Module Catalogue
for the Subject
Economathematics
as a Bachelor’s with 1 major
with the degree "Bachelor of Science"
(180 ECTS credits)

Examination regulations version: 2022
Responsible: Faculty of Mathematics and Computer Science
Responsible: Faculty of Business Management and Economics
## Contents

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Learning Outcomes

German contents and learning outcome available but not translated yet.

Wissenschaftliche Befähigung

- Die Absolventinnen und Absolventen sind vertraut mit den Arbeitsweisen und der zugehörigen Fachsprache der Mathematik und beherrschen die Methoden mathematischen Denkens und Beweisens.
- Die Absolventinnen und Absolventen besitzen grundlegende Kenntnisse der Stochastik, der Finanzmathematik und mindestens eines weiteren Gebiets der Mathematik und können sicher mit den Methoden dieser Gebiete umgehen.
- Die Absolventinnen und Absolventen besitzen einen umfassenden Überblick über die unterschiedlichen Disziplinen der Betriebs- und Volkswirtschaftslehre und können die zugrundeliegenden quantitativen, juristischen und theoretischen Methoden und Sichtweisen einordnen und anwenden.
- Die Absolventinnen und Absolventen kennen die Grundlagen der Informatik und sind in der Lage, kleinere und mittlere Projekte in mindestens einer modernen Programmiersprache selbständig zu entwickeln.
- Die Absolventinnen und Absolventen sind geschult in analytischem Denken, besitzen ein hohes Abstraktionsvermögen, universell einsetzbare Problemlösungskompetenz und die Fähigkeit, komplexe ökonomische Zusammenhänge zu strukturieren.
- Die Absolventinnen und Absolventen sind in der Lage, sich selbständig mithilfe von Fachliteratur in weitere Gebiete der Mathematik und Wirtschaftswissenschaften einzuarbeiten.
- Die Absolventinnen und Absolventen kennen die Regeln guter wissenschaftlicher Praxis und sind in der Lage, sie in ihrer eigenen Arbeit zu beachten.

Befähigung zur Aufnahme einer Erwerbstätigkeit

- Die Absolventinnen und Absolventen sind geschult in analytischem Denken, besitzen ein hohes Abstraktionsvermögen, universell einsetzbare Problemlösungskompetenz und die Fähigkeit, komplexe ökonomische Zusammenhänge zu strukturieren.
- Die Absolventinnen und Absolventen sind in der Lage, konkrete Probleme aus anderen Gebieten, insbesondere der Wirtschaftswissenschaften, zu erkennen, strukturieren, modellieren und mit mathematischen Methoden Lösungswege zu entwickeln.
- Die Absolventinnen und Absolventen sind in der Lage, konstruktiv und zielorientiert in Teams zu arbeiten.
- Die Absolventinnen und Absolventen sind in der Lage, sich weitere Wissensgebiete selbständig, effizient und systematisch zu erschließen.
- Die Absolventinnen und Absolventen sind vertraut mit mindestens einer modernen Programmiersprache und können kleinere und mittlere Projekte selbständig entwickeln.
- Die Absolventinnen und Absolventen besitzen die Fähigkeit, in interdisziplinär zusammengesetzten Teams im Bereich der Mathematik, Informatik und Wirtschaftswissenschaften gestaltend mitzuwirken.
• Die Absolventinnen und Absolventen kennen Unternehmensstrukturen und besitzen die Fähigkeit, Probleme aus der wirtschaftlichen Praxis selbständig zu bearbeiten.

**Persönlichkeitsentwicklung**

• Die Absolventinnen und Absolventen sind geschult in analytischem Denken, besitzen ein hohes Abstraktionsvermögen, universell einsetzbare Problemlösungskompetenz und die Fähigkeit, komplexe ökonomische Zusammenhänge zu strukturieren.

• Die Absolventinnen und Absolventen sind in der Lage, volks- und betriebswirtschaftliche, sowie gesellschaftliche Entwicklungen und Prozesse kritisch zu reflektieren und zu bewerten.

• Die Absolventinnen und Absolventen sind in der Lage, in partizipativen Prozessen gestaltend mitzuwirken.

• Die Absolventinnen und Absolventen besitzen ein ausgeprägtes Durchhaltevermögen bei der Lösung komplexer Probleme innerhalb eines vorgegeben Zeitrahmens.

• Die Absolventinnen und Absolventen sind in der Lage, Ideen und Lösungsvorschläge allgemeinverständlich zu formulieren und präsentieren.
Abbreviations used

Course types: E = field trip, K = colloquium, O = conversatorium, P = placement/lab course, R = project, S = seminar, T = tutorial, Ü = exercise, V = lecture

Term: SS = summer semester, WS = winter semester

Methods of grading: NUM = numerical grade, B/NB = (not) successfully completed

Regulations: (L)ASPO = general academic and examination regulations (for teaching-degree programmes), FSB = subject-specific provisions, SFB = list of modules

Other: A = thesis, LV = course(s), PL = assessment(s), TN = participants, VL = prerequisite(s)

Conventions

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Notes

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should the module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with

the general regulations governing the degree subject described in this module catalogue:

ASPO2015

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

22-Mar-2022 (2022-14)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.
Compulsory Courses

(95 ECTS credits)
Subfield Mathematics
(45 ECTS credits)
### Module Catalogue for the Subject Economathematics

Bachelor's with 1 major, 180 ECTS credits

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<th>Module offered by</th>
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<td>Dean of Studies Mathematik (Mathematics)</td>
<td>Institute of Mathematics</td>
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**Contents**

- Real numbers and completeness, basic topological notions, convergence and divergence of sequences and series, differential and integral calculus in one variable, further topological considerations, differential calculus with a focus on functions in several variables.

**Intended learning outcomes**

- The student knows and masters the essential methods and proof techniques of analysis and is able to apply them independently, He/She has an overview over the fundamental notions and concepts of analysis, their analytic background and geometric interpretation, and can interconnect them and express them adequately in written and oral form.

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**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- oral examination of one candidate each (20 to 40 minutes)
- Assessment will have reference to the contents of modules 10-M-ANB1 and 10-M-ANB2.
- Language of assessment: German and/or English

**Allocation of places**

- --

**Additional information**

- --

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

- --
Module title: Overview Linear Algebra for Economathematics

Abbreviation: 10-M-LNB-Ü-222-m01

Module coordinator: Dean of Studies Mathematik (Mathematics)

Module offered by: Institute of Mathematics

ECTS: 13

Method of grading: numerical grade

Duration: 2 semester

Module level: undergraduate

Other prerequisites: --

Contents:
Basic notions and structures; vector spaces, linear maps and systems of linear equations; theory of matrices and determinants; eigenvalue theory; bilinear forms and Euclidean/unitary vector spaces; diagonalisability and Jordan normal form.

Intended learning outcomes:
The student knows and masters the essential methods and proof techniques of linear algebra and is able to apply them independently. He/She has an overview over the fundamental notions and methods of linear algebra, knows about their algebraic and geometric background, is able to relate them to each other and can present them adequately in written and oral form.

