49 (0) 7071/29-78185

Appointments via email

Nauklerstraße 47, 72074 Tübingen

#### **Academic Advisory Service**

Bachelor: <a href="mailto:studienfachberatung@wiwi.uni-tuebingen.de">studienfachberatung@wiwi.uni-tuebingen.de</a>

Master: master@wiwi.uni-tuebingen.de

+49 (0) 7071/29-76415

Nauklerstraße 47, 72074 Tübingen

# **Important Contacts in the International Office**

#### **Exchange Student Service Center: Incoming Team**

Application and admission of students, administrative service during your studies in Tübingen, Exchange Buddy Program

incoming@zv.uni-tuebingen.de

+49 (0) 7071/29-77797

Wilhelmstraße 9, 72074 Tübingen

Appointments via this portal

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# **B290 Global Strategy**

B.Sc./B.Ed.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning

**Methods** 

lecture (2 SWS) tutorial (2 SWS) / independent study, oral participation

Method of Assessment written exam (90 minutes)

Course Work Group presentation

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module will discuss challenges of strategic relevance to a company and responses to address those challenges from the perspective of a multinational company's top management. Topics presented include:

- a) the industry-based view of strategy
- b) the resource-based view of strategy
- c) the institution-based view of strategy.

#### **Objectives**

In this module, students learn to identify and understand decisions of strategic relevance to a company on a global level. Students will learn to describe and evaluate a firm's corporate strategy and on this basis develop solutions for strategic dilemmas in real-life case studies.

# **B3X1** Banking and Finance I

Banking and Finance I B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung und Übung (4 SWS) / Präsentation von Übungsaufgaben,

Methods Mitarbeit, Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise werden konkrete Entscheidungsprobleme aus dem Bereich der Unternehmensfinanzierung, etwa über den Verschuldungsgrad oder über die Ausschüttungspolitik sowie deren Einbindung in ein Kapitalmarktgleichgewicht behandelt.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen und finanzwirtschaftliche Konzepte erläutern und anwenden.

# **B3X2** Banking and Finance II

Banking and Finance II B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung mit Übung (4 SWS) / Präsentation von Übungsaufgaben, Mitarbeit,

Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Methods

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise vermittelt es einen Überblick über Aufbau und Organisation (institutionelle Ausgestaltung) von Finanzmärkten sowie einen Einblick in das deutsche Banken- und Börsensystem.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen und beispielsweise die Regulierungsbedürftigkeit von Banken und Börsen begründen und wiedergeben.

# **B3X3 Banking and Finance III**

Banking and Finance III B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung mit Übung (4 SWS) / Präsentation von Übungsaufgaben, Mitarbeit,

Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Methods

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise werden die Besonderheiten eines grenzüberschreitenden Finanzmanagements in den Mittelpunkt gerückt und wechselkursrisikobezogene Entscheidungsprobleme gelöst.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen. Sie können beispielsweise das Spannungsfeld von Hedging und Spekulation analysieren und Modelle zur Bewertung von Währungsderivaten erklären.

# **B3X4 Banking and Finance IV**

Banking and Finance IV

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung mit Übung (4 SWS) / Präsentation von Übungsaufgaben, Mitarbeit,

Methods Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise werden ökonometrische Modelle und Schätzmethoden eingeführt und deren Anwendungsmöglichkeiten besprochen.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen. Beispielsweise können Studierende ökonometrische Schätzungen und Tests mit geeigneter Software durchführen und die Ergebnisse wissenschaftlich korrekt interpretieren.

# **B3X5** Banking and Finance V

Banking and Finance V

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung mit Übung (4 SWS) / Präsentation von Übungsaufgaben, Mitarbeit,

Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Methods

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise werden im Rahmen dieses Moduls zentrale Finanzprodukte vorgestellt und Modelle zur Bewertung entwickelt.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen. Beispielsweise können Studierende adäquate Modelle zur Bewertung von Finanzprodukte beschreiben und gegenüberstellen und das Risikoprofil von Anleihen und Derivaten erläutern.

# **B3X6 Banking and Finance VI**

Banking and Finance VI B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 210

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung (1 SWS) Übung (1 SWS) / Präsentation von Übungsaufgaben,

Methods Mitarbeit, Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise vermittelt es einen Einstieg in die durch den Klimawandel ausgelösten Chancen und Risiken für Finanzmarktteilnehmer wie Industrieunternehmen, Geschäftsbanken und Zentralbanken.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen. Schließlich lernen sie, Fachartikel zu praktischen oder theoretischen Themen zu interpretieren und können beispielsweise mit dem Klimawandel verbundene Chancen und Risiken beschreiben sowie deren makro- und mikroökonomische Wirkungsketten analysieren.

# **B3X7 Banking and Finance VII**

Banking and Finance VII B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 210

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning Vorlesung (1 SWS) Übung (1 SWS) / Präsentation von Übungsaufgaben,

Mitarbeit, Gruppendiskussion, Selbststudium, Literaturstudium

Method of Assessment Klausur (90 Minuten), oder Hausarbeit oder Präsentation

Course Work Siehe einzelne Lehrveranstaltung und Informationen auf Alma

Prerequisites B110 Einführung in die Betriebswirtschaftslehre, B200 Investition und

Finanzierung

Person Responsible Prof. Dr. Monika-Gehde-Trapp, Prof. Dr. Christian Koziol, Prof. Dr. Werner

Neus

#### Content

Methods

Das Modul befasst sich mit theoretischen, empirischen und institutionellen Fragen der Finanzwirtschaft. Beispielsweise geht es um die bilanzielle Erfassung finanzwirtschaftlicher Vorgänge im Rahmen eines HGB-oder eines IFRS-Jahresabschlusses, und die gleichermaßen mit einem theoretisch-konzeptionellen und einem fallstudienbasierten Zugang.

#### **Objectives**

Die Studierenden erwerben institutionelle Kenntnisse und können die Bedeutung verschiedener Elemente des Finanzsystems beurteilen. Die Studierenden sind in der Lage, eine quantitative Analyse finanzwirtschaftlicher Fragen durchzuführen. Zudem können sie finanzwirtschaftliche Ansätze in das Spannungsfeld zwischen theoretischen und berufsfeldbezogenen Anforderungen einordnen. Schließlich lernen sie, Fachartikel zu praktischen oder theoretischen Themen zu interpretieren. Sie können beispielsweise das Hedge Accounting erklären und kennen die wichtigsten Bewertungseinheiten im Bereich der Rechnungslegung von Finanzinstrumenten.

# **B320 Market Research**

B.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / Oral participation, independent study,

Methods literature study

Method of Assessment written exam (60 minutes)

Course Work Assignments

Prerequisitesbasic marketing knowledgePerson ResponsibleProf. Dr. Dominik Papies

#### Content

This module covers all relevant aspects of a market research project.

1. Data Collection

- 2. Data Visualization
- 3. Data Analysis

#### **Objectives**

Students know how to conduct their own market research project, they are able to use appropriate data collection methods, and analyze data with appropriate tools. They can implement the relevant steps in appropriate statistical software (e.g., R) by writing code. In the tutorial, students will apply the knowledge they acquire in lecture to selected marketing research problems.

# **B321 Aspects of Marketing Management 1**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning Lecture and tutorial (4 SWS) / oral participation, independent study, literature

Methods study

Method of Assessment written exam (60 minutes), or oral examination or assignments

Course Work ---

Prerequisitesbasic marketing knowledgePerson ResponsibleProf. Dr. Dominik Papies

#### Content

Students extend their knowledge in selected areas of marketing by choosing appropriate courses. These courses cover elements of the marketing mix (e.g., in branding), recent developments in research and management, or methods and tools that are relevant for marketing management.

#### **Objectives**

Students can analyze relevant problems in marketing management. Students know how to choose and apply appropriate tools for solving problems in marketing management, and they can assess the merits of different tools and solutions.

# **B322 Aspects of Marketing Management 2**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning Lecture and tutorial (4 SWS) / oral Participation, independent study, literature

Methods study

Method of Assessment written exam (60 minutes), or oral examination or assignments

Course Work ---

Prerequisitesbasic marketing knowledgePerson ResponsibleProf. Dr. Dominik Papies

#### Content

Students extend their knowledge in selected areas of marketing by choosing appropriate courses. These courses cover elements of the marketing mix, recent developments in research (e.g., in consumer behavior) and management, or methods and tools that are relevant for marketing management.

#### **Objectives**

Students can analyze relevant problems in marketing management. Students know how to choose and apply appropriate tools for solving problems in marketing management, and they can assess the merits of different tools and solutions.

# **B323 Aspects of Marketing Management 3**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning Lecture and tutorial (4 SWS) / oral participation, independent study, literature

**Methods** study

Method of Assessment written exam (60 minutes), or oral examination or assignments

Course Work ---

Prerequisitesbasic marketing knowledgePerson ResponsibleProf. Dr. Dominik Papies

#### Content

Students extend their knowledge in selected areas of marketing by choosing appropriate courses. These courses cover elements of the marketing mix, recent developments in research and management (e.g., in international marketing), or methods and tools that are relevant for marketing management.

#### **Objectives**

Students can analyze relevant problems in marketing management. Students know how to choose and apply appropriate tools for solving problems in marketing management, and they can assess the merits of different tools and solutions.

# B330A Accounting Information and Strategic Cost Management 1

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / discussion, oral participation, independent

Methods stud

Method of Assessment written exam (60 minutes)

Course Work --Prerequisites B130

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

This module analyzes the decision-facilitating and strategic role of managerial accounting. Managers have the responsibility and authority for making decisions with respect to the acquisition and the use of an organization's resources. To effectivley do this, they must identify the actions or strategies available to them, predict the relevant consequences of those actions, and then choose the action that has the most preferred predicted outcome. Management accounting systems can be effective tools in providing information that is useful in predicting the possible consequences of alternative actions and in presenting a description of those consequences. The course covers topics such as the use of financial and non-financial information, transfer pricing, budgeting, cost estimation, and capital budgeting.

#### **Objectives**

Students develop analytics skills with respect to the identification and use of decision-relevant accounting information. They are able to identify, differentiate and critically evaluate the use of accounting information concepts. Students are also able to explain the traid-offs that emerge when using accounting information data.

# B330B Accounting Information and Strategic Cost Management 2

B.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) colloquium (1 SWS) / discussion, oral

Methods participation, independent study, exercise (homework), discussion, groupwork

Method of Assessment written exam (60 minutes)

Course Work Case Study

Prerequisites B130

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

This module analyzes the decision-facilitating and strategic role of managerial accounting. Managers have the responsibility and authority for making decisions with respect to the acquisition and the use of an organization's resources. To effectivley do this, they must identify the actions or strategies available to them, predict the relevant consequences of those actions, and then choose the action that has the most preferred predicted outcome. Management accounting systems can be effective tools in providing information that is useful in predicting the possible consequences of alternative actions and in presenting a description of those consequences. The module covers topics such as the use of financial and non-financial information, transfer pricing, budgeting, cost estimation, and capital budgeting.

#### **Objectives**

Students develop analytic skills with respect to the identification and use of decision-relevant accounting information. They are able to identify, differentiate and critically evaluate the use of accounting information concepts. Students are also able to explain the trade-offs that emerge when using accounting information data. In the accompanying colloquium, students learn how to apply the concepts learned in the lecture to real-life business problems of firms by the means of case studies. Students work in student teams and take on the role of real decision-makers. They are able to discuss specific managerial decision problems, apply concepts of managerial economics to the problem set and develop appropriate solutions. Students evaluate different decision alternatives and present their solutions to the audience.

# B331 Specific Topics in Managerial Accounting & Organisation

Organisation B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning

**Methods** 

lecture (2 SWS) tutorial (2 SWS) / Mitarbeit, Selbststudium, Literaturstudium

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work ---

Prerequisites depending on specific course

Person Responsible Prof. Dr. Patrick Kampkötter, Prof. Dr. Kerstin Pull

#### Content

The module covers specific topics in the context of managerial accounting and organization, e.g., organizational behavior (OB) as a concept to better understand the attitudes and behaviors of individuals and groups in organizations, an integrated bottom-up analysis of innovation processes or the organizational structure of multinational corporations.

#### **Objectives**

Students gain in-depth knowledge of specific topics in the context of managerial accounting and organization. They are able to apply their knowledge from managerial accounting and organization to specific topics. For example, students are able to apply key figures from the cost information system and develop suitable management strategies from them. They are able to analyze strategic behavior in interdependent decision-making situations and create solutions for existing organizational problems.

### **B353 International Taxation**

B.Sc.

**ECTS-Credits** 6

**Workload Hours** Contact Hours: 20 Independent Study: 160

**Duration** 1 Semester

SS Cycle Language **English** 

Course Type / Learning Lecture (1 SWS) and tutorial (1 SWS) in block format at the beginning of the **Methods** 

term (saturday). Date will be announced via Alma and the chair's homepage /

participation, group discussion, self-study

**Method of Assessment** written exam (60 minutes)

**Course Work** Presentation

**Prerequisites** Basic knowledge on Business Taxation as presented in B350 Grundlagen der

Besteuerung is advisable, but no formal prerequisite.

Prof. Dr. Martin Ruf **Person Responsible** 

#### Content

This module provides an overview on the basics of international taxation. The taxation of different forms of international investments and the tax effects caused by the financing decisions made on these international investments will be closer looked at. Furthermore the influence of the EU on taxation will be described.

#### **Objectives**

Students understand the basics of international taxation. Students are able to distinguish between permanent establishments and subsidiaries and their implications concerning taxation. Furthermore, students are capable of presenting and discussing different subjects e.g. in the field of base erosion and profit shifting or other relevant topics in international taxation.

# **B383 Current Topics in Financial Accounting and Financial Analysis**

B.Sc./M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (1 SWS) tutorial (1 SWS) / Group discussion, presentation,

independent study, literature study

Method of Assessment written exam (60 minutes), or presentation or term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Jörg-Markus Hitz

#### Content

Methods

This module, with varying emphases, acquaints students with current topics in Financial Accounting and Financial Analysis. Topics in Financial Accounting include complex accounting treatments under IFRS that are typically relevant to multi-national firms, e.g., accounting for business combinations and goodwill, impairment testing, accounting for employee benefits and stock options. Topics in Financial Analysis include accounting-based securities valuation and analysis of IFRS financial statements.

#### **Objectives**

Upon completion of this module, students command profound knowledge of current topics in Financial Accounting and Financial Analysis, which they are able to apply to complex real-world cases.

# **B390 International Business**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning led

Methods

lecture (2 SWS) tutorial (2 SWS) / independent study, oral participation

Method of Assessment written exam (90 minutes)

Course Work Group presentation

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module discusses international business environments and operations. Topics presented include:

a) external influences on multinational corporations

- b) organizational structures of multinational corporations
- c) international management in different functional areas.

#### **Objectives**

In this module, students learn to identify and understand the managerial opportunities and challenges globalization has created for multinational corporations. They describe cultural and political influences on international business and evaluate the choices how multinational corporations can adapt to those influences.

# **B394 Innovative Topics in International Business I**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning

Methods

Seminar (2 SWS) / independent study, literature study

Method of Assessmentdepending on the individual courseCourse WorkDepending on the specific course

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module presents innovative and relevant topics of International Business. Key topics might include, for example:

- a) Chinese Management
- b) Cross-cultural Negotiations
- c) Digital Transformation in the Global Economy

#### **Objectives**

This module explores in its various parts selected topis of International Business that are innovative and of high relevance in a more introductory fashion, suitable for Bachelor students. It can enable students to better understand basic principles of management and business systems of selected countries, such as China, with a focus on cross-cultural aspects. Students will learn how organizations but also teams and individuals can successfully address such new challenges in the business world.

# **B395 Innovative Topics in International Business II**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning

Methods

Seminar (2 SWS) / independent study, literature study

Method of Assessmentdepending on the individual courseCourse WorkDepending on the specific course

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module presents innovative and relevant topics of International Business. Key topics might include, for example:

- a) Leadership and Business Negotiation Across Cultures
- b) Applied Research in International Business

#### **Objectives**

This module explores in its various parts selected topis of International Business that are innovative and of high relevance in a more introductory fashion, suitable for Bachelor students. It enables students to better understand basic principles of management such as leadership negotiations or research with qualitative methods in international management.