Courses:
V (4) + V (4) + Ü (2)

Method of assessment:
oral examination of one candidate each (20 to 40 minutes)
Assessment will have reference to the contents of modules 10-M-LNB1 and 10-M-LNB2.
Language of assessment: German and/or English

Allocation of places:
--

Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes):
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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

### Contents

- Combinatorics
- Laplace models
- Selected discrete distributions
- Elementary measure and integration theory
- Continuous distributions: normal distribution, random variable, distribution function, product measures and stochastic independence
- Elementary conditional probability, characteristics of distributions: expected value and variance, limit theorems: law of large numbers, central limit theorem.

### Intended learning outcomes

The student is acquainted with fundamental concepts and methods in stochastics, applies these methods to practical problems and knows about the typical fields of application.

### Courses

- V (4) + Ü (2)

### Method of assessment

- a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)
- Language of assessment: German and/or English creditable for bonus
- exam. reg. data record Bachelor (180 ECTS) Wirtschaftsmathematik - 2022

### Additional information

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### Referred to in LPO 1

- (examination regulations for teaching-degree programmes)
## Module Catalogue for the Subject
**Economathematics**

**Bachelor’s with 1 major, 180 ECTS credits**

<table>
<thead>
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<th>Module title</th>
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<td>Introduction to Stochastic Financial Mathematics</td>
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</table>

### Contents

Arbitrage and no-arbitrage, annuities and bonds, valuation of deterministic cash flows, actuarial present value, term structures and yield curves, forwards, payout profiles of options and other derivatives, fundamental theorem of asset pricing in the stochastic one-period model, risk neutral price measures, replication and completeness, stochastic multi-period models, valuation of European options in the binomial model, Black-Scholes formula.

### Intended learning outcomes

The student is acquainted with the fundamental concepts and methods of stochastic financial mathematics, can apply them to practical problems and knows about typical fields of application.

### Courses

V (4) + Ü (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English creditable for bonus

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

--
Subfield Computer Science
(15 ECTS credits)
### Module title
Basics in Algorithms and Data Structures for Economathematics

### Abbreviation
10-I-GADW-172-m01

### Module coordinator
Dean of Studies Informatik (Computer Science)

### Module offered by
Institute of Computer Science

### ECTS
10

### Method of grading
numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
--

### Contents
Design and analysis of algorithms, recursion vs. iteration, sort and search methods, data structures, abstract data types, lists, trees, graphs, basic graph algorithms, programming in Java.

### Intended learning outcomes
The students are able to independently design algorithms as well as to precisely describe and analyse them. The students are familiar with the basic paradigms of the design of algorithms and are able to apply them in practical programs. The students are able to estimate the run-time behaviour of algorithms and to prove their correctness.

### Courses
- V (4) + Ü (2)

### Method of assessment
written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)
--
## Module Catalogue for the Subject Economathematics

Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
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<td>Practical Course in Programming for Economathematics</td>
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</table>

### Contents

The programming language Java. Independent creation of small to middle-sized, high-quality Java programs.

### Intended learning outcomes

The students are able to independently develop small to middle-sized, high-quality Java programs.

### Courses

P (6)

### Method of assessment

- practical examination (programming exercises, approx. 120 hours) and written examination (approx. 60 to 120 minutes).
- If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Subfield Business Management and Economics
(35 ECTS credits)
## Module title
### Supply, Production and Operations Management

| Abbreviation | 12-BPL-G-212-m01 |

### Module coordinator
holder of the Chair of Business Management and Industrial Management

### Module offered by
Faculty of Business Management and Economics

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### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
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### Contents
This course will provide students with an overview of fundamental processes in procurement, production and logistics and the related corporate functions as well as a model-based introduction to related planning procedures.

### Intended learning outcomes
The students will be able to describe and discuss the objectives and major processes in the domains of corporate procurement, production and logistics as well as their interdependencies. Furthermore, they are capable of developing and applying basic planning models in these fields.

### Courses
(type, number of weekly contact hours, language — if other than German)

- V (2) + T (2)

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- written examination (approx. 60 minutes)
  Language of assessment: German and/or English

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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</table>

**Contents**

This course will introduce students to relevant subject areas of business administration. Students will acquire an overview of the different perspectives and main points of view from which a theoretical examination of business enterprise may take place. The course will focus on what companies or other organisations are, how they behave and in what form they are organised. For this purpose, a study will be made of the economic subject’s decision-making behaviour.

Reading list to be provided during lecture.

**Intended learning outcomes**

The aim of the lectures is to familiarise the students with the basic problem issues and perspectives within the field of business administration.

**Courses**

(type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)

Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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### Module Catalogue for the Subject
### Economathematics

**Bachelor's with 1 major, 180 ECTS credits**

<table>
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<td>Investment and Finance</td>
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<tr>
<td>holder of the Chair of Business Management, Banking and Finance</td>
<td>Faculty of Business Management and Economics</td>
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</table>

### Contents

Content:
This course offers an introduction to principles of financial mathematics, several methods of capital budgeting and principles of financial economics.

Outline of syllabus:
1. Principles of financial mathematics
2. Fundamental concepts
3. Problems of investment and finance in one commodity world under certainty
4. Problems of investment and finance in one commodity world under uncertainty
5. Problems of investment and finance in many commodities world under uncertainty
6. Capital market and corporate financing in Germany

### Intended learning outcomes

After completing the course "Principles of Investments and Finance", the students will be able
(i) to understand the fundamentals in financial mathematics and solve several problems, e.g. via the PV approach;
(ii) to address the central problems in intertemporal allocation given different capital market scenarios;
(iii) to budget and calculate the optimal useful life given static and dynamic investment approaches under the consideration of several other investment opportunities and the capital market scenario, especially the influence of taxes.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Module title
Macroeconomics 1

### Abbreviation
12-Mak1-G-212-m01

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#### Contents

**Description:**
This module covers basic macroeconomic relationships, the declaration of employment, production, interest, current and capital account, nominal and real exchange rate, prices and inflation - in the long run (with flexible wages and prices) and in the short term (with fixed wages and prices). The course will familiarise students with concepts which are of central importance in a globalised environment (e.g. interest rate arbitrage, foreign exchange risk, purchasing power parity). The explanations will be applied to current issues (e.g. current account balances in the global economy; questions related to the European monetary union and the global financial crisis).

**Outline of syllabus:**
1. Macroeconomic issues and characteristics
   - Issues of macroeconomics
   - The measurement of economic activity
2. Long-term relationships
   - The classic long-term model of the closed economy
   - Money and Inflation
   - The classic long-term model of a small open economy
   - Unemployment
3. Short and medium-term relationships
   - Fluctuations of economic activity: an introduction
   - The IS-LM model of a closed economy
   - The IS-LM model of an open economy
   - Aggregate supply and Phillips curve
   - Conclusion and outlook

**Reading:**
The latest editions of the following textbooks:
N. Gregory Mankiw: Macroeconomics [students are recommended to read the original English edition; they may also read the German translation]
Olivier Blanchard and David H. Johnson, Macroeconomics Prentice Hall; [a German-language edition of the book by Olivier Blanchard and Gerhard Illing is available from Pearson Studium].
Michael Burda and Charles Wyplosz: Macroeconomics. A European text.
To illustrate the lecture, case studies in particular will be developed in which more current sources are used.

**Intended learning outcomes**
This expertise enables the students to penetrate economically-intuitively and analytically macroeconomic interactions and problems in the course of advancing globalization and to deal with these arguments. Students learn to interpret on a scientific basis the impact of macroeconomic developments in individual economic actors (businesses, households, the state).

**Courses**
(type, number of weekly contact hours, language — if other than German)
V (2) + T (2)
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**Contents**

**Description:**
The lecture provides an introduction to long run or dynamic issues of macroeconomic theory and policy.

**Contents:**
1. Phillips curve and dynamic model
2. Growth theory and policy
3. Microeconomic foundations of macroeconomics
4. Macroeconomic policy

Lecture notes to be provided by Chair.

**Intended learning outcomes**

After completing the course "Makroökonomie 2" students are familiar with the most important concepts of growth theory, they know the microeconomic foundations of modern macroeconomic theory and understand the intertemporal budget constraint of the government. Therefore they are able to discuss the growth and distributional consequences of policy reforms by applying simple economic models.

**Courses**
(type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
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## Microeconomics 1

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### Module coordinator
holder of the Chair of Economics, Information and Contract Economics

### Module offered by
Faculty of Business Management and Economics

### ECTS | Method of grading | Only after succ. compl. of module(s) |
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### Contents
The lecture covers the following topics:

**Theory of the household:**
1. Utility maximisation under constraints
2. Comparative statics
3. Income and substitution effects
4. Labour supply
5. Intertemporal consumption / savings decisions

**Theory of the firm:**
6. Production functions (technology)
7. Profit maximisation
8. Long run versus short run cost minimisation
9. Supply of goods

### Intended learning outcomes
Students are systematically trained in microeconomic methods relevant in household and firm theory. Accordingly, they will know how to solve optimization problems under constraints. These scientific methods will serve as useful in many fields of specialization in economics and business administration. In particular, students know analytically how to analyze the impact of changes in the economic environment, e.g., wages, interest rates, income on individual decision making.

### Courses
(type, number of weekly contact hours, language — if other than German)

- V (2) + T (2)

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- written examination (approx. 60 minutes)
- Language of assessment: German and/or English

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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### Module title

**Economic Principles of Risk Management**

**Abbreviation** 12-Risk-152-m01

### Module coordinator

Holder of the Chair of Economics, Information and Contract Economics

### Module offered by

Faculty of Business Management and Economics

### ECTS

5

### Method of grading

Numerical grade

### Only after succ. compl. of module(s)

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### Duration

1 semester

### Module level

Graduate

### Other prerequisites

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### Contents

Rational decisions under uncertainty
1. Measures of risk aversion
2. Mean preserving spread
3. Axiomatic foundations of the expected utility hypothesis (Neumann/Morgenstern, Savage)
4. Insurance contracts
5. Optimal portfolios
6. Adverse selection
7. Moral Hazard
8. Experimental evidence and alternative approaches

### Intended learning outcomes

After completing the course students are able to
1. explain the results of the economic theory of decisions under risk,
2. apply the involved methods to given simple examples on their own,
3. recognise, in which real life situations and how the results can be applied.

### Courses

 Vĩnh (2) + Ü (2)

### Method of assessment

Written examination (approx. 60 minutes)
Language of assessment: German and/or English
Creditable for bonus

### Allocation of places

--

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)
Compulsory Electives Economathematics
(45 ECTS credits)
Subfield Mathematics
(10-30 ECTS credits)
Module title: Numerical Mathematics 1 for Economathematics

Abbreviation: 10-M-NUB1-152-m01

Module coordinator: Dean of Studies Mathematik (Mathematics)
Module offered by: Institute of Mathematics

ECTS: 10
Method of grading: Numerical grade
Only after succ. compl. of module(s): --

Duration: 1 semester
Module level: Undergraduate
Other prerequisites: --

Contents:
Solution of systems of linear equations and curve fitting problems, nonlinear equations and systems of equations, interpolation with polynomials, splines and trigonometric functions, numerical integration.

Intended learning outcomes:
The student is acquainted with the fundamental concepts and methods in numerical mathematics, applies them to practical problems and knows about their typical fields of application.

Courses (type, number of weekly contact hours, language — if other than German):
V (4) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus):
a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)
Language of assessment: German and/or English
Creditable for bonus: --

Allocation of places:
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Additional information:
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Referred to in LPO 1 (examination regulations for teaching-degree programmes):
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### Module Catalogue for the Subject Economathematics

**Bachelor’s with 1 major, 180 ECTS credits**

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<td>1 semester</td>
<td>undergraduate</td>
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</table>

### Contents

Elements of data analysis, statistics of data in normal and other distributions, elements of multivariate statistics.

### Intended learning outcomes

The student is acquainted with fundamental concepts and methods in statistics, applies these methods to practical problems and knows about the typical fields of application.

### Courses

**(type, number of weekly contact hours, language — if other than German)**

V (4) + Ü (2)

### Method of assessment

**(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)**

a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English creditable for bonus

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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<table>
<thead>
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<tr>
<td>Advanced Analysis for Economathematics</td>
<td>10-M-VAB-152-m01</td>
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</table>

**Contents**

Continuation of analysis in several variables, integration theorems.

**Intended learning outcomes**

The student is acquainted with advanced topics in analysis. Taking the example of the Lesbegue integral, he or she is able to understand the construction of a complex mathematical concept.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (4) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English creditable for bonus

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<td>Ordinary Differential Equations for Economathematics</td>
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</table>

**Contents**

Existence and uniqueness theorem; continuous dependence of solutions on initial values, systems of linear differential equations, matrix exponential series, linear differential equations of higher order.

**Intended learning outcomes**

The student is acquainted with the fundamental concepts and methods of the theory of ordinary differential equations. He/she is able to apply these methods to practical problems.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (4) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English creditable for bonus

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Module title | Introduction to Functional Analysis for Economathematics
---|---
Abbreviation | 10-M-FAB-152-m01

Module coordinator | Dean of Studies Mathematik (Mathematics)
Module offered by | Institute of Mathematics

ECTS | 10
Method of grading | Numerical grade
Only after succ. compl. of module(s) | --

Duration | 1 semester
Module level | Undergraduate
Other prerequisites | --

Contents
Banach spaces and Hilbert spaces, bounded operators, principles of functional analysis.

Intended learning outcomes
The student knows the fundamental concepts and methods of functional analysis as well as the pertinent proof methods, is able to apply methods from linear algebra and analysis to functional analysis, and realises the broad applicability of the theory to other branches of mathematics.

Courses
V (4) + Ü (2)

Method of assessment
a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)

Language of assessment: German and/or English

Allocation of places
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Additional information
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<td>Optimization for Machine Learning</td>
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**Module coordinator**
Dean of Studies Mathematik (Mathematics)

**Module offered by**
Institute of Mathematics

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**Duration**
1 semester

**Module level**
undergraduate

**Other prerequisites**
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**Contents**
Linear programming, quadratic programming, convex optimization, first order methods, application to machine learning problems such as support vector machines.