# **DS320 Introduction to Data Science**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture and tutorial (2 SWS) / Oral participation, independent study, literature

Methods study

Method of Assessment written exam (60 minutes)

Course Work Assignments

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

This module provides an introduction into the field of Data Science. It will define the idea of Data Science, describe its relation to related fields, provide an overview over different statistical software packages that are used in Data Science, and introduce different statistical concepts that are used in Data Science. In addition, it will introduce students to examples of applications of Data Science in different scientific fields.

#### **Objectives**

Students know how to define the field of Data Science. They are aware of different approaches in terms of programming language and statistical approach, and can relate these to different examples of how Data Science has been used to generate new knowledge. Furthermore, they are able to independently analyze economic data with econometric methods in order to derive decision-making foundations for decisions in companies.

# **E210 Microeconomics II**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 75 Independent Study: 105

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (3 SWS) tutorial (2 SWS) / oral participation, group discussion, self-

Methods study

Method of Assessment written exam (90 minutes)

Course Work ----

Prerequisites E170 Intermediate Microeconomics

Person Responsible Prof. Dr. Georg Wamser

#### Content

The module deals with the basics of public economics. The following topics are covered:

- 1. the role of the state in the economy
- 2. allocation and efficiency in the exchange and production economy
- 3. public goods
- 4. club goods, local public goods and fiscal federalism
- 5. externalities
- 6. imperfect competition
- 7. asymmetric information
- 8. economics of taxation

#### **Objectives**

Students apply microeconomic methods and the principles of economic reasoning to central questions of economic policy. Students justify state intervention through regulation and tax policy. They interpret empirical data as well as regularities in the data, and apply empirical analytical methods to better understand empirical relationships in a multivariate context. In the tutorials, students apply microeconomic methods to analyze and better understand the specific mechanisms justifying governments' intervention in the market economy.

# **E230 Macroeconomics II**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning

**Methods** 

lecture (2 SWS) tutorial (2 SWS) / oral participation, self-study, literature study

Method of Assessment written exam (90 minutes)

Course Work ---

Prerequisites E130 Macroeconomics I; E170 Intermediate Microeconomics or L203 Basics

in Economics (teacher training) - Labour and financial markets

Person Responsible Dr. Christian Manger

#### Content

Students will be enabled to i) critically evaluate macroeconomic models dealing with growth, ii) better understand empirical observations relating to economic growth, and iii) to better assess economic policy problems and reform proposals related to growth and development. In addition, they will be enabled to explain the purpose and limits of abstract economic models.

#### **Objectives**

Students will be enabled to i) critically evaluate macroeconomic models dealing with growth, ii) better understand empirical observations relating to economic growth, and iii) to better understand economic policy problems and reform proposals related to growth and development. In addition, they will be enabled to understand the usefulness and limits of abstract economic models of the macroeconomy.

# E311 Corporate Tax Policy in an International Setting

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (2 SWS) tutorial (1 SWS) / oral participation, group discussion,

**Methods** independent study

Method of Assessment written exam (60 minutes)

Course Work ---

PrerequisitesE210 Microeconomics IIPerson ResponsibleProf. Dr. Georg Wamser

#### Content

The module offers a discussion on corporate taxation in an international context. It provides a theoretical analysis to better understand possible distortions of the corporate income tax in a global setting. Beside institutional issues, some key optimal tax results are introduced. Different margins of firm behavior – which may be affected by international tax incentives – are then analyzed empirically, and discussed in light of the theory. Finally, incentive effects on government behavior (i.e. tax competition) and revenue consequences are examined using both theoretical and empirical methods.

#### **Objectives**

Students are familiar with key concepts of analyzing tax distortions in an international context. They are able to interpret theoretical as well as empirical results. Empirical techniques can be utilized to address main challenges of data analysis. Firm responses to corporate income tax incentives in a global setting can be understood, quantified and interpreted.

# E313 Topics in Economic Policy I

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning

Methods

lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

#### Content

Students extend their knowledge about the determinants and effects of economic policy by choosing appropriate courses. Topics might include business cycles, stabilization policy and geographical economics.

#### **Objectives**

Students are able to actively participate in an informed way in discussions about the effects of economic policy in different areas. They are able to analyze central problems with the help of microeconomic models. They distinguish relevant technical terms and concepts. They expand their knowledge in economic sub-disciplines such as business cycles, stabilization policy and geographical economics and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

# E314 Topics in Economic Policy II

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Methods

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

#### Content

Students extend their knowledge about the determinants and effects of economic policy by choosing appropriate courses. Topics might include social market economy and blockchain and cryptocurrencies.

#### **Objectives**

Students are able to actively participate in an informed way in discussions about the effects of economic policy in different areas. They are able to analyze central problems with the help of microeconomic models. Students are able to actively participate in an informed way in discussions about the effects of economic policy in different areas. They distinguish relevant technical terms and concepts. They expand their knowledge in economic subdisciplines such as social market economy and blockchain and cryptocurrencies and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

# E315 Topics in Economic Policy III

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Methods

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

#### Content

Students extend their knowledge about the determinants and effects of economic policy by choosing appropriate courses. Topics might include history of economic thought and stabilization policy and inequality.

## **Objectives**

Students are able to actively participate in an informed way in discussions about the effects of economic policy in different areas. They are able to analyze central problems with the help of microeconomic models. They distinguish relevant technical terms and concepts. They expand their knowledge in economic sub-disciplines such as history of economic thought and stabilization policy and inequality and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

## **E320 Economics in Action**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (1 SWS) / discussion, oral participation, independent

Methods study

Method of Assessment assignment,

Course Work ---

Prerequisites E130 Macroeconomics, E170 Intermediate Microeconomics

Person Responsible Dr. Christian Manger

#### Content

The module will provide an overview on topics in economics, which will reflect research activities at the department of economics. It makes use of economic theory and empirical methods to discuss current economic challenges. The module provides students with the necessary background information to understand these challenges, makes them familiar with appropriate theoretical frameworks and empirical methods to analyze them.

## **Objectives**

Having been exposed to teaching in economics for two years, participants in this module will finally see various economic concepts and principles applied to important topics of the time. Students completing this module will be able to explain the practical relevance of economic theory for economic policy problems, assess existing policy responses to these problems, and contribute in an informed manner to the ongoing debate. Moreover, the lectures will provide an overview on the research activities at the department of economics, and are specifically intended to guide students in their choice of where to write their bachelor thesis.

# E323 Firms in the Global Economy

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (3 SWS) tutorial (1 SWS) /oral participation, independent study,

Methods literature study, written assignment

Method of Assessment written exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Anna Gumpert

#### Content

This module focuses on the economics of multinational firms, the main drivers of globalization. The module is structured around three main questions:

- 1. Why do firms become multinational?
- 2. Why do not all firms become multinational?
- 3. What are the consequences of multinational firms' activities for their home and host countries?

The module develops current theories about multinational firms starting from case studies of real firms. In addition, the module discusses recent empirical evidence on the three questions.

## **Objectives**

Students completing this module will have a solid understanding of current economic models about multinational firms. They will understand and will be able to replicate the main theory results. They will know the current state of empirical evidence about the determinants of multinational firms' international expansion strategies as well as the consequences of multinational firms' activities for both home and host countries.

# E325 Topics in Firms and Markets I

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning depending on the courses chosen / oral participation, literature study, self

Methods study

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites E170 Intermediate Microeconomics

Person Responsible Prof. Dr. Anna Gumpert

## Content

Students deepen their knowledge of economics in Firms and Markets. They might describe the circumstances under which markets fail to allocate resources efficiently. Market-based policy measures that can correct these market failures and methods to quantitatively assess the costs and benefits of these policies will be looked into. Topics such as sustainability, knowledge economy and the optimal management of natural resources will be examined. Students might discuss depending on their course choices recent research about the effects of digitization and new information and communication technologies. Another topic students might analyze are innovations as the main driving force of the development of firms, industries and economies. The causes and effects of innovation will be studied bottom-up, starting at the microeconomic firm level, moving on to the industry level, the aggregate macroeconomic level, and finally the global level.

## **Objectives**

Students understand how the basic language, tools, and arguments of economics are applied to different topics such as the environmental context. They can analyze the strategic behavior of companies in individual markets. Therefore, they are able to distinguish between basic concepts of information economics, game theory and organizational economics and apply them to different issues, e.g. in the field of organization. They understand economic arguments for government intervention. They will understand the various policies available to regulators and how these policies bring about (or fail to bring about) efficient outcomes. Students will be able to critically assess and articulate perspectives on current policy issues such as environmental issues, or the opportunities and challenges that digitization and new information and communication technologies entail for firms and workers. They will be able to derive recommendations for firms and policy makers. When choosing Innovation and technological change, students know the key issues. They use basic tools of modern economic theory (dynamic optimization, game theory, general-equilibrium theory). They gain insight that business economics as well as micro- and macroeconomic theory simply take different perspectives of a unified scientific discipline.

# **E330 International Money and Finance**

B.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, group discussion, self-

Methods study, flipped classroom

Method of Assessment written exam (60 minutes)

Course Work ---

Person Responsible E130 Macroeconomics I
Person Responsible Prof. Dr. Gernot Müller

## Content

This module is concerned with the allocative role of international financial markets. The determinants of the current account and exchange rates are discussed in some detail as are debt crises. The role of monetary and exchange rate policies also come into focus, not least to shed some light on recent developments in the euro area.

## **Objectives**

Students become famliar with key concepts of international finance and use basic tools of dynamic macroeconomic analysis.

# E333 Blockchain and Cryptocurrencies

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (1 SWS) / Oral participation, Independent study,

Methods Assignments

Method of Assessment written exam (90 minutes)

Course Work Oral Participation, independent study

Person Responsible E130 Macroeconomics I

Dr. Christian Manger

#### Content

This module provides a hands-on introduction to the crypto world. In the first meetings, we mine our first coin and use our wallet to store it. We learn how the proof of work mechanism of bitcoin is different from more "novel" approaches like proof of stake. We also mint our own non-fungible token (NFT) and discuss potential real world applications of the technology. Moreover, we study whether DeFi (decentralized finance) that uses blockchain technology can be a substitute or complement to legacy finance (e.g., we will use a DEX (decentralized exchange) to trade one coin/token for another and discuss liquidity pools that can give rise to "impermanent loss"). After discussing the purpose and risks of stable coins like Tether or UST (Terra/Luna), we address the pros and cons of regulation and CBDCs (central bank digital currencies).

## **Objectives**

Students can explain how blockchain technology gives rise to a permissionless, decentralized ledger that allows censorship-free storage and transfer of funds. They can describe how programmable blockchains like Ethereum apply smartcontracts to build decentralized exchanges, and how NFTs work. Moreover, students can assess the benefits and risks of liquidity pools and stablecoins. They apply this knowledge to judge the need for regulation and the challenges for monetary policy.

# E360 Regression Analysis with STATA using Economic History Data

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning lecture and tutorial (2 SWS) / Oral participation, independent study, literature

Methods stud

Method of Assessment written exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Various statistical evaluations, which are particularly suitable for historical data:

- descriptive methods, such as frequencies, averages, etc.
- inductive statistics, which deal with the derivation of correlations between economic variables
- Use of the standard program Stata, in particular data management, OLS, logit and panel analysis.

## **Objectives**

Students know the basics and slightly advanced methods in statistical analysis. At the end of the module, they are able to conduct an independent analysis of economic-historical data sets. In addition to acquiring theoretical knowledge in statistics, the students also apply the acquired knowledge in a concrete practical way and are able to correctly assess the procedures of others as well as to statistically test their own questions.

# E363 International Development Economics and Economic History

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning

**Methods** 

Lecture and tutorial (2 SWS) / e-learning, group discussion, self-study

Method of Assessment written exam (60 minutes)

Course Work Assignments

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

This module will discuss all questions with a long-term perspective. Some main relevant topics are:

- influence from development aid on successful growth of Less Developed Countries (LDCs)
- level of 'colonial legacies', e.g. the influence of colonialism on development hurdles in LDCs
- the impact of educational programs on poverty and growth
- the micro credit system
- the intercorrelation of economic development with political factors, e.g. the effects and causes of civil wars
- the degree of political participation on development, inequality, and poverty.

#### Objectives

Students recognize the relationship between development and long run growth. Additionally, they get to know the current research in this field and its most important methods. After finishing the module they know how to participate in scientiftic projects and are able to put their theoretical knowledge into practice.

## E364 Applied Research in Economic History

B.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 45 Independent Study: 225

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning

Methods

seminar (3 SWS) / self-study, literature study, presentation

Method of Assessment assignment, term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

In this internship, students can obtain deep insights into the process of scholarly research in economic history by doing a research internship. They will learn to participate in scholarly projects by supporting researchers with small work units of information retrieval, econometric analysis and the design of texts. The internship consists of 6 dates each of them with a duration of 4.5 - 5 hours.

The topics will cover:

- long-run human capital development
- the development of welfare in many different world regions
- international economic history.

## **Objectives**

Students understand the current research methods in economic history, put their theoretical knowledge into practice and prove it. They also know how to participate in scientific projects. They not only look over the shoulders of researchers who are currently working on studies, but they will, by turning in assignments, also participate actively in small work units of information retrieval, econometric analysis and the design of texts. They will summarize and present the main results in a term paper.

# **E365 Topics in International Economic History**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning seminar (2 SWS) / independent study, literature study, oral participation,

Methods discussion, presentation

Method of Assessmentterm paperCourse WorkPresentation

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

The seminar provides an overview of different topics in Economic History with focus on

- human capital formation
- demographics
- interesting topics within various world regions.

## **Objectives**

By writing a term paper, students will be able to gather, analyze and apply information, to formulate convincing arguments, communicate academic ideas, produce conclusions and acquire skills in academic writing. On the basis of defending their term paper in the seminar, they will also gain advanced presentation and communication skills.

# E366 Topics in Economic History and Development Economics

ECONOMICS B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language German/Englisch

Course Type / Learning d

Methods

depending on the courses chosen / oral participation, literature study

Method of Assessment Klausur (60 Minuten)

Course Work Depending on the specific choices

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Students extend their knowledge about the determinants and effects of economic histroy by choosing appropriate courses. Topics might include social market economy and history of economic thought.

## **Objectives**

Students are able to actively participate in an informed way in discussions about the effects of economic history in different areas. They distinguish relevant technical terms and concepts. They expand their knowledge in topics such as history of economic thought and development economics and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

Please note that German <u>and</u> English courses are offered as part of this module. Please check the <u>University</u> <u>Course Catalogue</u> of the respective semester in ALMA to find out exactly which courses are offered as part of this module.

# E370 Topics in International Economics I

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Methods

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

Students extend their knowledge in selected areas of international economics by choosing appropriate courses. Topics might include multinational firms and migration.

## **Objectives**

Students are able to actively participate in an informed way in discussions about the driving forces and effects of economic globalization and the effects of international economics in different areas. They are able to compare and explain economic growth and the economic development of national economies. They can analyze international trade and goods flows and assess the advantages and disadvantages of globalization for the economies involved. They distinguish relevant technical terms and concepts. They expand their knowledge in topics such as multinational firms and migration and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

# E371A Theory and Policy of International Trade A

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (1 SWS) / oral participation, discussion, independent

Methods study

Method of Assessment written exam (90 minutes)

Course Work ---

Prerequisites E130 Macroeconomics I, E170 Intermediate Microeconomics

Person Responsible Prof. Dr. Valeria Merlo, Prof. Dr. Frank Stähler

#### Content

This module introduces economic models that are relevant to the understanding of the causes and consequences of international trade. We will discuss the following topics:

1. Trade and technology: The Ricardian model

2. Factor endowments and trade I: The Specific-factors model

3. Factor endowments and trade II: The Heckscher-Ohlin model

4. The standard model of trade

5. New trade theory: Increasing returns to scale and imperfect competition

6. Trade policy under perfect competition

7. Trade policy under imperfect competition

## **Objectives**

Students understand the principle of comparative advantage and demonstrate gains from trade. They explain how differences in resources generate a specific trade pattern. They explain why trade will generate both winners and losers and identify the likely winners and losers. Students understand the meaning of gains from trade when there are losers; they understand how economies of scale and product differentiation lead to intraindustry trade. They assess the extent to which empirical patterns of trade and factor prices support some of the predictions of different models. They evaluate costs and benefits of tariffs, their welfare effects and identify winners and losers of trade policy.