**Intended learning outcomes**
The student is acquainted with the relevant methods in optimization and is able to apply these methods to practical machine learning problems, both theoretically and numerically.

**Courses**
V (4) + Ü (2)
Module taught in: German and/or English

**Method of assessment**
(a) written examination (approx. 90 to 180 minutes, usually chosen) or
(b) oral examination of one candidate each (15 to 30 minutes) or
(c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)
Language of assessment: German and/or English
Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester
credible for bonus

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
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<th>Module title</th>
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<td>Machine Learning and Numerics Lab</td>
<td>10-M-MNL-222-m01</td>
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Module coordinator                    Module offered by
--                                    Institute of Mathematics

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Duration       Module level  Other prerequisites
1 semester     --          --

Contents

Intended learning outcomes

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + P (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

project work (30 to 60 hours)
Language of assessment: German and/or English
creditable for bonus

Allocation of places

Additional information

Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Subfield Business Management and Economics
(15-35 ECTS credits)
Module title: Marketing
Abbreviation: 12-Mark-G-212-m01

Module coordinator: holder of the Chair of Business Management and Marketing
Module offered by: Faculty of Business Management and Economics

ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents
Description:
In this module, students will acquire the theoretical foundations of market-oriented management.

Content:
With the stakeholder approach as a starting point, the basic design of market-oriented management will be explained and exemplified in the 5 classical steps: situation analysis, objectives, strategies, tools and controlling. The course will focus not only on the behavioural approaches of consumer behaviour but also on industrial purchasing behaviour. A case study introducing students to the fundamental principles of market research based on a conjoint analysis will provide students with deeper insights into the topic.

Outline of syllabus:
1. Marketing, entrepreneurship and business management
2. Explanations of consumer behaviour
3. Fundamentals of market research
4. Strategic marketing; marketing tools
5. Corporate social responsibility versus creating shared value

Reading:

Intended learning outcomes
The students have a basic understanding of business management and are able to classify the knowledge systematically. In addition, they can use the acquired knowledge solve and identify the conventional problem fields of business management.

Courses
(type, number of weekly contact hours, language — if other than German)
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<th><strong>Method of assessment</strong> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)</th>
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<td>written examination (approx. 60 minutes)</td>
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Module Catalogue for the Subject
Economathematics
Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
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<tbody>
<tr>
<td>Entrepreneurship, Competition and Strategy</td>
<td>12-U&amp;UF-F-152-m01</td>
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<td>undergraduate</td>
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### Contents

**Description:**
The module builds on the introductory course "Grundlagen marktorientierter Unternehmensführung" ("Fundamentals of Market-based Management"). It provides a systematic introduction to the approaches of corporate management (stakeholder and shareholder value approach) as well as an overview of market-oriented corporate governance. In addition, aspects of responsible leadership will be discussed.

The theory of Chester Barnard with the idea of creating a complex economic incentive contribution balance in the company will help students develop an in-depth understanding of typical management tasks. In addition, the course will focus on the development of business plans for the successful establishment and the continued existence of companies.

**Outline of syllabus:**
1. Business and strategy in economic theory
2. Business plan as a strategy concept
3. Stakeholder management and responsible leadership
4. Stakeholder value, shareholder value and creating shared value

### Intended learning outcomes

Students will gain profound knowledge of basics in business as well as basics in different approaches in corporate management. Furthermore the students will get an overview of the main tools to create a business plan.

### Courses
(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)

### Allocation of places

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### Additional information

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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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Module title | Abbreviation
---|---
Sales and Customer Relationship Management | 12-SCRM-211-m01

| Module coordinator | Module offered by |
---|---|
Holder of the Junior Professorship of Digital Marketing and E-Commerce | Faculty of Business Management and Economics

| ECTS | Method of grading | Only after succ. compl. of module(s) |
---|---|---|
5 | numerical grade | -- |

| Duration | Module level | Other prerequisites |
---|---|---|
1 semester | undergraduate | -- |

Contents

A key challenge for companies in a marketing context is to choose the right approaches on how to deliver their products and services to customers. In doing so, companies need to carefully consider their customers' needs and requirements to successfully manage company-customer relationships.

This course focuses on classic and new approaches of sales and customer relationship management. In particular, it covers the set-up of sales systems in terms of offline channels (e.g., retail stores) and online channels (e.g., online shops or market places), their interplay (e.g., multi-channel management), or the management of the sales force.

Moreover, it focuses on different types of customer-firm interactions, on approaches of analyzing customer satisfaction and loyalty, as well as on customer complaint management, cross-selling management or customer experience management.

Intended learning outcomes

The major goal of this class is to learn about and understand how sales management and customer relationship management work and to be able to transfer respective concepts to real life / business practice.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) Written examination (approx. 60 to 120 Minutes) or b) Term paper (to be prepared by one candidate or in groups of 3 candidates approx. 10 pages each ) or c) oral examination in groups (groups of 3, approx. 10 minutes per candidate)
Language of assessment: German and/or English creditable for bonus

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Contents

In this course, students will acquire important knowledge and skills that will enable them to prepare a well-structured paper and to present the results of their work with the help of relevant topics in the fields of strategic marketing and strategic management.

**Reading:**
will vary according to topic

### Intended learning outcomes

After completing the course "Marketing Strategie", students will be able to

i. understand the fundamentals of scientific literature reviews;
ii. integrate elaborated content in a scientific thesis;
iii. create presentations independently.

### Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 25 minutes), weighted 2:1
Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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# Module Catalogue for the Subject Economathematics

## Bachelor’s with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>International Marketing</td>
<td>12-INMA-211-m01</td>
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## Contents

The course seeks to familiarize students with the tools and terminology to explore and understand marketing practices in an international environment. They will learn the scope and challenges of international marketing, the dynamic environment of international trade, culture, political, legal, and business systems of globalizing markets, opportunities and threats on global markets and develop decision-making skills for the successful formulation, implementation and control of international marketing strategies. In particular, the course highlights strategic and managerial issues related to international marketing.

## Intended learning outcomes

Students are required to study and prepare marketing approaches to enter and operate in international markets. Students intensify their knowledge and develop theoretical and practical concepts through case studies.

## Courses

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<th>Module taught in:</th>
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<td>German and/or English</td>
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## Method of assessment

- a) Written examination (approx. 60 minutes) or
- b) Term paper (15 to 20 pages) or
- c) Term paper (10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
- d) oral examination of one candidate each (approx. 20 minutes)

Language of assessment: German and/or English

## Allocation of places

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## Additional information

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## Referred to in LPO I

(examination regulations for teaching-degree programmes)

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<table>
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<th>Module title</th>
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<tr>
<td>Supply, Production and Logistics Management. Material Requirements Planning</td>
<td>12-BPL-F-212-m01</td>
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**Contents**

This module builds on the course "Beschaffung, Produktion und Logistik - Grundlagen" ("Procurement, Production and Logistics - Basics"). Selected tasks and processes, in particular in the area of materials management, will be analysed in detail and related planning and control models and methods will be developed.

**Intended learning outcomes**

The students are able to analyze the areas of responsibility of the functions of procurement, production and logistics as well as their interdependencies in an integrated perspective and evaluate concepts for their management. In addition, they are able to develop models in the domain of materials management and apply solution procedures to the planning problems.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (15 to 20 pages) or
c) term paper (10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
d) oral examination (approx. 20 minutes)

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
Humanitarian Supply Chain Management

Abbreviation: 12-HSCM-211-m01

Module coordinator
Holder of the Chair of Business Management and Industrial Management

Module offered by
Faculty of Business Management and Economics

ECTS: 5
Method of grading: numerical grade
Only after succ. compl. of module(s): --

Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents
Despite the solidarity-based nature of humanitarian aid, up to 70% of the activities of humanitarian aid organizations are related to both, the design and the coordination of logistical processes. Humanitarian assistance is delivered through humanitarian supply chains, systems concerned with planning, executing, and controlling the effective, cost-efficient flow and storage of materials, goods, and related information from the point of origin to the point of consumption in order to meet the needs of the beneficiaries. While aid organizations do not operate in a traditional business environment, the requirements for managing humanitarian supply chains effectively and efficiently are fundamentally comparable to those of commercial supply chains. Similarly, humanitarian organizations often employ business managers to manage their business processes. The management of the supply chain of a humanitarian organization, therefore, requires basic business knowledge that will be addressed in this course.

Intended learning outcomes
The course will provide you with a basic understanding of factors influencing humanitarian supply chains and fundamental insights in managing them efficiently and effectively. You will learn about the different roles of humanitarian organizations and the challenges they face. Furthermore, you will be introduced to general supply chain management concepts that can also be applied in the humanitarian context, and that can provide a significant positive impact on the organization of humanitarian operations.

Courses
V (2) + Ü (2)
Module taught in: English

Method of assessment
(a) written examination (approx. 60 minutes) or (b) term paper (approx. 15 pages)
Language of assessment: German and/or English

Allocation of places
--

Additional information
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Seminar: Supply, Production and Logistics Management

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Seminar: Supply, Production and Logistics Management</td>
<td>12-BPL-FS-212-m01</td>
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**Module coordinator**

holder of the Chair of Business Management and Industrial Management

**Module offered by**

Faculty of Business Management and Economics

<table>
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<tr>
<th>ECTS</th>
<th>Method of grading</th>
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<tbody>
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<td>numerical grade</td>
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</table>

**Duration**

1 semester

**Contents**

The seminar will focus on special problems in the areas of procurement, production, logistics or business management. Students will independently work on the respective problem and write a seminar (term) paper. Usually, this will be largely literature based with students learning how to carry out structured literature analyses and prepare systematic evaluations. In individual cases, students may also conduct empirical research of their own or further develop formal models. Students will be required to deliver a talk on the subject in class.

**Intended learning outcomes**

The students will be able to study advanced problems on their own and structure them in a (seminar) paper. They will learn to present the central results and discuss related issues in class.

**Courses**

(type, number of weekly contact hours, language — if other than German)

| S (2) |

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) term paper (approx. 15 pages) and presentation (approx. 20 minutes); (weighted 2:1) or
b) term paper (approx. 20 to 25 pages)

Language of assessment: German and/or English

**Allocation of places**

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Strategic and Innovation Management</td>
<td>12-IM-212-m01</td>
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**Module coordinator**
holder of the Chair of Entrepreneurship and Management

**Module offered by**
Faculty of Business Management and Economics

<table>
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<tr>
<th>ECTS</th>
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<td>numerical grade</td>
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</tbody>
</table>

**Duration**
1 semester

**ECTS**
undergraduate

**Other prerequisites**
--

### Contents

The course will provide students with an overview of essential topics of innovation management. Particular emphasis will be on the application of theoretical concepts to practical examples and cases. The course will develop the innovation process starting with the idea and ending with the market entry of an innovation. The course will consist of two core elements: 1. "Creating Value": how can companies create something new? and 2. "Profiting from Value": how can companies profit from innovations? The course will use practical examples from numerous industries such as world-class restaurants, music, consumer goods, electricity or the software industry.

### Intended learning outcomes

At the end of the module students are able to understand:
- The importance of innovations
- The sources of innovations
- The New Product Development process
- The roles in the innovation process
- The importance of intellectual property rights
- How innovations diffuse in the market

### Courses

(V (2) + Ü (2))
Module taught in: German and/or English

### Method of assessment

(a) written examination (approx. 60 minutes) or
(b) term paper (as individual or group work; approx. 10 pages per person) or
(c) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)

Language of assessment: German and/or English

### Allocation of places

--

### Additional information

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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

--
### Module title
Entrepreneurship

### Abbreviation
12-EPS-212-m01

<table>
<thead>
<tr>
<th>Module coordinator</th>
<th>Module offered by</th>
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<tbody>
<tr>
<td>holder of the Chair of Entrepreneurship and Management</td>
<td>Faculty of Business Management and Economics</td>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

### Contents

**Description:**
The course introduces students to the basics of entrepreneurial self-employment. In addition to discussing theoretical concepts covering the definition, creation and performance of new ventures, the course will also discuss methods and instruments for a potential entrepreneurial career. Several content areas of start-up planning are being covered during the course of the lecture including team compilation, business model creation and financing.

**Contents of the course:**
1. Introduction to entrepreneurship
2. Human resources in start-ups
3. Opportunity analysis
4. Business modelling
5. Entrepreneurship in the digital industry
6. Business planning
7. Finance
8. Marketing in start-ups

### Intended learning outcomes
After completing the module "Entrepreneurship", the students should be able to
(i) describe and problematize the concept of entrepreneurship and the entrepreneurial perspective;
(ii) describe and analyze the entrepreneurial process, its drivers, characteristics and context;
(iii) apply theories within the entrepreneurship field to real life situations;
(iv) take initiatives and independently develop a business idea and use knowledge gained from earlier courses in business administration in order to develop this idea in a business plan sketch;
(v) plan human resources and marketing in a start-up.

### Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Module taught in: German and/or English

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (as individual or group work; approx. 10 pages per person) or
c) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)

Language of assessment: German and/or English

### Allocation of places
--

### Additional information
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### Referred to in LPO I (examination regulations for teaching-degree programmes)
--
## Seminar: Research Seminar

<table>
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<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Seminar: Research Seminar</td>
<td>12-RES-211-m01</td>
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### Module coordinator

Holder of the Chair of Entrepreneurship and Strategy

### Module offered by

Faculty of Business Management and Economics

### ECTS

<table>
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<tr>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
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<td>5 numerical grade</td>
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</table>

### Duration

1 semester

### Module level

undergraduate

### Other prerequisites

--

### Contents

Students develop seminar papers on varying topics in the domain of entrepreneurship, strategy, and innovation and present the key insights from their work.