# E371B Theory and Policy of International Trade B

B.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (4 SWS) tutorial (1 SWS) / oral participation, discussion, independent

Methods study

Method of Assessment written exam (90 minutes)

Course Work Assignments

Prerequisites E130 Macroeconomics I, E170 Intermediate Microeconomics

Person Responsible Prof. Dr. Valeria Merlo

#### Content

This module combines a theoretical discussion of trade models with an empirical analysis of trade data. Additional to the topics discussed in E371A we will introduce the statistical program R and show students how to use this tool to analyze and visualize trade data. We will discuss empirical evidence on the Ricardian and factor endowments models and we will introduce the gravity model of trade.

#### **Objectives**

Students know how to handle, analyze and visualize trade data using the statistical software R. They understand the theoretical foundation behind the gravity equation. They are able to replicate the estimation of gravity models for international trade and interpret the results.

# E374 Topics in International Economics II

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Methods

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

Students extend their knowledge in selected areas of international economics by choosing appropriate courses. Topics might include sustainable finance.

## **Objectives**

Students are able to actively participate in an informed way in discussions about the driving forces and effects of economic globalization. They are able to compare and explain economic growth and the economic development of national economies. They can analyze international trade and goods flows and assess the advantages and disadvantages of globalization for the economies involved. Students are able to actively participate in an informed way in discussions about the effects of international economics in different areas. They distinguish relevant technical terms and concepts. They expand their knowledge in topics such as sustainable finance and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

# E375 Topics in International Economics III

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, independent study

Methods

Method of Assessment written exam (90 minutes), or oral examination or assignments

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

Students extend their knowledge in selected areas of international economics by choosing appropriate courses. Topics might include imperfect labor markets.

## **Objectives**

Students are able to actively participate in an informed way in discussions about the driving forces and effects of economic globalization and the effects of international economics in different areas. They are able to compare and explain economic growth and the economic development of national economies. They can analyze international trade and goods flows and assess the advantages and disadvantages of globalization for the economies involved. They distinguish relevant technical terms and concepts. They expand their knowledge in topics such as imperfect labor markets and migration and transfer their basic knowledge of the first semesters to further fields of application. In doing so, they link the competences they have acquired so far.

# E376 A toolkit for writing your bachelor thesis

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning lecture (1 SWS) tutorial (1 SWS) / participation, discussion, independent

Methods study

Method of Assessment assignment

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

## Content

The module will discuss how to manage data sets and prepare them to conduct empirical research. We will discuss data management, description and graphical illustration using STATA and R. We will review several identification strategies and econometric techniques, and learn how to apply the methods using STATA. Furthermore, we will offer a short introduction to the typesetting program LaTex and show how to produce graphically appealing scientific documents.

## **Objectives**

Students are familiarized with applied empirical research and acquire the tools needed to write an empirical bachelor thesis.

# E380 Current Topics in Economics and Business **Administration**

B.Sc.

**ECTS-Credits** 

**Workload Hours** Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester Cycle WS, SS

Language German/Englisch

Course Type / Learning Vorlesung (2 SWS) Übung (2 SWS) / participation, discussion, independent Methods

study, literature study

**Method of Assessment** Klausur (60 Minuten) oder Seminararbeit oder Präsentation

**Course Work** Depending on the specific choices

**Prerequisites** 

**Person Responsible** Prof. Dr. Taiga Brahm

#### Content

In diesem Modul stehen ausgewählte Bereiche der Wirtschaftswissenschaft, insbesondere aktuelle Themen im Zentrum (nach Kurswahl der Studierenden).

## **Objectives**

Die Studierenden umreißen ausgewählte Themengebiete der Wirtschaftswissenschaft. Sie unterscheiden relevante Fachbegriffe und Konzepte. Sie erweitern ihr Wissen in wirtschaftswissenschaftlichen Teildisziplinen und übertragen ihre Grundkenntnisse der ersten Semester auf weitere Anwendungsfelder. Dabei verknüpfen sie ihre bisher erworbenen Kompetenzen.

Please note that German and English courses are offered as part of this module. Please check the University Course Catalogue of the respective semester in ALMA to find out exactly which courses are offered as part of this module.

# **S220 Quantitative Methods in Economics and Business Administration**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, group discussion, self-

**Methods** stud

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites S110 Explorative Data Analysis, S111 Risk and Probability oder equivalent for

students studying in their minor

Person Responsible Prof. Dr. Martin Biewen, Prof. Dr. Joachim Grammig

#### Content

The module covers the basics of econometric estimation and testing. The following topics are covered:

1. Statistical estimation theory

2. Maximum likelihood and the method of moments

3. Hypothesis testing

4. Specificspecial test procedures

5. Multivariate regression analysis: assumptions and application

6. Introduction to the theory of stochastic processes

7. Use of econometric software

## **Objectives**

Students know and understand different estimation methods and assess the quality of a statistical/econometric estimation. Students apply statistical test procedures to empirical questions and interpret the results in a scientifically correct way. They interpret estimation results in terms of economic and statistical significance.

# S310 Econometric Analysis of Financial Data

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture and tutorial (3 SWS) / participation, discussion, independent study

Methods

Method of Assessment written exam (60 minutes), or oral exam

Course Work ---

Prerequisites S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Joachim Grammig

## Content

This module deals with topics in the applied econometric analysis of financial data (Financial Econometrics).

## **Objectives**

The students know how to use econometric and statistical methods for the analysis of financial data.

# S311 Topics in Applied Econometrics and Statistics

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lectu

Methods

lecture and tutorial (3 SWS) / oral participation, group discussion, self study

Method of Assessment written exam (60 minutes), or oral exam

Course Work ---

**Prerequisites** S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Joachim Grammig

## Content

This module deals with topics in applied econometric and statistical data analysis.

## **Objectives**

Students know how to apply econometric and statistical methods to various topics in economics and business.

# S316 Policy Analysis and Evaluation

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning lecture (2 SWS) tutorial (2 SWS) / oral participation, group discussion, self-

Methods study

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Bernhard Boockmann

#### Content

The module deals with methods that can be used to evaluate the effectiveness and the efficieny of economic policies and interventions. The following topics are covered:

- 1. Introduction
- 2. Randomised experiments
- 3. Regression analysis and statistical matching
- 4. Instrumental variables
- 5. Regression discontinuity design
- 6. Difference-in-differences
- 7. Cost-benefit analysis
- 8. An evaluation project

## **Objectives**

Students understand and apply important methods of policy and programme evaluation. They understand the assumptions and the intuition behind the different methods. They know how to interpret and critically assess results from evaluation studies.

# S317 Topics in Data Science

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguageEnglish

Course Type / Learning Lecture and tutorial (4 SWS) / oral participation, independent study, literature

Methods study

Method of Assessment written exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

## Content

The module deals with different issues in Data Science. Students deepen their knowledge by selecting appropriate courses.

## **Objectives**

Students know how to use different tools in Data Science by covering relevant topics. They learn how to handle large data sets.

# **S321 Applied Econometrics**

B.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning lecture (3 SWS) tutorial (1 SWS) / oral participation, group discussion, self-

Methods study

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Martin Biewen, Prof. Dr. Joachim Grammig

#### Content

The module discusses econometric models and estimation techniques. Topics presented include:

1. Regression analysis

2. Estimation and inference

3. Data and specification issues

4. Use of cross-sectional, time series and panel data

5. Sample selection corrections

6. Simultaneous equation models

7. Endogeneity: sources and solutions

8. Instrumental variables estimation and two-stage least squares

## **Objectives**

Students understand and apply important methods of applied econometrics. They reflect the assumptions and the intuition behind the different methods. The students perform econometric estimations and tests using econometric software and interpret the results in as scientifically correct way.

# S324 Computational Econometrics Using Stata

B.Sc.

ECTS-Credits 3

Workload Hours Contact Hours: 30 Independent Study: 60

**Duration** 1 Semester

Cycle WS Language English

Course Type / Learning

**Methods** 

Lecture and PC-lab (2 SWS) / independent study, literature study

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Martin Biewen

#### Content

The module deals with the use of the statistical software Stata for the analysis of micro data. Topics include:

1. Data management

2. Estimation Methods

3. Introduction to Programming

4. Examples from different fields of Economics

## **Objectives**

Students conduct empirical studies using micro data. Students use the statistical software package Stata in order to import, manipulate and analyze data. Students master basic principles of programming in Stata.

# S326 Empirical Analysis of Panel Data

B.Sc.

ECTS-Credits 3

Workload Hours Contact Hours: 30 Independent Study: 60

**Duration** 1 Semester

Cycle SS Language English

Course Type / Learning

Methods

Lecture and PC-lab (2 SWS) / independent study, literature study

Method of Assessment written exam (60 minutes)

Course Work ---

Prerequisites S220 Quantitative Methods in Economics and Business Administration

Person Responsible Prof. Dr. Martin Biewen

#### Content

The module deals with the econometric methods of panel data and their application to selected examples from the German Socio-Economic Panel (GSOEP). The topics include:

- 1. Introduction to the German Socio-Economic Panel (GSOEP)
- 2. Econometric methods for panel data

## **Objectives**

The module enables students to conduct empirical studies using panel data. Students use the statistical software package Stata in order to import, manipulate and analyze data. They understand the benefits of working with large panel data sets such as the Germany Socio-Economic Panel (GSOEP). Students perform panel data analyses of microdata, with applications in labor economics.

# **B400 Advanced Corporate Finance**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (90 minutes) or Assignment

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Christian Koziol

#### Content

This module focuses on two fundamental question of corporate finance: (1) What is the optimal capital structure of a firm? (2) What drives the value of a firm? The aim of the module is to introduce students to practical and theoretical factors driving capital structure decisions as well as firm values. Within advanced model frameworks students will be enabled to analyze the effects of corporate decisions on issued claims and develop solutions for classical incentive problems in corporate financing.

## **Objectives**

Students develop central factors that drive the optimal capital structure and the total value of a firm. They assess and analyze advanced theoretical models dealing with specific issues and problems in corporate finance. In the practice course students apply those models to real-world data and develop solutions for classical corporate finance problems.

# **B401 Continuous-time Derivatives Pricing**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Assignment

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Christian Koziol

#### Content

This module introduces fundamentals on stochastic processes for financial products. Students learn how to price derivatives by using differential equations. Further, pricing techniques like the Black-Scholes formula or numerical methods are developed to a broad variety of traded claims and applied to real-world data.

#### **Objectives**

During this module students obtain an in-depth knowledge in derivatives pricing by using continuous-time concepts of modern finance theory. They apply them to equity and other securities. Having completed this module, students approach the literature in this field successfully, develop and analyze advanced pricing models, and apply continuous-time techniques for arbitrary derivatives pricing challenges.

# **B402 Financial Statement Analysis**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture and Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (120 minutes)

Course Work Assignments

Prerequisites ---

Person Responsible Dr. Margarita Mejia Likosova

## Content

The module of financial statement analysis starts introducing the need for reporting of financial information and integrating the agency problem, the users, sources and limitations of financial information, the basic analysis tools, and the role of IFRS and consolidated accounts. This introduction is followed by a comprehensive study and interpretation of the main financial statements. The module concludes with the analysis of the financial position of a firm, the management of current capital and the firm's profitability.

## **Objectives**

Students understand, analyse and interpret the financial statements of the companies (balance sheet, profit and loss statement, annual report, statement of changes in equity and statement of cash flows) in order to make intelligent investment decisions.

# B403 Topics in International Financial Reporting and Risk

Management M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning

Methods

Seminar (2 SWS)/ Oral participation, Independent study, Literature study

Method of Assessment Presentation, Term Paper

Course Work --Prerequisites ---

Person Responsible Dr. Margarita Mejia Likosova

#### Content

The module of advanced topics in international financial reporting and risk management explains and connects the following concepts: financial scandals, earnings management, agency theory, information asymmetry, IFRS, properties of financial information, role of external auditors, diversifiable versus market risk, market efficiency and crisis. Students will be introduced to the current state of empirical/theoretical literature that links financial reporting and risk management.

## **Objectives**

This module responds in particular to the increasing need of future managers in finance but also in other disciplines and working in a global economy, to understand financial reports and evaluate them in terms of risks. Students develop a global perspective about the role of financial reporting for risk management within the firm and the market. At the end of this module students understand the reasons behind some of the current financial reporting requirements and, based on relevant empirical/theoretical research, can reflect upon the succes of the implementation of those requirements. Students present and discuss the research question and their analysis to an academic audience, they react to and incorporate new ideas, feedback and critique.

## **B404 Modern Issues in Finance 1**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSCourse LanguageEnglish

Course Type/ Learning

**Methods** 

Lecture (2 SWS)/ Independent Study

Method of Assessment Written Exam or oral examination, or assignments or presentation

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Christian Koziol

#### Content

This module enables students to extend their knowledge in selected areas of advanced finance by choosing appropriate courses. These courses deal with various aspects of portfolio management, asset pricing, corporate finance and risk management.

## **Objectives**

Students develop in-depth knowledge of advanced finance concepts. They are able to apply these concepts to arbitrary securities classes in the context of modern finance challenges. Having completed this module, students approach the literature in this field successfully and are able to develop, control and evaluate advanced problems in finance.

## **B405 Modern Issues in Finance 2**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSCourse LanguageEnglish

Course Type/ Learning

Methods

Lecture (2 SWS)/ Independent Study

Method of Assessment Written Exam or oral examination, or assignments or presentation

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Christian Koziol

#### Content

This module enables students to extend their knowledge in selected areas of advanced finance by choosing appropriate courses. These courses deal with various aspects of portfolio management, asset pricing, corporate finance and risk management.

## **Objectives**

Students develop in-depth knowledge of advanced finance concepts. They are able to apply these concepts to arbitrary securities classes in the context of modern finance challenges. Having completed this module, students approach the literature in this field successfully and are able to develop, control and evaluate advanced problems in finance.

# **B412 Bank Management**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites B130 Cost Accounting, B270 Investment and Finance

Person Responsible Prof. Dr. Jan Riepe

#### Content

The module deals with the specific methods of managerial accounting and risk management in banks. Thereby, topics related to value maximizing management of internal processes as well as to the link between risk management and mangerial accounting. Furthermore, the module covers recent trends in the design of internal governance mechanisms in banks. The module is accompanied by exercise sessions.

#### **Objectives**

At the end of the module, the students are enabled to select profitable investment projects of a bank based on the bank's business objectives combined with the risk-return trade-off. They know to conduct a capital allocation process inside a banking group, to quantify the underlying risk with an appropriate method, and to evaluate the design of internal business processes according to regulatory requirements and good governance principles.

# **B413 Empirical Banking**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Colloquium (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Presentation (50%), Term Paper (50%)

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Jan Riepe

#### Content

The module gives a survey of important topics in empirical banking. As examples, the conflicts of interest between loan officers and the overall bank management, the influence of prudential regulation on the reporting behavior and the impact of different ownership structures of the banks' corporate governance can be mentioned.

#### **Objectives**

The module is intended to give the students a broad overview concerning the the relevant questions in the Empirical Banking literature and to convey the basic principles of writing research oriented essays. After having attended the module, students describe the current state of research in the area of empirical banking, empirical bank management and risk governance. They use appropriate data, collection methods, and analyze data with appropriate tools. Furthermore, they understand and evaluate the current literature, ideas, topics, theories, open questions in this area.

Students formulate Empirical Banking research question and address and analyze the research question in a academic thesis. Students present and discuss the research question and their analysis to an academic audience, they react to and incorporate new ideas, feedback and critique.

# **B414A CFA® Level I-III: Security Valuation - Chartered Financial Analysts® Preparation**

B.Sc./M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Ted Azarmi, PhD

#### Content

The module covers the material for one of the three CFA® levels. Standards of practice, detailed finance, accounting, and security valuation tools are included. The curriculum, in class mock exams and the final exam resemble a portion of the respective CFA® level exam. Each level is offered triennially, for detailed information please have a look at Campus or chair homepage.