### Intended learning outcomes

**Educational aims**

- Raise students’ awareness of research positioning and theoretical modelling
- Familiarize students with systematic literature search
- Enable students to develop a well-structured, academic manuscript

**Learning outcomes**

On successful completion of this module students will be able to:

- Formulate an adequate research question
- Effectively search the literature
- Structure and write-down an academic manuscript
- Present and explain their research outcomes in class

### Courses

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<th>(type, number of weekly contact hours, language — if other than German)</th>
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<td>S (2)</td>
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</table>

Module taught in: German and/or English

### Method of assessment

<table>
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<tr>
<th>(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)</th>
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<tbody>
<tr>
<td>Term paper (10 to 15 pages) and presentation (in groups of up to 3 candidates, approx. 10 minutes per candidate)</td>
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<tr>
<td>Language of assessment: German and/or English</td>
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</tbody>
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### Allocation of places

15 places.

Should the number of applications exceed the number of available places, places will be allocated as follows:

1. Applicants who have already achieved a total of 90 ECTS credits or more will be given preferential consideration.

2. When places are allocated in accordance with (1) and the number of applications exceeds the number of available places, places will be allocated according to the average grade of assessments taken so far; among applicants with the same average grade, places will be allocated by lot.

### Additional information

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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### Module title
**Seminar: Business Simulation**

**Abbreviation**: 12-BUS-211-m01

### Module coordinator
**Holder of the Chair of Entrepreneurship and Strategy**

### Module offered by
**Faculty of Business Management and Economics**

### ECTS
<table>
<thead>
<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<tbody>
<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

### Contents
This action-oriented module complements the lecture “Strategic and Innovation Management” (12-IM). In teams of up to four students, students compete in a business simulation that covers critical elements of managerial decision making. Participants act as a board of directors to develop the business by making decisions related to strategy, finance, market, operations, staffing, and innovation. This provides a unique opportunity to directly apply and critically reflect topics discussed in the classroom, while working in a team.

### Intended learning outcomes

#### Educational aims
- Raise students' situational awareness in managerial decision making
- Promote students' ability to make informed managerial decisions in complex situation
- Sensitize students for the need to anticipate competitive actions and reactions

#### Learning outcomes
On successful completion of this module students will be able to:
- Understand how management theories can be applied in ‘real-life’ decision making scenarios
- Understand the interconnectivity of managerial decisions in different areas of a company, e.g., marketing, finance, and innovation
- Make managerial group decisions based on anticipated competitor behavior

### Courses

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<tr>
<th>Type</th>
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<th>Language</th>
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<td>S</td>
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</table>

### Method of assessment

- **Term paper** (10 to 15 pages) and presentation (in groups of up to three candidates, approx. 10 minutes per candidate)
- **Language of assessment**: German and/or English

### Allocation of places

15 places. WB_4

Should the number of applications exceed the number of available places, places will be allocated as follows:
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2. When places are allocated in accordance with (1) and the number of applications exceeds the number of available places, places will be allocated according to the average grade of assessments taken so far; among applicants with the same average grade, places will be allocated by lot.

### Additional information

- Referred to in LPO I (examination regulations for teaching-degree programmes)
### Module title

**Seminar: Business Plan**

**Abbreviation**

12-BPS-211-m01

### Module coordinator

Holder of the Chair of Entrepreneurship and Strategy

### Module offered by

Faculty of Business Management and Economics

### ECTS

5

### Method of grading

Numerical grade

### Only after succ. compl. of module(s)

--

### Duration

1 semester

### Module level

Undergraduate

### Other prerequisites

--

### Contents

Students work in teams of up to three students to develop a business model and a business plan for an own business idea or a notional one.

### Intended learning outcomes

**Educational aims**

- Clarify the role of business models and business plans
- Clarify theoretical concepts related to business models and business plans
- Enable students to critically appraise alternative approaches to business modelling and business planning
- Enable students to evaluate the boundaries and risks of business modelling and business planning

**Learning outcomes**

On successful completion of this module you will be able to:

- Assess the role of business models and business plans for startups and established companies
- Make judgements about the design of business models and business plans
- Create and evaluate concepts related to business models and business plans
- Systematically choose between different routes of action

### Courses

<table>
<thead>
<tr>
<th>Type</th>
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<tr>
<td>S</td>
<td>2</td>
<td>German and/or English</td>
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</table>

Module taught in: German and/or English

### Method of assessment

<table>
<thead>
<tr>
<th>Type</th>
<th>Scope</th>
<th>Language</th>
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<tbody>
<tr>
<td>Term paper (10 to 15 pages) and presentation (in groups of up to three candidates, approx. 10 minutes per candidate)</td>
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</table>

Language of assessment: German and/or English

### Allocation of places

15 places.

Should the number of applications exceed the number of available places, places will be allocated as follows:

(1) Applicants who have already achieved a total of 90 ECTS credits or more will be given preferential consideration.

(2) When places are allocated in accordance with (1) and the number of applications exceeds the number of available places, places will be allocated according to the average grade of assessments taken so far; among applicants with the same average grade, places will be allocated by lot.

### Additional information

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)
Module title | Abbreviation
---|---
Supply Chain Management | 12-SCM-F-212-m01

| Module coordinator | Module offered by |
---|---
holder of the Chair of Logistics and Quantitative Methods in Business Administration | Faculty of Business Management and Economics

| ECTS | Method of grading | Only after succ. compl. of module(s) |
---|---|---
5 | numerical grade | -- |

| Duration | Module level | Other prerequisites |
---|---|---
1 semester | undergraduate | -- |

Contents

The seminar "Supply Chain Management" will introduce students to tactical and operational planning problems of supply chain management. It will discuss the wording of these as formal models and, with the help of a continuous case study, will acquaint students with the implementation of these models in SAP APO.

Intended learning outcomes

After completing this seminar students can
(i) apply selected and applied quantitative models for procurement, production, sales and supply chain management;
(ii) face the practical problems when using real data to feed models;
(iii) understand the challenges to reach a coordinated decision in a company.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (approx. 15 pages) or
c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes); (weighted 2:1)

Language of assessment: German and/or English

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Seminar: Logistics &amp; Supply Chain Management</td>
<td>12-LSCM-212-m01</td>
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</table>

**Module coordinator**
holder of the Chair of Logistics and Quantitative Methods in Business Administration

**Module offered by**
Faculty of Business Management and Economics

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<th>ECTS</th>
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<td>5</td>
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**Duration**
1 semester

**Contents**
In this module, students will learn, on a case-by-case basis, how companies successfully implemented quantitative planning methods to optimise their processes in logistics and supply chain management.

**Intended learning outcomes**
After completing this module students can
1. understand mathematical models to solve practical problems in logistics and supply chain management,
2. evaluate and critique the results of such models, and
3. understand, describe, and evaluate the limits of such models.

**Courses** (type, number of weekly contact hours, language — if other than German)
S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written elaboration (approx. 10 to 15 pages) and presentation (approx. 10 minutes), (weighted 2:1)
Language of assessment: German and/or English

**Allocation of places**
20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Applicants who have already achieved a total of 90 ECTS credits or more will be given preferential consideration. (2) When places are allocated in accordance with (1) and the number of applications exceeds the number of available places, places will be allocated according to the average grade of assessments taken so far; among applicants with the same average grade, places will be allocated by lot.

**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
--
# Module Catalogue for the Subject

**Economathematics**

**Bachelor's with 1 major, 180 ECTS credits**

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Toyota Supply Chain Management</td>
<td>12-MDM-212-m01</td>
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<tbody>
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<td>holder of the Chair of Logistics and Quantitative Methods in Business Administration</td>
<td>Faculty of Business Management and Economics</td>
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<tr>
<th>Duration</th>
<th>Module level</th>
<th>Other prerequisites</th>
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<td>1 semester</td>
<td>undergraduate</td>
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</table>

## Contents

Toyota is still considered to be a pioneer in the field of automobile production although it has recently had to cope with difficulties (e. g. recalls, production shortfalls caused by natural disasters) and had lost its dominant position in the automotive market to General Motors and Volkswagen—at least temporarily. The development of concepts, such as Lean Manufacturing, Total Quality Management, Kaizen, Kanban, etc. can be attributed completely or at least partially to Toyota. These concepts integrated in the so-called Toyota Production System (TPS) are now considered standard elements of modern production systems and are standard repertoire in business management. However, with a focus on the management of production systems, they only represent one of the cornerstones of the successful Toyota model. Toyota currently operates extremely efficient global supply chains with international production sites (in Japan, USA, France, Brazil, Argentina, Malaysia, Pakistan, etc.), globally distributed suppliers and a worldwide dealer network. Toyota implemented not only efficient production (with TPS), but also sustained efficient design and coordination of globally distributed value-added activities. To accomplish this, Toyota has consistently developed its management philosophy and the principles underlying TPS and integrated these in the "Toyota supply chain". While we were able to learn from Toyota in the past as to how production systems can be designed, today we can learn from Toyota as to how complex global supply chains in the automotive industry - but also in other industries - should be designed and coordinated. Notably its planning principles are - despite the greater complexity - easy to understand, simple to implement and are based on simple 'ground rules'. The aim of this seminar is to learn from the Toyota supply chain.

## Intended learning outcomes

Drawing on current cutting-edge research, students are enabled to critically and independently analyze current research questions and to learn and apply research methods. The seminar style of the course teaches them to present their own seminar papers and research both in written and in oral form. Students are enabled to critically analyze and discuss the work of their peers.

## Courses (type, number of weekly contact hours, language — if other than German)

S (2)

## Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written elaboration (approx. 10 to 15 pages) and presentation (approx. 10 minutes), (weighted 2:1)

Language of assessment: German and/or English

## Allocation of places

20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Applicants who have already achieved a total of 90 ECTS credits or more will be given preferential consideration. (2) When places are allocated in accordance with (1) and the number of applications exceeds the number of available places, places will be allocated according to the average grade of assessments taken so far; among applicants with the same average grade, places will be allocated by lot.

## Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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<table>
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<td>Microeconomics 2</td>
<td>12-Mik2-G-212-m01</td>
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**Module coordinator**
holder of the Chair of Industrial Economics

**Module offered by**
Faculty of Business Management and Economics

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<tr>
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<th>Other prerequisites</th>
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<td>numerical grade</td>
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</tbody>
</table>

**Duration**
1 semester

**Module level**
undergraduate

**Contents**

Outline of syllabus:
1. Cost minimisation
2. Profit maximisation and the supply function
3. Short-run market equilibrium
4. Long-run market equilibrium
5. Government interventions
6. Monopoly
7. Pricing strategies with market power
8. Introduction to game theory
9. Strategic interaction and oligopoly

**Intended learning outcomes**

The aim of the course is to understand how markets work. We will investigate the behavior of a company in different market structures; namely perfectly competitive markets, monopoly markets and all forms in between, the so-called oligopoly markets. Ultimately, we are interested in whether the market results from a social point of view is desirable. Using our models, we will also try to analyze the consequences of different government interventions. The knowledge that students gain in this course will be in their future course of studies of benefits to them. In almost all business and economics lectures markets play a role. It also discussed in detail how economic actors make their decisions. Students will thus learn the important building blocks of economic thought. This knowledge will also be useful in the workplace and even in their private lives.

**Courses**
(type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

**Allocation of places**
--

**Additional information**
--

**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
--
### Module title
Games and Strategies

### Abbreviation
12-S&W1-F-212-m01

### Module coordinator
holder of the Chair of Industrial Economics

### Module offered by
Faculty of Business Management and Economics

### ECTS
5

### Method of grading
numerical grade

### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
--

### Contents

**Outline of syllabus:**
1. Static games with complete information
   - Concept of a game
   - Solution concepts and the Nash equilibrium
   - Continuous strategy sets
   - Nash equilibrium in mixed strategies
2. Dynamic games with complete information
   - Subgame perfect Nash equilibrium
   - Repeated games
3. Static games with incomplete information: Bayesian Nash equilibrium
4. Dynamic games with incomplete information
   - Perfect Bayesian Nash equilibrium
   - Signaling games

### Intended learning outcomes

Students which complete this course will be able to

(i) explain different equilibrium concepts (Nash equilibrium, subgame perfect equilibrium, bayesian equilibrium, perfect bayesian equilibrium);

(ii) explain for which kind of strategic situation each of these equilibrium concepts were developed;

(iii) apply these concepts to simple realistic strategic situations;

(iv) choose the appropriate equilibrium concept which fits best to a given strategic situation.

### Courses

<table>
<thead>
<tr>
<th>Type</th>
<th>Number of weekly contact hours</th>
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<tr>
<td>V (2)</td>
<td>+ Ü (2)</td>
<td>German and/or English</td>
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</table>

### Method of assessment

- written examination (approx. 60 minutes)
- Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

--
Module title: Competition Policy
Abbreviation: 12-S&W2-F-212-m01

Module coordinator: holder of the Chair of Industrial Economics
Module offered by: Faculty of Business Management and Economics

ECTS: 5
Method of grading: only after succ. compl. of module(s)

Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents:
Content:
German and European Competition Policy illustrated by real world cases of the Competition Protection Office.

Outline of syllabus:
1. History of economic thought on competition and mission statements
2. Overview of German and European competition law
3. Fundamentals of industrial economics
4. Classic cartels
5. Tacit collusion
6. Horizontal mergers
7. Joint ventures
8. Abuse of dominant positions: price level
9. Abuse of dominant positions: price discrimination
10. Vertical restraints
11. Vertical mergers

Reading:
Schulz: Wettbewerbspolitik, Tübingen.

Intended learning outcomes:
After completing the course students are able to
(i) recognize the potential of lessening competition due to certain practices by firms;
(ii) argue by using results from industrial economics why certain practices hinder competition;
(iii) understand decisions of the Bundeskartellamt and of the European Commission and evaluate such decisions from an economic point of view.

Courses:
(type, number of weekly contact hours, language — if other than German)
V (3) + Ü (2)
Module taught in: German and/or English

Method of assessment:
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 to 90 minutes) or
b) term paper (approx. 10 pages) and presentation (approx. 15 minutes), (weighted 2:1)
Language of assessment: German and/or English

Allocation of places:
--

Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
### Module title
Economics of Regulation

### Abbreviation
12-S&W3-F-212-m01

### Module coordinator
holder of the Chair of Industrial Economics

### Module offered by
Faculty of Business Management and Economics

### ECTS
5

### Method of grading
Numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
--

### Contents
Outline of syllabus:
1. Repetition of micro skills
   - Definitions and basic concepts
   - Market analysis
2. Introduction to regulation theory
   - The regulatory process
   - The natural monopoly
   - Optimal pricing of natural monopoly
   - Privatisation
3. Practice of economic regulation
   - Past and recent experience in Europe and around the world
   - Analysis of selected naturally monopolistic markets

This course will be taught in English.