## **Objectives**

Students complement their German business education by US-oriented business coverage which provides a truly international perspective. They understand that CFA's code of ethics and rigorous problem-solving oriented approach provides an edge in the finance industry. Students develop a solid foundation that helps them to succeed in CFA® exams and to eventually achieve the CFA® designation which is a highly regarded professional distinction in business.

# B414B CFA® Level I-III: Security Valuation - Chartered Financial Analysts® Preparation

B.Sc./M.Sc.

ECTS-Credits 12

Workload Hours Contact Hours: 120 Independent Study: 240

**Duration** 2 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (each 2 SWS), Tutorial (each 2 SWS)/ Oral participation, Independent

Methods study, Literature study

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Ted Azarmi, PhD

#### Content

The module covers the material for two of the three CFA® levels. Standards of practice, detailed finance, accounting, and security valuation tools are included. The curriculum, in class mock exams and the final exam resemble a portion of the respective CFA® level exam. Each level is offered triennially, for detailed information please have a look at Campus or chair homepage.

## **Objectives**

Students complement their German business education by US-oriented business coverage which provides a truly international perspective. They understand that CFA's code of ethics and rigorous problem-solving oriented approach provides an edge in the finance industry. Students develop a solid foundation that helps them to succeed in CFA® exams and to eventually achieve the CFA® designation which is a highly regarded professional distinction in business.

# **B420 Marketing-Mix Management**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (1 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written exam, or oral examination, or assignments

Course Work Presentation

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

This module covers key concepts of marketing, the implementation in the marketing mix, its internationalization, and empirical generalizations.

- (1) Product management
- (2) Pricing
- (3) Communication management
- (4) Distribution management
- (5) Branding
- (6) Optimization
- (7) International Marketing

#### **Objectives**

Students understand and evaluate key concepts and advanced aspects regarding the implementation and optimization of marketing mix elements. Through participation in the tutorial, students will understand how to apply academic literature from peer-reviewed journals to current problems of marketing.

#### **B421 eBusiness**

eBusiness M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture and Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

The module covers the analysis of specific market conditions in electronic marketplaces (e.g., lower search cost, information asymmetry, lower marginal cost).

- 1. The electronic market place
- 2. How digitization affects the marketplace
- 3. Marketing-mix instruments in the online market place

#### **Objectives**

Students can explain the relevance of digitization, e-commerce, and other online activities. Students can evaluate how digitization has changed the marketplace. Through the tutorial, students know how to apply marketing instruments on problems from the online domain.

# **B425 Data Science and Marketing 1**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam or oral examination, or assignments or presentation or online

Course Work assessment assignments

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Person Responsible Jun.-Prof. Dr. Wiebke Keller

#### Content

Students extend their knowledge in selected areas of marketing, advanced marketing research, or related areas of data science by choosing appropriate courses. These courses cover elements of the marketing mix, and they may involve aspects of data collection, advanced techniques of analysis and estimation, writing and understanding statistical code, and the application to marketing problems.

#### **Objectives**

Students can analyze and solve advanced marketing and marketing research problems. Students know how to choose and apply appropriate tools for solving advanced problems in marketing and marketing research, and they can draw on recent advances in data science where appropriate. They can reflect upon the appropriateness of different approaches.

# **B426 Data Science and Marketing 2**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and Tutorial (2 SWS)/ Discussion, oral participation, independent

Methods study, literature study, coding

Method of Assessment Written Exam or oral examination, or assignments or presentation or online

Course Work assessment

Prerequisites --

Person Responsible Jun.-Prof. Dr. Wiebke Keller

#### Content

Students extend their knowledge in selected areas of marketing, advanced marketing research, or related areas of data science by choosing appropriate courses. These courses cover elements of the marketing mix, and they may involve aspects of data collection, advanced techniques of analysis and estimation, writing and understanding statistical code, and the application to marketing problems.

#### **Objectives**

Students can analyze and solve advanced marketing and marketing research problems. Students know how to choose and apply appropriate tools for solving advanced problems in marketing and marketing research, and they can draw on recent advances in data science where appropriate. They can reflect upon the appropriateness of different approaches.

# **B430A Managerial Accounting and Cost Analysis**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS)/ Discussion, Oral participation,

Methods Independent study

Method of Assessment Written Exam (60 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

The module provides an overview on the main applications, tasks and instruments of managerial accounting and cost analysis. Topics include, for instance, variance analysis, break-even analysis, target costing, budgeting, transfer pricing, production program planning, the value of information systems, and decision-making under uncertainty.

#### **Objectives**

Students learn and understand the basic framework of managerial accounting and cost analysis. They know the core according instruments and are able to evaluate differences between these instruments. The are able to critically analyze the differences between decision-making under certainty and under uncertainty. Students are also able to explain and reflect the underlying behavioral problems that are inherent to the tools used in managerial accounting. In the accompanying practice course, students will develop solutions to these problems and apply them to organizational problem settings.

# **B430B Managerial Accounting and Cost Analysis**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS), Colloquium (1 SWS)/ Discussion, Oral

Methods participation, Independent study

Method of AssessmentWritten Exam (60 minutes)Course WorkCase Study / Term Paper

Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

The module provides an overview on the main applications, tasks and instruments of managerial accounting and cost analysis. Topics include, for instance, variance analysis, break-even analysis, target costing, budgeting, transfer pricing, production program planning, the value of information systems, and decision-making under uncertainty.

#### **Objectives**

Students learn and understand the basic framework of managerial accounting and cost analysis. They know the core according instruments and are able to evaluate differences between these instruments. The are able to critically analyze the differences between decision-making under certainty and under uncertainty. Students are also able to explain and reflect the underlying behavioral problems that are inherent to the tools used in managerial accounting. In the accompanying practice course, students will develop solutions to these problems and apply them to organizational problem settings.

In the accompanying colloquium, students learn how to apply the concepts learned in the lecture to real-life business problems of firms by the means of case studies. Students work in student teams and take on the role of real decision makers. They are able to discuss specific managerial decision problems, apply concepts of managerial economics to the problem set and develop appropriate solutions. Students evaluate different decision alternatives and present their solutions to the audience.

# **B432A Organizational Economics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Discussion, Oral participation,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

Firms need to react to recent developments in corporate governance, global competition, and continuous technological change by adjusting their internal management systems and their organizational structure. This module provides a multidisciplinary approach to managerial and organization economics, with a special focus on value creation, incentive systems, behavioral economics and other-regarding preferences, and the internal organization of firms. The module is centered around the question how organizations can create value through improved organizational design and an efficient use of management practices.

#### **Objectives**

Students learn how to use and implement accounting information for efficiently designing and operating an organization. They are able to assess which behavioral reactions are triggered by the use of a series of management practices. Further, they are able to explain the underlying principal-agent problem and are to reflect modifications of contract theoretical models. They understand the role of incentive and performance management systems for firms and are able to critically evaluate the use of these systems. The goal in this module is to develop rigorous frameworks to enable students to apply them to real-life problems. In the accompanying practice course, students will develop solutions to these problems and apply them to organizational problem settings.

# **B432B Organizational Economics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS), Colloquium (1 SWS)/ Discussion, Oral

Methods participation, Independent study

Method of Assessment Written Exam (90 minutes)

Course Work Presentation

Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

Firms need to react to recent developments in corporate governance, global competition, and continuous technological change by adjusting their internal management systems and their organizational structure. This module provides a multidisciplinary approach to managerial and organization economics, with a special focus on value creation, incentive systems, behavioral economics and other-regarding preferences, and the internal organization of firms. The module is centered around the question how organizations can create value through improved organizational design and an efficient use of management practices.

#### **Objectives**

Students learn how to apply the concepts learned in the lecture to real-life problems in organizations. Students analyze case studies involving real firms and research papers in teams and learn how to present, critically reflect and discuss their findings. In addition to the written exam accompanying the lecture, the colloquium focuses on presentation and communication skills. In the case studies, students take on the role of real managers and learn how to analyze critical situations and develop and implement solutions to the problems evolved.

# B434 Managerial Accounting: Control Systems, Top Executives, and Ethics

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter

#### Content

This module provides a multidisciplinary approach to the concepts of management and control, top executive compensation, and ethics in accounting. In detail, the module covers issues such as the design and evaluation of management control systems, fundamental issues on top management incentives and characteristics (compensation, pay-for-performance sensitivity, leadership styles, careers, etc.). Furthermore, the module introduces good corporate governance with a specific focus on the role of controllers and auditors and ethical dilemmas such as the manipulation of key performance indicators, gaming incentive systems, organizational misbehavior and management fraud.

#### **Objectives**

Students learn how to use management control systems for operating an organization and how to critically assess the interdependencies between control systems, executive compensation and corporate governance and apply this to real-life problems. The goal of the module is to develop a rigorous framework and to apply this to ethical dilemmas that can be observed in real-word firms. Students also improve their analytical and discussion skills with respect to scientific papers. In the accompanying practice course, students will develop solutions to these problems and apply them to organizational problem settings.

### **B440 Personnel Economics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Kerstin Pull

#### Content

This module analyzes HR from a strategic perspective, i.e., HR is regarded as a potential driver of firm performance. Personnel economics focuses on the economics of HR and thus complements other, e.g., sociological or psychological approaches to HR that students might be familiar with. In the module, we analyze different HR functions (e.g., recruitment, training, compensation & benefits, promotion, dismissal) and focus on problems associated with informational asymmetries and how these might be solved. Methodologically, the module is based on formal theoretical models as well as on quantitative empirical studies with field and laboratory data. In the accompanying tutorial, the material is practiced and deepened on the basis of selected exercise questions.

#### **Objectives**

Students understand the principles and main concepts of personnel economics and develop a strategic perspective to HR and how it contributes to firm performance. They identify problems in HR that are associated with informational asymmetries and use analytical tools to analyze and address these. Students understand and interpret quantitative empirical findings and relate these to the theoretical models that build the foundation of personnel economics.

# **B441 Comparative Employment Relations**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Case Study (1 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (60 minutes)

Course Work Case Study (Group) Presentation

Prerequisites ---

Person Responsible Prof. Dr. Kerstin Pull

#### Content

The module covers different topics in employment relations from a comparative perspective. Among others, it is analyzed how different national institutions (e.g. minimum wages, employment protection legislation, collective bargaining institutions or education systems) affect the behavior of workers and firms in imperfect labor markets. Further, the module also covers cultural differences and how these affect the HR practices of national and multinational firms.

#### **Objectives**

Students learn how the institutional and cultural environment shapes employment relations and how theses links are analyzed theoretically and empirically. Within their (group) presentations, students describe and analyze a case study of a multinational firm and its HR practices and present their insights to their fellow-students.

# **B450A Taxes and Business Strategy**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning

Methods

Lecture (2 SWS), Tutorial (2 SWS)/ participation, group discussion, self-study

Method of Assessment Written Exam (60 minutes)

Course Work Assignment

Prerequisites Students should have a general understanding of business strategies as

teached in a business or economics bachelor programme. Specifically,

students should be familiar with net present value concepts.

Person Responsible Prof. Dr. Martin Ruf

#### Content

This module focuses on the effects of taxation on essential corporate decisions, namely, investment, financing, acquisitions or the choice of the appropriate legal form. Since specific tax law is not the main part of this approach, the module can be chosen even by students without an in-depth knowledge in tax law. Nonetheless, it provides a broad framework for understanding how taxation affects corporate decision-making. No specific prerequisites are required.

#### **Objectives**

Students assess the enormous impact that changes in transaction structure have on after-tax cash flows and to integrate tax strategies into the bigger picture of corporate decision making. They explain the competitive advantage of certain tax strategies for corporations. As a side effect, students will be faced with basic tax law principles and, thereby, will broaden their knowledge about legal issues.

# **B460 Sustainable Strategy**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Lecture and Tutorial (2 SWS) / Oral participation, Literature Studies

Method of Assessment Written Exam (60 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Philip Yang

#### Content

This module aims at improving the understanding of contemporary research in the field of sustainable strategy with respect to the triple bottom line of economic, environmental, and social sustainability. Equally, theoretical and empirical advancements in this literature are discussed in detail. The students develop own management summaries in groups that draw from recent research to provide practical implications with respect to one sustainability-related topic.

#### **Objectives**

The students understand recent theoretical and empirical literature in the field of sustainable strategy. Further, they develop an understanding of scientific research papers in the area of economics and management and are able to transfer these to a practitioner oriented management summary.

# **B461 Empirical Studies in Sustainable Strategy**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Lecture and Tutorial (2 SWS) / Oral participation, Literature Studies

Method of AssessmentStata log fileCourse WorkPresentation

Prerequisites Basic econometric knowledge and Stata experience are advantageous

Person Responsible Prof. Dr. Philip Yang

#### Content

This interactive module starts with a brief introduction on conceptual methods, hypotheses development, data collection, causal inference, and econometrics in the context of research on sustainable strategy. In the main part, the students have to develop an own conceptual model, collect own or clean existing datasets (e.g. EIKON, ASSET4, BOARDEX, GSOEP, Company data) in order to answer a self-elaborated research questions. The research questions should address one of the many areas of strategic strategy with respect to the triple bottom line of economic, environemntal and social sustainability.

#### **Objectives**

The students formulate an own research question and develop an own conceptual model in the abovementioned fields. Further, they use datasets to answer these questions empirically. Hereby, they follow a typical scientific approach that starts with the formulation of a question, developing a conceptual model, presenting it in front of an audience, searching and cleaning adaquate datasets for an empirical analysis, and finally using econometric methods to empirically test the conceptual model.

# **B463 Strategy & Innovation**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 90 Independent Study: 180

Duration1 SemesterCyclegenerally: WS

Language of instruction English

Course Type/ Learning Lecture (2 SWS), Seminar (2 SWS) Oral participation, Group discussion,

MethodsIndependent studyMethod of AssessmentIn-class participation

Course Work Short tests, prep notes for class

Prerequisites Registration via ILIAS

Person Responsible Asst.-Prof. Dr. Theresa Veer

#### Content

This module looks at firms' strategies particularly from an innovation viewpoint, including aspects evolving around R&D, corporate entrepreneurship, IP management, IP strategy, industry lifecycles, industry evolution, etc. It also deepens students' knowledge on the very basics of strategy analysis, development, and implementation. In the case study seminar the lecture's content will be applied to case studies.

#### **Objectives**

Students reflect on and analyze the factors that affect organizations' long-term economic performance based on commonly used tools and frameworks to make recommendations to organization on how they can improve their long-run performance.

The module highlights and emphasizes the appliance of learned tools and frameworks, so as to enable the students to:

- evaluate the structure of firms' external environments and analyze how these affect expected long-run industry performance
- · evaluate firm-level resources and capabilities
- develop suitable and superior strategies at the business-unit and corporate levels
- assess how social, technological, political, and economic factors and forces can influence and determine the necessity for strategic (re-)positioning
- comprehend, analyze, and manage the complex ethical and social issues organizations face as they develop and implement their strategies
- · discuss their analyses within the class; react to and incorporate new ideas, feedback, and critique.

### **B464 Financial Institutions in the "New Normal"**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 2 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Led

Methods

Lecture and Tutorial (2 SWS) / Oral participation Literature Studies

Method of Assessment Written Exam (60 minutes)

Course Work Assignments

Prerequisites ---

Person Responsible Prof. Dr. Monika Gehde-Trapp

#### Content

In this course, students acquire knowledge about

- current economic challenges for financial institutions due to the low interest rate environment, digitalization-driven innovations such as cryptocurrencies and smart contracts as well as social transformation processes with regard to sustainability.
- current regulatory challenges for financial institutions such as Basel IV, IFRS 9 and 13, MARisk, EMIR and MiFID
- the impact of these challenges on business models, corporate governance, processes and methods.

#### **Objectives**

#### Students will

- know the regulatory environment of financial institutions
- understand, describe verbally and in writing and critically reflect on the changing regulatory environment
- know, describe verbally and in writing and critically reflect on the impact of digitalization on the business models of financial institutions
- know, verbally and in writing and critically reflect on the impact of sustainability requirements on financial institutions
- analytically and empirically assess the impact of regulatory, economic and social transformation processes on the strategy and risk management of financial institutions

# **B465 Specialization in Economic Research**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS or SSLanguage of instructionEnglish

Course Type/ Learning Lecture (1 SWS), Seminar (1 SWS) Presentation or literature review,

Methodsdiscussion, self studiesMethod of AssessmentPresentation or term paperCourse WorkDiskussion, Literaturarbeit

Prerequisites ---

Person Responsible Asst.-Prof. Dr. Jan Riepe & Asst.-Prof. Dr. Theresa Veer

#### Content

This module explores in depth relevant topics for research in business and economics. The following topics will be covered in the course:

- 1. theory / research design
- 2. empirical research methods
- 3. research ethics

#### **Objectives**

After successful completion of the module, students will be able to critically analyze, question and evaluate individual research papers. In addition, they will be able to classify work within the existing scholarship.

In case of the examination form presentation, students additionally present their results to a critical audience and learn to discuss them and to react constructively to criticism.

In case of the examination form term paper, students additionally learn to express their results coherently in writing and to present their ideas and criticism convincingly on the basis of their own reviews, analyses and links to the research canon.

# **B466 Financial Intermediation – Theory and Empirics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCyclegenerally: WS

Language of instruction English

Course Type/ Learning Lecture with integrated Colloquium (4 SWS) / Independent Study Literature

Methods Studies

Method of Assessment Presentation, Assignment, Term Paper

Course Work Assignments

Prerequisites ---

Person Responsible Prof. Dr. Monika Gehde-Trapp

#### Content

In this course, students acquire knowledge of

- the theoretical foundations of financial intermediation,
- the different groups of financial institutions such as banks, asset managers, venture capitalists, broker/dealers, stock exchanges, rating agencies, fintechs and their functions as intermediaries,
- the management and governance of financial institutions,
- · the risks arising from intermediation,
- · the regulation of financial institutions

#### **Objectives**

After successful completion of this course, students

- know the theoretical foundations of financial intermediation and the role of different types of financial institutions.
- have an overview of the instruments used to provide intermediation services and the associated market volumes and market shares.
- identify management and governance problems in financial institutions and formulate solution strategies.
- identify different types of risk and calculate risk measures.
- understand the regulatory environment of financial intermediaries and the interplay between regulation and innovation.

# **B481A Sustainable Governance A**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS)/ Group discussion, presentation, independent study,

Methods literature study

Method of Assessment Written Exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Jörg-Markus Hitz

#### Content

In the light of current societal and environmental transformation processes, firms are facing two distinct challenges: adopting "sustainable" governance and business models, and complying with regulation such as mandatory non-financial reporting, sustainability requirements along supply chains, or inclusion of long-term non-financial KPIs into management compensation systems. This course introduces students to this contemporary view on corporate governance along three dimensions: economic analysis of corporate governance mechanisms and institutions, coverage of relevant legal and regulatory frameworks, and drawing insights from contemporary studies.

#### **Objectives**

Students are familiar with contemporary issues in sustainable corporate governance such as board diversity, NGO activism, or ESG ratings. They command a profound knowledge of managerial governance choices and regulatory frameworks, and understand how these potentially contribute to firms' and society's long-term objectives. Students are able to structure and evaluate complex governance-related issues in the context of findings from academic research.

### 481B Sustainable Governance B

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 45 Independent Study: 225

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Colloquium (1 SWS)/ Group discussion, presentation,

Methods independent study, literature study

Method of Assessment Portfolio

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Jörg-Markus Hitz

#### Content

In the light of current societal and environmental transformation processes, firms are facing two distinct challenges: adopting "sustainable" governance and business models, and complying with regulation such as mandatory non-financial reporting, sustainability requirements along supply chains, or inclusion of long-term non-financial KPIs into management compensation systems. This course introduces students to this contemporary view on corporate governance along three dimensions: economic analysis of corporate governance mechanisms and institutions, coverage of relevant legal and regulatory frameworks, and drawing insights from contemporary studies.

#### **Objectives**

Students are familiar with contemporary issues in sustainable corporate governance such as board diversity, NGO activism, or ESG ratings. They command a profound knowledge of managerial governance choices and regulatory frameworks, and understand how these potentially contribute to firms' and society's long-term objectives. Students are able to structure, evaluate and communicate complex governance-related issues in the context of findings from academic research.

# **B482 Current Topics in Financial Accounting &**

**Financial Analysis** M.Sc.

**ECTS-Credits** 6

**Workload Hours** Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS Language of instruction **English** 

Course Type/ Learning Lecture (1 SWS), Tutorial (1 SWS)/ Group discussion, presentation, Methods

independent study, literature study

**Method of Assessment** Written examination or presentation or term paper

**Course Work Prerequisites** 

**Person Responsible** Prof. Dr. Jörg-Markus Hitz

#### Content

This course, with varying emphases, acquaints students with current topics in Financial Accounting and Financial Analysis. Topics in Financial Accounting include complex accounting treatments under IFRS that are typically relevant to multi-national firms, e.g., accounting for business combinations and goodwill, impairment testing, accounting for employee benefits and stock options. Topics in Financial Analysis include accounting-based securities valuation and analysis of IFRS financial statements.

#### **Objectives**

Upon completion of this course, students command profound knowledge of current topics in Financial Accounting and Financial Analysis, which they are able to apply to complex real-world cases.

# **483 Empirical Accounting Research**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

Duration1 SemesterCycleWS or SSLanguage of instructionEnglish

Course Type/ Learning Lecture (1 SWS), Tutorial (1 SWS)/ Group discussion, presentation,

Methods independent study, literature study

Method of Assessment Presentation or term paper

Course Work ---

Prerequisites B480 Unternehmenspublizität und Märkte

Person Responsible Prof. Dr. Jörg-Markus Hitz

#### Content

This course introduces students to empirical research in financial accounting. At the outset, empirical accounting research is outlined as one of various contemporaneous methodological streams, which closely links to analytical and experimental work in the field. Based on this framework, an overview of trends and themes in contemporary accounting research is presented. In the core part of the course, the methodological issues involved in establishing causal inference are addressed and applied to contemporary literature streams. Illustrations and examples draw from academic papers using effects studies and event studies to infer economic consequences of disclosure regulation. The course consists of lectures and tutorials using databases, in which relevant issues are implemented using statistical software and commercial databases

#### **Objectives**

Upon conclusion of the course, students have acquired an understanding of the core fields, of current trends and techniques in empirical accounting research. Students are able to develop research questions, and to devise and execute research designs addressing these questions.

# **B490 Managing Across Cultures**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ oral participation, independent case study

Methods research, presentation, literature study

Method of Assessment Written Exam (90 minutes)

Course Work Writing and presenting a paper in group work

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

The module discusses the influence of national cultures on management practices. Topics presented include:

a) business communication and negotiation across cultures

b) global leadership and multicultural teams

c) international human resource management

#### **Objectives**

In this module, students reflect on important Cross-Cultural Management theories. They learn to discuss these theories and apply them to real-life business cases. Performing applied cross-cultural teamwork in assigned groups, they furthermore analyze specific Cross-Cultural Management topics in detail. In addition, this module provides students with practical Cross-Cultural Management skills which are relevant to successfully operate in multinational organizations.

# **B493A Doing Business in Selected Countries and World**

Regions M.Sc.

**ECTS-Credits** 

**Workload Hours** Contact Hours: 40 Independent Study: 140

**Duration** 1 Semester

Cycle SS Language of instruction **English** 

Course Type/ Learning Seminar and Colloquium (2 SWS) / Discussion, Oral participation, Methods

Independent study, Literature study

**Method of Assessment** Written Exam (120 minutes)

**Course Work Prerequisites** 

Person Responsible Prof. Dr. Markus Pudelko

#### Content

Within this module, students can select two out of several courses covering the economic and social framework conditions and business cultures of different countries and regions such as China, Japan, Korea, and South America. Focal topics include:

- a) Business cultures
- b) Cross-cultural communication and conflict management
- c) Building cooperative business relationships with business partners from these countries and regions

#### **Objectives**

Students analyze the economic, social, political, and cultural conditions of specific countries and regions and assess their influence on domestic and international management. They will develop an understanding of how to engage in business activities with business partners from these countries and regions. Through group assignments, case studies, and role plays within the courses, students will enhance on a more general level their ability to effectively communicate, interact, and behave in an international business environment. In addition, this module provides students with practical managerial skills which are relevant to successfully do business in specific countries and regions.

# **B493B Doing Business in Africa**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Seminar and Colloquium (1 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (60 minutes)

Course Work Group Presentation

Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module will explore commonalities and differences of business systems of sub-Saharan Africa. Key topics include:

- a) the economic framework conditions of sub-Saharan Africa
- b) business cultures of African nations
- c) African-European business partnerships

#### **Objectives**

This module enables students to comprehend the basics of African business systems and to explain the characteristics of management in Africa. They interpret the dynamic economic situation in sub-Saharan Africa and recognize the role of outside economies, such as the West, but also China. In addition, students identify the opportunities Africa provides for Western companies, and assess what these companies should do in order to make use of them. In addition, this module provides students with practical managerial skills which are relevant to successfully do business in Africa or with African companies.

# **B495 Current Issues in International Business I**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 40 Independent Study: 140

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS) Oral participation, Independent study, Literature study

Method of Assessment

t Written Exam (90 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof.Dr. Markus Pudelko

#### Content

This module presents timely and relevant topics of International Business. Key topics might include, for example:

- a) Chinese management
- b) Chinese business system
- c) Digital Transformation in the Global Economy
- d) New Marketing in China

#### **Objectives**

This module explores in its various parts selected topis of International Business that are timely and of high relevance in an advanced fashion. It can enable students to better understand the management and business systems of selected countries, such as China, in a more intensive manner and also discusses new developments in the global economy, such as the digital transformation. Students will learn how organizations but also individuals can successfully address such new challenges in the business world.

# **B496 Current Issues in International Business II**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 40 Independent Study: 140

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS) Oral participation, Independent study, Literature study

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof.Dr. Markus Pudelko

#### Content

This module presents timely and relevant topics of International Business. Key topics might include, for example:

- a) Chinese management
- b) Chinese business system
- c) Digital Transformation in the Global Economy
- d) New Marketing in China

#### **Objectives**

This module explores in its various parts selected topis of International Business that are timely and of high relevance in an advanced fashion. It can enable students to better understand the management and business systems of selected countries, such as China, in a more intensive manner and also discusses new developments in the global economy, such as the digital transformation. Students will learn how organizations but also individuals can successfully address such new challenges in the business world.

# **B497 Current Issues in International Business III**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 40 Independent Study: 140

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS) Oral participation, Independent study, Literature study

Method of Assessment Written Exam (90 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof.Dr. Markus Pudelko

#### Content

This module presents timely and relevant topics of International Business. Key topics might include, for example:

- a) Chinese Management
- b) Chinese Business System
- c) Digital Transformation in the Global Economy
- d) Applied Research in International Business

#### **Objectives**

This module explores in its various parts selected topis of International Business that are timely and of high relevance in an advanced fashion. It can enable students to better understand the management and business systems of selected countries, such as China, in a more intensive manner and also discusses new developments in the global economy, such as the digital transformation. Students will learn how organizations but also individuals can successfully address such new challenges in the business world.

# **B512 CFA Colloquium**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Colloquium (2 SWS)/ group dicsussion, presentation, independent study

Method of Assessment Portfolio: Term Paper (75%) and Presentation (25%)

Course Work Independent research

Prerequisites At least one of the following classes: B300, B301, B310, B311, B414A,

B414B

Person Responsible Prof. Ted Azarmi, PhD

#### Content

The students are provided with the academic tools to participate in the CFA Institute Research Challenge. The entire class travels to Frankfurt at the CFA institute's expense. They listen to a high-level analyst-type company presentation. They are provided with an academic and an industry mentor. They receive training on a Bloomberg terminal and are introduced to other financial data providers such as Thomson Reuters Eikon in their study. Based on competition with some of the best German universities, the students have a chance to win and participate at an European and global championship. CFA pays travel costs to all competition venues (which in the past included New York city, for example). The course material includes valuation, financial analysis, stock investment, financial statement analysis. Students practice preparing real-world stock analyst reports at a professional quality level.

#### **Objectives**

Students extract information from publicly available financial statements and other data for a firm. They learn to interpret the impact of information on stock prices. Students learn to use Bloomberg terminals and to analyze data provided by other professional financial data sources. Students do real-world practice with financial modeling using Excel for stock valuation. Students learn to interpret key value drivers of a firm and its stock price such as unique product position, competition, public relations and relevant marketing and production issues. Financial analyst report writing at an advanced level is also emphasized. Students learn how to personally interact with upper management of a firm in an analyst interview type setting and how to ask probing and meaningful questions relevant to stock valuation. Students also learn about stock prices, investment in stocks and practical aspects of the stock market.

# **B519 Selected Issues in Managerial Economics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Colloquium (2 SWS) Discussion, presentation, oral participation, independent

study, literature study

Method of Assessment Presentation

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Patrick Kampkötter, Prof. Dr. Werner Neus, Prof. Dr. Kerstin Pull,

Prof. Dr. Manfred Stadler

#### Content

**Methods** 

The module deals with current research topics in management and economics.

#### **Objectives**

By presenting two or more assigned papers, students critically assess and reflect seminal and/or current research in managerial economics. They develop methodological competencies, both in formal theory as well as in empirics. They acquire presentation, communication and discussion skills and further improve their analytical skills.

# **B591 Topics in Advanced Research**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Seminar and Colloquium (2 SWS)/ Discussion, Oral participation,

Methods Independent study, Literature study

Method of Assessment Written Exam (60 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Markus Pudelko

#### Content

This module introduces participants (future scholars and junior scholars) into publication strategies for top international journals in the area of management.

The topics presented include:

- a) the requirements of international participations in management
- b) correct application of research methods
- c) the review process in leading management journals

#### **Objectives**

The module will teach students to interpret journal rankings, to obtain information about selected journals, and t present their research according to the quality criteria of these publication outlets. They will analyze the review process in leading management journals, learn to develop publications strategies and to write up the various sections of a scholarly article.

# CM5\_01 Advanced Topics in Accounting and Finance

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

Students deepen their knowledge on advanced topics in Accounting and Finance and related fields by selecting from the online course catalogue. Depending on the specific topic, students extract insights from the academic literature or perform data analyses to create new insights, and summarize their results in a written thesis and an oral presentation. Details are announced in the course catalogue.

#### **Objectives**

Upon successful completion of this module, students are familiar with the latest research in Accounting and Finance or related fields. Students evaluate advanced and complex problems from the field of Accounting and Finance and address potential solutions through their own literature research and empirical analysis. Students analyze the advantages and drawbacks of new developments in their chosen topic, compose their own written academic paper and present and defend their results in front of an academic audience.

# CM5\_02 Advanced Topics in Economics

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

This module is concerned with various topics from the field of Economics. A particular focus is on applied empirical and theoretical methods in modern economic research.

#### **Objectives**

Students become familiar with the frontier of research in economics. Upon successful completion of this module, students address important research questions in economics. Own empirical and theoretical analyses are summarized in a scientific paper and the main findings are presented in class.

# CM5\_03 Advanced Topics in Economics and Finance

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

Students deepen their knowledge on advanced topics in Economics and Finance by selecting from the online course catalogue. Depending on the specific topic, students extract insights from the academic literature or perform data analyses to create new insights, and summarize their results in a written thesis and an oral presentation. Details are announced in the course catalogue.

#### **Objectives**

Students know how to write, present and defend an own research paper in Economics, Econometrics or Finance. They deepen and apply their technical and econometric skills and interpret their results approprietly.

# CM5\_04 Advanced Topics in European Economics

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

This module is concerned with various topics from the field of Economics. A particular focus is on applied empirical and theoretical methods in modern economic research. Students may focus on an european point of view.

#### **Objectives**

Students become familiar with the frontier of research in economics. Upon successful completion of this module, students address important research questions in economics. Own empirical and theoretical analyses are summarized in a scientific paper and the main findings are presented in class. Students apply their findings on European Economies.

# CM5\_05 Advanced Topics in European Management

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

Students deepen their knowledge on advanced topics in european management and related fields by selecting from the online course catalogue. Depending on the specific topic, students extract insights from the academic literature or perform data analyses to create new insights, and summarize their results in a written thesis and or oral presentation. Details are announced in the course catalogue.

#### **Objectives**

Upon successful completion of this module, students are familiar with the latest research in European Management or related fields. Students evaluate advanced and complex problems from the domain of European Management and address potential solutions through their own literature research and empirical analysis. Students analyze the advantages and drawbacks of new developments in their chosen topic, compose their own written academic paper and present and defend their results in front of an academic audience.

# CM5\_06 Advanced Topics in General Management

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

Students deepen their knowledge on advanced topics in General Management and related fields by selecting from the online course catalogue. Depending on the specific topic, students extract insights from the academic literature or perform data analyses to create new insights, and summarize their results in a written thesis and or oral presentation. Details are announced in the course catalogue.

## **Objectives**

Upon successful completion of this module, students are familiar with the latest research in General Management or related fields. Students evaluate advanced and complex problems from the domain of General Management and address potential solutions through their own literature research and empirical analysis. Students analyze the advantages and drawbacks of new developments in their chosen topic, compose their own written academic paper and present and defend their results in front of an academic audience.

# CM5\_07 Advanced Topics in International Business

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

Students deepen their knowledge on advanced topics in International Business and related fields by selecting from the online course catalogue. Depending on the specific topic, students extract insights from the academic literature or perform data analyses to create new insights, and summarize their results in a written thesis and or oral presentation. Details are announced in the course catalogue.

## **Objectives**

Upon successful completion of this module, students are familiar with the latest research in International Business or related fields. Students evaluate advanced and complex problems from the domain of International Business and address potential solutions through their own literature research and empirical analysis. Students analyze the advantages and drawbacks of new developments in their chosen topic, compose their own written academic paper and present and defend their results in front of an academic audience.

# CM5\_08 Advanced Topics in Management and Economics

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

#### Content

This module is concerned with various topics from the field of economics and business administration. A particular focus is on data science techniques in modern economic research.

## **Objectives**

Students become familiar with the frontier of research in economics and business adminstration and data science techniques. Upon successful completion of this module, students address important research questions in economics and business adminstration and data science techniques. Own empirical and theoretical analyses are summarized in a scientific paper and the main findings are presented in class.

# CM5\_09 Advanced Topics in Data Science in Business and

Economics M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Portfolio

Course WorkSee course cataloguePrerequisitesSee course cataloguePerson ResponsibleSee course catalogue

## Content

This module is concerned with various topics from the field of management and economics. A particular focus is on applied empirical and theoretical methods in modern economic research.

## **Objectives**

Students become familiar with the frontier of research in management and economics. Upon successful completion of this module, students address important research questions in management and economics. Own empirical and theoretical analyses are summarized in a scientific paper and the main findings are presented in class.

# **DS400 Data Science Project Management**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course WorkSee course descriptionPrerequisitesSee course descriptionPerson ResponsibleProf. Dr. Dominik Papies

#### Content

In this module, students learn about selected areas of data science techniques by using appropriate methods. Methods covered in this module are, among others, (automated) data acquisition and collection, handling, analysis and vizualization. The topics and data sets may cover the entire range of business and economics where quantitative empirical work is prevalent.

### **Objectives**

Students can explain selected relevant and complex data science problems. Students know how to choose data science tools (e.g., programming languages, statistical approaches) for solving and analysing data science problems. Students develop an understanding of what to keep in mind when analyzing complex data sets. Further, they can explain the merits of different techniques relative to other approaches.

# **DS401 Data Science Techniques 1**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 semesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

## **DS402 Data Science Techniques 2**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

## **Objectives**

# **DS403 Data Science Techniques 3**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

# **DS404 Data Science Techniques 4**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

## **DS405 Data Science Techniques 5**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

## **DS406 Data Science Techniques 6**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

## **DS407 Data Science Techniques 7**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

## **DS408 Data Science Techniques 8**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SS

Language of instruction German or English

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation, Independent study,

Methods Literature study

Method of Assessment written exam, or oral examination, or assignments

Course Work See course description

Prerequisites ---

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students extend their knowledge in selected areas of data science techniques by choosing appropriate courses. These courses cover, among other topics, different programming languages, different approaches to data analysis (e.g., Machine Learning), and relevant tools to extract information (e.g., text mining). Courses in this module usually involve data processing as well as statistical programming.

### **Objectives**

# **DS500 Data Science Project**

M.Sc.

ECTS-Credits 12

Workload Hours Contact Hours: 30 Independent Study: 330

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Colloquium (1 SWS), PC-Lab (1 SWS)/ discussion, independent study,

**Methods** programming

Method of Assessment Presentation (50%), Term Paper (50%)

Course Work See course description

**Prerequisites** DS400 Data Science Project Management

Person Responsible Prof. Dr. Dominik Papies

#### Content

In this module, students apply the knowledge they acquired in previous modules and implement a data science project, covering all relevant steps. These steps usually involve (automated) data acquisition and collection, handling, analysis, vizualization, and creating a user interface. The topics and data sets may cover the entire range of business and economics where quantitative empirical work is prevalent, and the project may be an autonomous data science project, or it may be part of a larger research project.

## **Objectives**

After completing this module, students know how to implement and program all relevant steps of a typical data science project. They can reflect upon proper choices of programming language, data source and analytical method. They can develop a suitable interface to communicate analytical results to relevant stakeholders. They can assess and evaluate the benefits of the approaches they apply relative to other approaches. Through the assignment, they develop a suitable interface to communicate analytical results to relevant stakeholders. They can assess and evaluate the benefits of the approaches they apply relative to other approaches. Students can present their results orally.

# E410 Fiscal Federalism

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS)/ Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (60 minutes)

Course Work Assignment

Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

## Content

The module will discuss implications of multilevel governance on economic behavior (of governments, individuals or firms).

## **Objectives**

In this module, students will apply formal methods to understand complex issues in fiscal federalism. Students analyze optimal policy scenarios, which will be compared to real-world policies of governments. Students assess actual practices in federations around the worlds.

## **E411 Economics of Taxation**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (60 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

#### Content

This module will present a unified framework in which tax policy and its consequences can be analyzed. We introduce basic concepts used in public economics and some fundamentals of economic modelling. Topics include:

- (i) taxes and labor supply
- (ii) income taxation
- (iii) commodity taxation
- (iv) taxes and investment, as well as
- (v) taxes and foreign direct investment.

## **Objectives**

In this module, students will outline important topics in public economics, with a focus on taxation. They will reflect advanced concepts in (theoretical and empirical) policy analysis. Students apply these concepts to analyze tax and transfer policies. In the practice course, participants implement microeconometric estimation techniques to assess the consequences of tax policy.

# **E412 Topics in Public Policy I**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture (2 SWS), Colloquium (2 SWS)/ oral participation, independent study,

Methods literature study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

## Content

Students extend their knowledge on the determinants and effects of public policy by choosing appropriate courses.

## **Objectives**

Students develop an understanding of the determinants and effects of public policy in different areas.

# **E413 Topics in Public Policy II**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture (2 SWS), Colloquium (2 SWS)/ oral participation, independent study,

Methods literature study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

## Content

Students extend their knowledge on the determinants and effects of public policy by choosing appropriate courses.

## **Objectives**

Students develop an understanding of the determinants and effects of public policy in different areas.

# **E414 Topics in Public Policy III**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture (2 SWS), Colloquium (2 SWS)/ oral participation, independent study,

Methods literature study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Georg Wamser

## Content

Students extend their knowledge on the determinants and effects of public policy by choosing appropriate courses.

## **Objectives**

Students develop an understanding of the determinants and effects of public policy in different areas.

# **E421 International Trade I**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (1 SWS)/ Oral participation, Discussion,

Methods Independent Study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites E424 Advanced Microeconomics

Person Responsible Prof. Dr. Anna Gumpert

#### Content

This module introduces students to key concepts of international trade theory and recent advances in the field. Topics covered include the theory of comparative advantage, the role of increasing returns to scale and heterogeneous firms in international trade.

## **Objectives**

Upon completing this module, students know key facts about international trade and important theories explaining these facts. Students understand state of the art research in the field of international trade and are prepared to engage in such research themselves. The insights gained in this module enable students to contribute in an informed manner to the globalization debate.

# **E422 International Trade II**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (1 SWS)/ Oral participation, Discussion,

Methods Independent Study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites E424 Advanced Microeconomics

Person Responsible Prof. Dr. Anna Gumpert

#### Content

This module introduces students to key concepts of international trade theory and recent advances in the field. Topics covered include the theory of comparative advantage, the role of increasing returns to scale and heterogeneous firms in international trade.

## **Objectives**

Upon completing this module, students know key facts about international trade and important theories explaining these facts. Students understand state of the art research in the field of international trade and are prepared to engage in such research themselves. The insights gained in this module enable students to contribute in an informed manner to the globalization debate.

## **E424 Advanced Microeconomics I**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (2 SWS)/ Literature study, Independent writing,

Methods Discussion, Oral participation

Method of Assessment Written Exam (120 minutes)

Course Work Assignments

Prerequisites ---

Person Responsible Prof. Dr. Anna Gumpert

#### Content

The module deals with the essential concepts of modern microeconomic theory and the underlying mathematical methods on an advanced level. It covers preferences and consumer behavior, production and firm behavior, competitive market equilibrium and general equilibrium, welfare, market failure and market power, and game theory.

## **Objectives**

Students completing this module understand the essential concepts of microeconomics. In the practice course, they apply and deepen their understanding of these concepts. Students are enabled to successfully apply microeconomic theory in advanced field courses, to understand and assess theoretical contributions in economic journals, and to develop their own research agenda for the Master program and beyond.

# **E431 Open Economy Macroeconomics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS)/ Oral participation, Group discussion,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Gernot Müller

## Content

The module is concerned with current account determination, sovereign debt and default, exchange rates and monetary policy. We approch these issues from a theoretical point of view, but confront model predictions with evidence as we proceed.

## **Objectives**

Students explain and reflect upon the content and the tools of modern macroeconomics.

## **E432 Advanced Labour Economics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 45 Independent Study: 135

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (90 minutes)

Course Work Assignments

**Prerequisites** Good working knowledge of calculus

Person Responsible Dr. Christian Manger

#### Content

This module will cover the most relevant aspects of modern labour economics with a focus on economic theory. Amongst others, this module will discuss the effects of asymmetric information, discrimination, search fricitons and minimum wages on labour supply, investment in human capital, wage dispersion, automation, and efficiency.

### **Objectives**

This module familiarizes students with formal models in labour market theory. Completion of the module will enable them to analyse current political issues such as residual wage differentials, discrimination with respect to gender or ethnicity, and the effects of minimum wages. Moreover, they are able to judge the advantages and limits of theoretical models and can apply them in order to develop their own research agenda.

## E433 Advanced Macroeconomics I

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 75 Independent Study: 195

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (3 SWS), Tutorial (2 SWS)/ Oral participation, Independent study,

Methods Literature study

Method of Assessment Written Exam (90 minutes)

Course Work Assignments

**Prerequisites** Good working knowledge of calculus

Person Responsible Dr. Christian Manger

#### Content

The module familiarizes students with the essential concepts of modern macroeconomic theory at an advanced level. A particular focus will be placed on formal microfounded models to analyze and understand economic growth dynamics. The main topics are growth theory sustainable growth, and an introduction to real business cycle models.

## **Objectives**

This module will provide students with the necessary instruments and techniques that enable them to develop their own research agenda. Having completed this module, students will feel comfortable reviewing journal articles at the frontier of modern economic research. While the module will be mostly concerned with positive economic theory, students will also learn to derive and assess the normative and policy implications of the covered models and apply them to real world problems.

# **E434 Advanced Macroeconomics II**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Group discussion,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites E433 Advanced Macroeconomics I

Person Responsible Prof. Dr. Ralph Luetticke

#### Content

Topics to be covered include: Heterogeneous-agent macroeconomic models. Search, matching and equilibrium unemployment. Dynamic programming. Solution Methods of General Equilibrium models.

#### Outline

- 1. Tools for Studying Dynamic Economies
- (a) Dynamic Programming
- (b) Numerical Dynamic Programming
- (c) Applications to Neoclassical Growth and Search, Matching and Unemployment
- 2. Self Insurance and Incomplete Markets Models (Theory)
- (a) Self Insurance (partial equilibrium)
- (b) Bewley Models
- 3. Heterogeneous-agents in Macroeconomics (Applications)
- (a) Household heterogeneity
- (b) Firm heterogeneity
- 4. Equilibrium Unemployment Theory
- (a) Theory
- (b) Applications
- · Numerical problem sets, solved on a computer
- Neoclassical growth model using the social planner's problem
- Stochastic growth model (RBC) planner's problem
- Neoclassical growth model competitive equilibrium
- Incomplete markets model (Huggett-Aiyagari)
- Basic McCall job search model
- Calibrated search model
- · Analytical problem sets, pen and paper
- some full analytical solutions
- some characterizations of the problem and describing an algorithm to solve it on a computer

## **Objectives**

Students get acquainted with two major features of modern economies. The first is the large dispersion across households and firms in income and wealth, the second is the existence of persistent unemployment. Students will understand the causes and consequences of dispersion or, put differently, economic inequality. They will do so by learning the models and tools that macroeconomists have developed to represent these phenomena. With the help of these models, students will then analyse the welfare implications of various government interventions aimed at reducing inequality.

One goal of the course is to give students the opportunity to learn how to use a computer to solve economic models that may not have a "pen and paper" solution. This will allow students to consider richer models of economic behaviour and will hopefully inspire them to be ambitious in research ideas.

# **E435 European Economic Integration**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Presentation, Term Paper

Method of Assessment Presentation, Term Paper

Course Work ---

Prerequisites Enrollment in joint MSc Tübingen/Marseille, exception granted upon request

Person Responsible Prof. Dr. Gernot Müller

#### Content

In this seminar faculty from Tübingen and Marseille discuss contemporary issues of European Economic Integration with students. Topics include Brexit, Migration and European Monetary and Fiscal Policy.

## Special feature:

- Topics are allocated in February to students enrolled in their first year at Tübingen
- Student presentations take place in April in Marseille (involves a 4 day trip to Marseille)
- Term paper to be handed in June

## **Objectives**

Students learn how to apply tools of economic analysis to contemporanous policy issues; in addition they practise presentation skills.

## **E436 Quantitative Macroeconomics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Group discussion,

Methods Independent study, Literature study

Method of Assessment Assignments or Term Paper

Course Work Assignments

Prerequisites E433 Advanced Macroeconomics I

E434 Advanced Macroeconomics II (recommended but not required)
S411 Advanced Time Series Analysis (recommended but not required)

Basic undergraduate knowledge of macroeconomics as well as econometrics

are required, programmi

Person Responsible Prof. Dr. Willi Mutschler

#### Content

We cover modern theoretical macroeconomics (the study of aggregated variables such as economic growth, unemployment and inflation by means of structural macroeconomic models) and combine it with econometric methods (the application of formal statistical methods in empirical economics). We focus on the quantitative aspects and methods for solving and estimating the most prominent model classes in macroeconomics: Structural Vector Autoregressive (SVAR) and Dynamic Stochastic General Equilibrium (DSGE) models. Using these two model strands, the theoretical and methodological foundations of quantitative macroeconomics is taught. The students are thus enabled to understand the analyses and forecasts of public (universities, central banks, economic research institutes) as well as private (business banks, political consultations) research departments, but also to derive and empirically evaluate their own structural macroeconomic models.

As Quantitative Macroeconomics is highly computational, the course is interactive and "hands-on", so there is no formal separation between the lecture and the exercise class. Each topic begins with a theoretical input and presentation of methods. These concepts are practiced directly thereafter by means of exercises and implemented on the computer in MATLAB and Dynare. We will also cover some basics in High Performance Computing and recent developments like Machine Learning in the field.

Software used: Dynare and MATLAB

#### **Objectives**

Students acquire knowledge of advanced methods of quantitative research in the field of modern macroeconomics. This knowledge is relevant for the realization of a wide variety of macroeconomic research projects and is applied in central banks, ministries, research institutes (e.g. DIW, ifo, IfW, IWH, RWI) and research departments of international organizations (e.g. IMF, World Bank). Upon successful completion of this module, students are prepared to work in these areas. At the same time, the module prepares students for the requirements of a quantitatively oriented macroeconomic dissertation.

The gained methodological skills enable a precise understanding and largely independent empirical analysis of the most important model classes in quantitative macroeconomics. Students are familiar with a variety of examples and situations in which quantitative thinking is useful in explaining abstract macroeconomic phenomena. They recognize and appreciate the connections between theory and evidence and use their training to find possible avenues of research. While constructing abstract models, they identify appropriate economic and statistical tools and evaluate their strengths and weaknesses in the context of problem solving. They utilize computers and software effectively as tools for solving and estimating macroeconomic models. In addition, because students work on the problem sets as a team, students' coordination, organization, and communication skills are enhanced.

# **E437 Computational Macroeconomics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Group discussion,

Methods Independent study, Literature study

Method of Assessment Assignments or Term Paper

Course Work ---

Prerequisites E433 Advanced Macroeconomics I (or similar Bachelor studies)

E434 Advanced Macroeconomics II (recommended but not required)
S411 Advanced Time Series Analysis (recommended but not required)
Basic undergraduate knowledge of macroeconomics as well as econom

Person Responsible Prof. Dr. Willi Mutschler

#### Content

We cover modern theoretical macroeconomics and combine it with state-of-the-art numerical methods to study abstract macroeconomic concepts such as optimal monetary, fiscal and environmental policy, occasionally-binding constraints (zero-lower-bound, irreversible investment), quantitative easing and rare disaster risk. To this end, we use the Dynamic Stochastic General Equilibrium (DSGE) model paradigm, particularly focusing on different variants of the New-Keynesian model, and develop the numerical procedures and algorithms required to solve and simulate such models. Using several examples from the literature the theoretical and methodological foundations of computational macroeconomics is taught. As this course is highly computational, it is interactive and "hands-on", so there is no formal separation between the lecture and the exercise class. Each topic begins with a theoretical input and presentation of methods. These concepts are practiced directly thereafter by means of exercises and implemented on the computer in MATLAB/Julia and Dynare. We will also cover some basics in High Performance Computing and recent developments like Machine Learning in the field.

#### **Objectives**

Students acquire knowledge of advanced numerical methods in the field of computational macroeconomics. This knowledge is relevant for the realization of a wide variety of macroeconomic research projects and is applied in central banks, ministries, research institutes (e.g. DIW, ifo, IfW, IWH, RWI) and research departments of international organizations (e.g. IMF, World Bank). Upon successful completion of this module, students are prepared to work in these areas. At the same time, the module prepares students for the requirements of a methodological oriented macroeconomic dissertation.

Students are familiar with a variety of algorithms, examples and situations in which computational thinking is useful in approximating and evaluating abstract macroeconomic phenomena. They recognize and appreciate the connections between theory and computational methods and use their training to find possible avenues of research. While constructing abstract algorithms, they identify appropriate computational tools and evaluate their strengths and weaknesses in the context of problem solving. They utilize computers and software effectively as tools for solving and simulating macroeconomic models. In addition, because students work on the problem sets as a team, students' coordination, organization, and communication skills are enhanced.

# **E440 Multinational Enterprises**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 40 Independent Study: 140

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS)/ Discussion and oral participation in

**Methods** tutorial

Method of Assessment Written Exam (90 minutes)

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

#### Content

This module will deal with the role of multinational enterprises and foreign direct investment in the world economy. We will explain why and when they exist, and we will discuss in detail which type of foreign direct investment we may expect, considering different market conditions and country characteristics. We will also consider how the existence of multinational firms will change local market structures and welfare.

### **Objectives**

Students will understand the role multinational enterprises play in the global economy. They will be able to apply microeconomics concepts for the analysis of foreign direct investment, and they will explain under which circumstances trade will be a substitute or a complement of foreign direct investment. They will also analyze the holdup problem and other relevant frictions in this context. The tutorial allows them to discuss multinational firm behavior in detail.

# **E441 Advanced Microeconomics II**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture

Methods

Lecture (3 SWS), Tutorial (1 SWS)/ Literature study, Independent writing

Method of Assessment Written Exam (120 minutes)

Course Work ---

**Prerequisites** E424: Advanced Microeconomics

Person Responsible Prof. Dr. Frank Stähler

## Content

The module builds on the course Advanced Microeconomics I. It deals with advanced concepts of general equilibrium, stratgic behavior, market power and asymmetric information and game theory.

## **Objectives**

Students completing this module explain the advanced concepts of microeconomics. In the tutorial, they apply and deepen their understanding of these concepts. Students successfully apply advanced microeconomic theory and are able to understand and assess advanced theoretical contributions in economic journals.

# **E442 Empirical Methods and Data Analysis I**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

## Content

In this module, students extend their knowledge in selected areas of empirical methods, econometrics, and data science by choosing appropriate courses.

## **Objectives**

# **E443 Empirical Methods and Data Analysis II**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

## Content

In this module, students extend their knowledge in selected areas of empirical methods, econometrics, and data science by choosing appropriate courses.

## **Objectives**

# **E444 Empirical Methods and Data Analysis III**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

## Content

In this module, students extend their knowledge in selected areas of empirical methods, econometrics, and data science by choosing appropriate courses.

## **Objectives**

# **E445 Empirical Methods and Data Analysis IV**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

## Content

In this module, students extend their knowledge in selected areas of empirical methods, econometrics, and data science by choosing appropriate courses.

## **Objectives**

## **E446 Health Economics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Seminar (4 SWS) O

Methods

Seminar (4 SWS) Oral participation, Discussion, Independent study

Method of Assessment Presentation, Term Paper
Course Work ---

Prerequisites ---

Person Responsible Prof. Dr. Frank Stähler

#### Content

This course introduces students to the application of economic theory and empirical methods to the study of markets for healthcare and health insurance and related government policies. Students will engage directly with recent, peer-reviewed academic articles in health economics and related fields. We will focus on empirical, applied microeconomics research. Strong emphasis will be placed on the methods used in the studies that we examine. Special attention will be given to those with a tight link between theory and empirics that test the predictions of a theory or estimate a structural model of consumer or firm behavior. Topics will include the demand for healthcare; health insurance markets, with a focus on asymmetric information; social insurance programs; and the impacts of health, health risk, and health insurance on individual decisions and outcomes, including health, labor supply, and savings.

#### **Objectives**

- 1. Be able to engage critically with current, peer-reviewed, academic research in health economics and related fields.
- 2. Be able to clearly communicate economic research—the motivation, research question, theoretical and/or empirical framework, and results—to an audience of your peers.
- 3. Understand how to apply the theoretical and empirical tools used by applied microeconomists to conduct research on markets for healthcare and health insurance as well as related government policies.
- 4. Understand key concepts in the design of health insurance contracts and markets, such as asymmetric information, adverse selection, moral hazard, risk adjustment, and managed competition.

# **E450A Game Theory and Industrial Organization**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS) Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

Course Work

To participate in the exam, students are required to pass four assignments.

Prerequisites

Knowledge of mathematical methods for economic analysis. It is strongly

recommended to attend the refresher course S 414 – Advanced Mathematical

Methods (block seminar prior to the start of the semester).

Person Responsible Prof. Dr. Manfred Stadler

#### Content

The module is concerned with the strategic interaction of firms in relevant markets. Firm behavior, market structure and market performance are explained in terms of some basic market conditions such as technology, demand, entry cost, and information structure. Special topics are collusion, deterrence and accommodation of market entry, strategic choice of capacities, advertising, investment, research and development, location, horizontal and vertical product differentiation as well as information sharing and signaling.

#### **Objectives**

Students know basic mathematical tools and key concepts used in modern game theory and apply these concepts to various topics of strategic competition in different markets.

# **E450B Game Theory and Industrial Organization**

M.Sc.

ECTS-Credits

Workload Hours Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS), Colloquium (2 SWS) Oral participation,

Discussion, Independent study, Presentation

Method of Assessment Written Exam (90 minutes)

Course Work To participate in the exam, students are required to pass four assignments

**Prerequisites** and pass the colloquium.

Knowledge of mathematical methods for economic analysis. It is strongly recommended to attend the refresher course S 414 – Advanced Mathematical

Methods (block seminar prior to the start of the semester)

Person Responsible Prof. Dr. Manfred Stadler

#### Content

Methods

The module is concerned with the strategic interaction of firms in relevant markets. Firm behavior, market structure and market performance are explained in terms of some basic market conditions such as technology, demand, entry cost, and information structure. Special topics are collusion, deterrence and accommodation of market entry, strategic choice of capacities, advertising, investment, research and development, location, horizontal and vertical product differentiation as well as information sharing and signaling.

The colloquium complements the lecture. It deals with selected topics in Applied Industrial Organization.

#### **Objectives**

Students know basic mathematical tools and key concepts used in modern game theory and apply these concepts to analyze topics of strategic competition in different markets. By visiting the colloquium, students know how to present and discuss advanced models in Industrial Organization and to apply them to specific research questions.

## **E453A Economic Growth**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS) Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

**Course Work**To participate in the exam, students are required to pass four assignments.

Prerequisites ---

Person Responsible Prof. Dr. Manfred Stadler

#### Content

After a short review of the neoclassical growth theory the module deals with some advanced models of endogenous growth. Special topics are capital accumulation, population dynamics, public infrastructure, natural resources, environmental pollution, climate change and sustainable development, education and human capital as well as innovation and technological change in the global economy.

#### **Objectives**

Students apply the basic mathematical tools and key concepts which are essential in dynamic macroeconomics (differential equations, dynamic optimization) and categorize the decisive forces fostering and hampering economic growth and sustainable development.

## **E453B Economic Growth**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS), Colloquium (2 SWS) Oral participation,

Methods Discussion, Independent study, Presentation

Method of Assessment Written Exam (90 minutes)

Course Work To participate in the exam, students are required to pass four assignments

**Prerequisites** and the colloquium.

E453A

Person Responsible Prof. Dr. Manfred Stadler

#### Content

After a short review of the neoclassical growth theory the module deals with some advanced models of endogenous growth. Special topics are capital accumulation, population dynamics, public infrastructure, natural resources, environmental pollution, climate change and sustainable development, education and human capital as well as innovation and technological change in the global economy.

The colloquium complements the lecture. It deals with selected topics in ecnomic growth and sustainable development.

#### **Objectives**

Students apply the basic mathematical tools and key concepts which are essential in dynamic macroeconomics (differential equations, dynamic optimization) and categorize the decisive forces fostering and hampering economic growth and sustainable development. By visiting the the colloquium, students know how to present and discuss advanced models in dynamic macroeconomics and to apply them to specific research questions.

## **E454 Innovation and Technological Change**

B.Sc./M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS) Oral participation, Discussion,

Methods Independent study

Method of Assessment Written Exam (90 minutes)

**Course Work** To participate in the exam, students are required to pass three assignments.

Prerequisites ---

Person Responsible Prof. Dr. Manfred Stadler

#### Content

Innovation is the main driving force of the development of firms, industries and economies. The causes and effects of innovation cannot be explained in a satisfying way by focusing on only one of these levels. The module therefore provides an integrated bottom-up analysis of the innovation process, starting at the microeconomic firm level (innovation management), moving on to the industry level (innovation competition), the aggregate macroeconomic level (innovation and growth dynamics), and finally the global level (innovation and international trade).

#### **Objectives**

Students explain the key issues of innovation and technological change. They distinguish basic tools of modern economic theory (dynamic optimization, game theory, general-equilibrium theory). They develop a deep understanding of the relationship between business economics and micro- and macroeconomic theory and recognize that both represent different approaches within a unified scientific discipline.

## **E456 Behavioral Economics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Lecture and Tutorial (2 SWS)/ Oral participation, Discussion, Independent

Methods study

Method of Assessment Written Exam (90 minutes)

Course Work Assignments

**Prerequisites** attendance compulsory

Person Responsible Prof. Dr. Manfred Stadler or Prof. Dr. Kerstin Pull

#### Content

The module is divided into four main sections:

- 1) Behavioral decision making (intertemporal decision making, decision making under uncertainty, so called "paradoxes" of decision making like "preference reversal" and "conjunction effect");
- 2) Elementary Methods of Experimental Economics (principles of experimentation, hypothesis testing, methods of non-parametric statistics;
- 3) Behavioral game theory (fairness and reciprocity, bounded rationality);
- 4) Recent developments in Behavioral Economics (Neuro-Economics, mental modeling)

#### **Objectives**

Graduates of the module describe behavioral principles of strategic and non-strategic decision making in an economic environment. This enable them to evaluate purely theoretical economic problems more adequately and to design an appropriate economic environment for applied decision problems as well. Moreover, graduates conduct simple economic experiments in order to test how suitable selected economic and institutional designs are to deal with economic problems.

## **E471 Empirical Topics in International Trade**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (2 SWS)/ Oral participation, Discussion,

Methods Independent study

Method of AssessmentTake-home Exam or written exam (see term details)Course WorkData project and/or presentation (see term details)

Prerequisites E424, E433

Person Responsible Prof. Dr. Valeria Merlo

#### Content

The goal of this module is to introduce students to central and recent empirical work in international trade. We will discuss the derivation and estimation of gravity models for international trade and develop an understanding of state-of-the-art empirical techniques used in international economics. The lecture will be complemented by a tutorial where we will learn to handle and visualize trade data, replicate empirical studies and estimate gravity models using the statistical program R.

#### **Objectives**

Students will be able to analyze trade data, evaluate existing research and carry out own empirical research in international economics.

# **E463 Causal Machine Learning**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Lecture (2 SWS), Tutorial (2 SWS)/ Self study, Presentation, Coding

Method of Assessment Portfolio

Course Work ---

Prerequisites Successful participation in either S411 Advanced Time Series Analysis or

S422 Advanced Microeconometrics or comparable courses (please contact

person responsible)

Person Responsible Prof. Michael Knaus, PhD

#### Content

This module introduces recent methods at the intersection of causal inference and machine learning. This includes (i) methods that leverage supervised machine learning for the estimation of average or heterogeneous treatment effects, like Double Machine Learning and Causal Forests, and (ii) policy learning that recommends ads/policies/treatments/... in a data-driven way, like bandit algorithms. The methods are applied to simulated and real datasets using the programming language R.

#### **Objectives**

Students understand the conceptual and statistical foundations of causal machine learning methods and are able to implement them in R. They can judge the quality of data analysis using such methods and are aware of their shortcomings.

## **E464 Causal Inference**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Led

Methods

Lecture (2 SWS), Tutorial (2 SWS)/ Self study, Presentation, Coding

Method of Assessment Portfolio

Course Work ---

Prerequisites Knowledge of probability theory and ordinary least squares

Person Responsible Prof. Michael Knaus, PhD

#### Content

Correlation does not imply causation. This insight is crucial for any data analyst who aims to inform decisions. This course introduces two frameworks to think about causality: (i) potential outcomes that are more prevalent in economics and statistics, and (ii) directed acyclic graphs (DAGs) that are more prevalent in computer science and industry. These frameworks are applied to understand how causal effects can be identified in experiments (A/B testing), natural experiments (instrumental variables, difference-in-differences, regression discontinuity), and more complex causal structures as well as how to discover causal structures. Application are run in R.

In combination with machine learning modules like "Machine Learning in Econometrics" or "Machine Learning Applications in Business and Economics", it is the perfect preparation for "Causal Machine Learning".

#### **Objectives**

Students develop a thorough understanding of causal inference through the lense of potential outcomes and DAGs. These frameworks and their application allow them to be critical consumers and reflected producers of data analyses that target causal effects.

# E465 Language and Culture I

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

In this module, students extend their knowledge in selected areas from language and culture of one or more countries and regions of the world by choosing appropriate courses.

#### **Objectives**

# E466 Language and Culture II

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

In this module, students extend their knowledge in selected areas from language and culture of one or more countries and regions of the world by choosing appropriate courses.

#### **Objectives**

# E467 Language and Culture III

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

In this module, students extend their knowledge in selected areas from language and culture of one or more countries and regions of the world by choosing appropriate courses.

#### **Objectives**

# E468 Language and Culture IV

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 60 Independent Study: 120

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Valeria Merlo

#### Content

In this module, students extend their knowledge in selected areas from language and culture of one or more countries and regions of the world by choosing appropriate courses.

#### **Objectives**

## **E475 Macro-Finance**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCyclegenerally: WS

Language of instruction English

**Course Type/ Learning** 

Lecture (2 SWS), Tutorial (2 SWS) Oral participation, Group work, Self-study

Methods

Method of Assessment Written Exam (60 minutes)

**Course Work**Mandatory hand-in of at least half of problem set solutions, group-work possible, discussion in tutorial with voluntary presentation of results

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Person Responsible Dr. Maximilian Weiß

#### Content

In this course, we go at the central question of financial economics: what are the real risks that drive asset prices and expected returns. In the first part, we cover consumption-based asset pricing theory and the three views of asset pricing and their relationship: the stochastic discount factor representation, the mean-variance frontier, and the expected return-beta representation. In the second part, we discuss the associated empirical puzzles — the equity premium puzzle and the return predictability puzzle — and go through theories in the literature that offer a resolution to these puzzles. We quantitatively assess more complex theories that combine asset pricing and macroeconomic fluctuations by numerically solving models using the programming language Julia.

### **Objectives**

Students master formally and intuitively the theoretical foundations of consumption-based asset pricing and have an understanding of how to relate these concepts to data measurements. They understand the main empirical puzzles / open questions and know the leading theoretical explanations within this framework.

# E480 Empirical Studies on Migration, Trade and Growth in the Long Run

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 45 Independent Study: 225

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning Lecture (2 SWS), Tutorial (1 SWS) Self study, Literature study, Presentation,

Methods Assignment

Method of Assessment Term Paper

Course Work Presentation, Assignments

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

This module provides an overlook over interesting quantitative topics in international economic history, like:

- impact from different factors on international migration
- the extent of migrants influence on their destination countries in the long run
- the latest research on the biological standard of living and human capital development

#### **Objectives**

The students recognize the relationship between migration, trade and long run growth. Additionally, they get to know the current research in this field and its most important statistical methods. By writing a term paper, students gather, analyze and apply information in order to formulate convincing arguments, communicate academic ideas, produce conclusions and acquire skills in academic writing.

## **E481 Topics in History I**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Students extend their knowledge on historical economic developments by choosing appropriate courses.

#### **Objectives**

# E482 Topics in History II

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (4 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Students extend their knowledge on historical economic developments by choosing appropriate courses.

#### **Objectives**

## **E483 Topics in History III**

M.Sc.

ECTS-Credits 3

Workload Hours Contact Hours: 30 Independent Study: 60

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (2 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Students extend their knowledge on historical economic developments by choosing appropriate courses.

#### **Objectives**

## **E484 Topics in History IV**

M.Sc.

ECTS-Credits 3

Workload Hours Contact Hours: 30 Independent Study: 60

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Lecture and tutorial (2 SWS) / Oral participation Independent study, Literature

Methods study

Method of Assessment Written exam, or oral examination, or assignments, or term paper

Course Work See term details

Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

Students extend their knowledge on historical economic developments by choosing appropriate courses.

#### **Objectives**

## **E550 Topics in Applied Economic Theory**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning Seminar (2 SWS)/ Oral participation, Group discussion, Independent study,

Methods Literature Study

Method of Assessment Presentation, Term Paper

Course Work ---

Prerequisites Game Theory and Industrial Organization (E 450) or Economic Growth (E

453)

Person Responsible Prof. Dr. Manfred Stadler

#### Content

The seminars deals with selected topics in Applied Microeconomics and Macroeconomics. Two of three seminars can be taken out of:

(1) Master Seminar: Game Theory and Industrial Organization

(2) Master Seminar: Case Studies in Industrial Organization (Prof. Rall)

(3) Master Seminar: Resources, Innovation and Economic Growth

Seminars (1) and (2) in Applied Microeconomics deal with strategic issues in Industrial Organization. Either they apply advanced concepts of game theory in IO (sequential games, differential games, global games, evolutionary games) or they use standard concepts in order to analyze specific case studies.

The seminar (3) in Applied Macroeconomics deals with selected topics in economic growth and sustainable development such as population dynamics, natural resources and environment, public spending and infrastructure, education and human capital accumulation as well as innovation and technological change in the global economy.

#### **Objectives**

Students know how to write and present an own research paper. They apply research techniques and scientific writing skills. In presenting a research paper, students acquire presentations as well as communication skills (written and oral). Students learn to reflect on the current state of reasearch in Applied Economic Theory and carry out scientific work independently.

## E580 Topics in International Economic History I

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS)/ Self study, Literature study

Method of Assessment Presentation, Term Paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

The module provides an overlook over interesting topics in International Economic History. In the summer term the main focus is on:

- European economic history during the latest era,
- "First Era of Globalization" (1880-1913) and what determinants gave rise to its failure,
- the current wave of globalization and which influence anti-globalization movements have
- the latest research on the biological standard of living and human capital development.

In the winter term the main focus is on:

- financial market evidence,
- modern issues, such as bubbles and economic crises, seen from a long-term perspective,
- behavioral aspects of stock markets.

#### **Objectives**

In this module students describe general issues in international economics and interesting economic developments. Students will also strengthen their knowledge in applied statistical analyses techniques and execute them with STATA by using real historical data. By writing a term paper, students will be able to gather, analyze and apply information, to formulate convincing arguments, communicate academic ideas, produce conclusions and acquire skills in academic writing.

# **E581 Topics in International Economic History II**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 30 Independent Study: 240

Duration1 SemesterCycleWS, SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS)/ Self study, Literature study

Method of Assessment Presentation, Term Paper

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Jörg Baten

#### Content

In this module, students can obtain deep insights into the process of scholarly research in economic history by doing a research internship. The main aspects are how researchers are working on studies and how to retrieve information, prepare econometric analysis and design a scholarly text.

The topics covered in the Winter term:

Long-run human capital development.

The development of welfare in many different world regions.

International economic history.

The topics covered in the Summer term:

Development and violence.

Brain drain and migration.

General development trends in poor countries over the long run, e.g. human capital, welfare.

#### **Objectives**

In this module students describe general issues in international economics and interesting economic developments. They will also strengthen their knowledge in applied statistical analyses techniques and execute them with STATA by using real historical data. By writing a term paper, students will be able to gather, analyze and apply information, to formulate convincing arguments, communicate academic ideas, produce conclusions and acquire skills in academic writing. Students present and discuss the research question and their analysis to an academic audience, they react to and incorporate new ideas, feedback and critique.

# **S411 Advanced Time Series Analysis**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Lecture (4 SWS), PC-Lab (2 SWS)/ Oral participation, Group work, Self-study

Method of Assessment Portfolio

Course Work ---Prerequisites ---

Person Responsible Prof. Dr. Joachim Grammig

#### Content

The module deals with a rigorous treatment of state-of-the art univariate and multivariate time series methods used in economics and finance. This includes:

- 1. Autoregressive moving average models
- 2. Forecasting
- 3. Regression analysis with stationary and non-stationary time series
- 4. Unit root tests
- 5. Structural vector-autoregressive models and cointegration
- 6. Equilibrium correction and Johansen methodology
- 7. Amplification of time series methods in macroeconomics and finance using econometric software
- 8. Conditional heteroskedasticity in financial time series

#### **Objectives**

Students master state-of-the-art time series econometrics, both univariate and multivariate. They apply time series methods with awareness of their potential and limitations in macroeconomics and finance. They command an econometric programming language independently and productively to perform empirical analyses involving time series data. They present and discuss their results of the application of time series methods in a scientific fashion.

## **S412 Empirical Asset Pricing**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Le

Methods

Lecture (4 SWS), PC-Lab (2 SWS)/ Oral participation, Group work, Self-study

Method of Assessment Portfolio

Course Work ---Prerequisites ----

Person Responsible Prof. Dr. Joachim Grammig

#### Content

Principles of modern financial economics, generalized method of moments- and regression-based estimation and evaluation of asset pricing models, econometric software (Matlab) is used for financial applications in practical course. The theoretical part emphasizes the link of financial economics and the econometric modelling. The methods are applied in a practical class in the PC laboratory.

#### **Objectives**

Students gain practical experience and the theoretical background in the application of econometric methods for the analysis of price formation processes in financial markets. They are able to estimate and evaluate linear and nonlinear factor models and they develop an understanding of the econometric methods and their limitations in asset pricing. Students also learn how to present and discuss their results in a scientific proper fashion, which is dealt with in the practical class. They are able to productively use Matlab for their own analyses in empirical finance, e.g. their master's thesis. students master important concepts of asset pricing in financial economics and econometric theory, which are closely intertwined.

## **S413 Financial Economics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 60 Independent Study: 210

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Course Type/ Learning

Lecture (3 SWS), Tutorial (1 SWS)/ Oral participation, Group work, Self-study

Methods

Method of Assessment Written Exam (90 minutes)

Course Work --Prerequisites ---

Person Responsible Prof. Dr. Joachim Grammig

#### Content

The module deals with a rigorous treatment of modern financial economics. This includes:

- 1. Relationsship of state preferences, risk-neutral probabilities and the pricing kernel
- 2. Existence of a positive stochastic discount factor and fundamental theorem of financial economics
- 3. Relationship of stochastic discount factor representations of asset pricing models, mean-variance frontier and expected return-beta representation
- 4. Recent advances in financial economics
- 5. Implementation and illustrations using computer software (Matlab)

#### **Objectives**

Students master formally and intuitively the theoretical foundations of modern financial economics and key concepts associated with asset pricing in discrete time.

## **S414 Advanced Mathematical Methods**

M.Sc.

ECTS-Credits 3

Workload Hours Contact Hours: 30 Independent Study: 60

**Duration** 1 Semester

Cycle WS
Language of instruction English

Course Type/ Learning

Methods

Lecture (1 SWS), Tutorial (1 SWS)/ Oral participation, Group work, Self-study

Method of Assessment Written Exam (60 minutes)

Course Work ---Prerequisites ---

Person Responsible Dr. Julie Schnaitmann

#### Content

The module covers key concepts in linear algebra and mathematical statistics. It will in particular deal with matrix algebra (including linear independence and eigenvalue theory), quadratic forms, matrix differentiation, difference equations, basic probability theory and statistical inference.

#### **Objectives**

This module is designed for recently enrolled Master students at the School of Business and Economics. The aim is to provide participants with the mathematical tools and the fundamentals of probability theory and statistics which are particularly important for successful completion of the Master programme. The module is designed to review some basic concepts which are covered in standard bachelor courses and will then expand the field to more advanced methods. After completing the module, students will have acquired the basic mathematical and statistical knowledge that is needed to start a Masters degree in Economics/Business Adminstration.

## **S415 Machine Learning in Econometrics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 75 Independent Study: 105

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning Le

Methods

Lecture (3 SWS), PC-Lab (2 SWS)/ Oral participation, Group work, Self-study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites Successful participation in either S411 Advanced Time Series Analysis or

S422 Advanced Microeconometrics

Person Responsible Dr. Jantje Sönksen

#### Content

This module illustrates how machine learning techniques can be used in economic research and applications. It offers a thorough analysis of a variety of tools in statistical learning and links them to econometric analysis. The module focuses on supervised machine learning techniques, such as: decision/regression trees, (logistic) regressions, naïve Bayes, local regressions, nearest neighbors, artificial neural networks, and support vector machines. The lecture also covers hyperparameter tuning methods, various feature selection and regularization techniques, and causal forests. A practical PC-Lab class is an essential part of the module.

#### **Objectives**

Students apply machine learning techniques and understand how these are linked to standard econometrics. They command different machine learning methods and apply them to economic problems using statistical software. They are aware of the respective advantages and shortcomings of these methods and discuss their results critically.

# **S416 Topics in Financial Econometrics**

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

See term details

Duration1 SemesterCycleWS or SSLanguage of instructionEnglish

Course Type/ Learning

Methods

Seminar (2 SWS)/ oral participation, independent study, literature study

Method of Assessment

Course Work ---

Person Responsible Prof. Dr. Joachim Grammig

#### Content

**Prerequisites** 

This module is concerned with various and current topics from the field of empirical financial economics and financial econometrics. A particular focus is on applied emirical and theoretical methods in modern financial economics research.

Presentation, Assignment, Term Paper

#### **Objectives**

Students become familiar with the frontier of research in financial economics and econometrics. Upon successful completion of this module, students address important issues in financial economics and financial econometrics. Own empirical and theoretical analyses are summarized in a paper and the findings are presented in class.

## **S420 Statistics of Financial Markets**

M.Sc.

**ECTS-Credits** 

**Workload Hours** Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

WS Cycle Language of instruction **English** 

Course Type/ Learning

Methods

**Method of Assessment** 

Written Exam (90 minutes)

**Course Work** 

Basic knowledge of probability theory, linear algebra and econometric **Prerequisites** 

Lecture (4 SWS), Tutorial (2 SWS)/ Independent Study, Literature Study

methods

**Person Responsible** Prof. Dr. Martin Biewen

#### Content

The module deals with statistical models and methods for the analyis of financial data. The following topics are covered:

- 1) Univariate Return Distributions
- 2) Extreme Value Theory
- 3) Multivariate Return Distributions
- 4) Copulas, Value at Risk
- 5) ARIMA Time Series
- 6) Random Walks, Market Efficiency
- 7) Stochastic Volatility, GARCH Time Series
- 8) CAPM-Model, Performance Measures
- 9) Stochastic Dominance
- 10) Brownian Motion, Stochastic Calculus
- 11) Option Pricing, Black-Scholes-Model
- 12) Neural Networks, Support Vector Machines
- 13) Credit Risk Management

#### **Objectives**

Students master the most commonly used statistical methods for analyzing financial variables. The module enables them to understand the motivation and derivation of the different methods. Students apply these methods in practical applications using the statistical software Stata.

## **S422 Advanced Microeconometrics**

M.Sc.

ECTS-Credits 9

Workload Hours Contact Hours: 90 Independent Study: 180

**Duration** 1 Semester

Cycle SS
Language of instruction English

Course Type/ Learning

Methods

Lecture (4 SWS), Tutorial (2 SWS)/ Independent Study, Literature Study

Method of Assessment Written Exam (90 minutes)

Course Work ---

Prerequisites Basic knowledge of probability theory, linear algebra and econometric

methods

Person Responsible Prof. Dr. Martin Biewen

#### Content

The module deals with a rigorous treatment of state-of-the art microeconometric methods with applications in different fields of economics. The topics include:

- 1. Conditional Expectations and Linear Projections
- 2. Basic Asymptotic Theory
- 3. Single Equation OLS estimation
- 4. Single Equation IV estimation
- 5. Systems of Equations OLS/GLS estimation
- 6. Systems of Equations IV estimation
- 7. Linear Unobserved Effects Panel Data Models
- 8. M-estimation, Nonlinear Regression, and Quantile Regression
- 9. Generalized Method of Moments and Maximum Likelihood Estimation
- 10. Discrete Response Models
- 11. Corner Solutions, Censoring, and Selection Models
- 12. Treatment Evaluation
- 13. Duration Analysis

#### **Objectives**

Students master the state of the art of microeconometric techniques. They understand derivations and proofs. Students are able to assess the applicability and the limitations of the methods in fields such as labor economics, industrial economics, finance, and marketing. Students to apply the different methods in practical applications using the statistical software Stata.

## WE4 01 Introduction to Business Ethics

M.Sc.

ECTS-Credits 6

Workload Hours Contact Hours: 30 Independent Study: 150

**Duration** 1 Semester

Cycle see online: Weltethos-Institut, Alma

Language of instruction English

Course Type/ Learning

Seminar (2 SWS)/ See online: Weltethos-Institut, Alma

Methods

Method of Assessment Presentation

Course Work Facilitation of discussion and short paper

Prerequisites ---

Person Responsible Weltethos-Institut, Dierksmeier, Claus, Prof., Dr. phil.

#### Content

This seminar offers a practical overview of the current debate on business ethics and its underlying presuppositions and theoretical foundations. We will take a look at some of the main challenges we are facing as a global community today and their relationship to business. Participating students will work in teams to analyze the impact business makes on specific socio-economic or environmental challenges and provide concrete examples for both, adverse and constructive effects of business conduct on those challenges. These examples will then be analyzed, regarding their ethical content and the legitimacy of different courses of action.

This seminar offers an interactive learning experience on the fast growing topic of business ethics and is focused on establishing links between theoretical works and their practical implications.

#### **Objectives**

Students analyze the impact business makes on specific socio-economics or environmental challenges and provide examples for both.