### Intended learning outcomes
The aim of this course is to provide the students with an understanding of the economic analysis that underpins competition policy and regulatory policy towards network utilities and to provide them with some institutional background.

Upon successful completion of this module the students will
(i) acquire an understanding of the underlying reasons why some markets cannot be made competitive;
(ii) acquire a knowledge of the economic principles that lie behind the application of competition policy and utility regulation;
(iii) develop an understanding of the ways in which economic analysis can positively inform competition policy and utility regulation, and the limitations of economic analysis in this context;
(iv) learn from the practical experiences of market regulation and deregulation of the last 20-30 years.

### Courses
V (2) + Ü (2)

Module taught in: German and/or English

### Method of assessment
(a) written examination (approx. 60 to 120 minutes) or
(b) term paper (approx. 10 pages) and presentation (approx. 15 minutes), (weighted 2:1)

Language of assessment: German and/or English

### Allocation of places
--

### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)
--
Module title |
Seminar: Competition and Strategy

Abbreviation |
12-S&W-FS-212-m01

Module coordinator |
holder of the Chair of Industrial Economics

Module offered by |
Faculty of Business Management and Economics

ECTS |
5

Method of grading |
umerical grade

Only after succ. compl. of module(s) |
--

Duration |
1 semester

Module level |
undergraduate

Other prerequisites |
--

Contents

This course covers selected topics from the field of industrial economics. Students will be expected to independently work on a topic, submit a written piece of work and present their findings orally.

Intended learning outcomes

Students are able to independently investigate and classify scientific publications on their relevance to a given theme. In addition, they are able to present the results orally and in writing by conventional scientific standards.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 20 minutes), (weighted 2:1)
Language of assessment: German and/or English

Allocation of places

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Module title

**Industrial Organization**

**Abbreviation**

12-IIO-212-m01

### Module coordinator

holder of the Chair of Industrial Economics

### Module offered by

Faculty of Business Management and Economics

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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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### Contents

**Description:**

The purpose of this course is to provide an introduction to the main concepts and analytical tools of the theory of industrial organisation. Industrial organisation studies examine how firms interact and compete with each other in the market. The focus is predominantly on markets characterised by imperfect competition (so-called oligopoly competition), i.e. markets where firms can exercise market power.

Outline of syllabus:

1. Games and strategy
2. Oligopoly
3. Product differentiation
4. Dynamic and repeated games
5. Collusion
6. Market structure, entry and exit
7. Mergers
8. Vertical relations
9. Strategic behaviour by incumbent firms

This course will be taught in English.

### Intended learning outcomes

The purpose of this course is to provide an introduction to the main concepts and analytical tools of the theory of industrial organization. Industrial organization studies how firms interact and compete with each other in the market. The focus is predominantly on markets characterized by imperfect competition, i.e. markets where firms can exercise market power. Students who complete this course will be able to comprehend and use simple game theoretic models of oligopoly competition. By using these models, they will be able to understand and suggest managerial policies. They will be able to comment on governmental remedies in case of market failure within the context of the existing competition laws.

This course will be taught in English.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Module taught in: German and/or English

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 to 120 minutes) or
b) term paper (approx. 10 pages) and presentation (approx. 15 minutes), weighted 2:1

Language of assessment: German and/or English

### Allocation of places

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### Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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</table>
### Integrated Business Processes

**Abbreviation**

12-GP-G-152-m01

**Module coordinator**

Holder of the Chair of Business Management and Business
Information Systems

**Module offered by**

Faculty of Business Management and Economics

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<th>ECTS</th>
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</table>

**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

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### Contents

This course is aimed at students of Wirtschaftsinformatik (Business Information Systems) and Wirtschaftswissenschaft (Business Management and Economics) interested in the topic. The course is divided up into two parts. In the theoretical part, students will acquire the necessary theoretical knowledge that will serve as a basis for the practical part. The practical exercise will present students with an opportunity to apply their newly acquired knowledge by working with an SAP S4/HANA on case studies on the model company Almika. In this context, the human resources, purchasing, sales, service, project management and finance departments will be dealt with.

The course will introduce students to business processes of an ERP system (Enterprise Resource Planning) using the example of SAP S/4HANA. In addition to the basic principles, students will also become familiar with the processes and functionalities.

### Intended learning outcomes

After completing the course, the students will be able to

1. reflect technical principles and operational models of ERP systems,
2. understand the functionality of ERP systems and
3. perform and understand business processes within the ERP system SAP Business ByDesign.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes), weighted 2:1 creditable for bonus

### Allocation of places

15 places. (1) The number of places is not restricted for students of the Bachelor’s degree subject Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits). (2) Additional places will be allocated to students of other subjects provided there is enough capacity. These additional places will be allocated by lot among all applicants irrespective of their subjects. (3) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (4) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Module title
Forward and Reverse Business Engineering

Abbreviation
12-FRBE-F-152-m01

Module coordinator
Holder of the Chair of Business Management and Business Information Systems

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Only after succ. compl. of module(s)
--

Duration
1 semester

Module level
undergraduate

Other prerequisites
--

Contents
"Business Engineering" refers to the method and model-based design theory for companies in the information age. "Forward" refers to design methods (such as situation analysis, requirements analysis and business process modelling) that help implement a new solution. "Reverse" refers to approaches (such as the use and process analysis) that make it possible to improve or re-design existing structures and processes. Market requirements and technological innovation potential are typical reasons for the continuous transformation of a company. The resulting change needs to be implemented into the organisational structure, business processes and information systems.

The course traces the implementation cycle of enterprise software from the point of view of a member of a project team. In addition to acquainting students with the theoretical basis of adaptation, the course will also discuss examples from practical projects.

Intended learning outcomes
The students know in detail the process of adaptation of business software libraries. They master the methods of Forward Engineering (such as situation analysis, requirement analysis, process modeling and business blueprint) and Reverse Engineering (Reverse Business Engineering) and their implementation in tools.

Courses
V (2) + Ü (2)

Method of assessment
a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes), weighted 2:1 creditable for bonus

Allocation of places
50 places. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Bachelor's students of Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) will be given preferential consideration. (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (1) and (2) and the number of applications exceeds the number of available places, places will be allocated by lot among applicants from this group. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
### Module title
Seminar: Information Systems

### Abbreviation
12-Wiinf-FS-212-m01

### Module coordinator
holder of the Chair of Business Management and Business Information Systems

### Module offered by
Faculty of Business Management and Economics

### ECTS
5

### Method of grading
numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
undergraduate

### Other prerequisites
--

### Contents
In this course, students will acquire important knowledge and skills that will enable them to prepare a well-structured term paper and to present the results of their work with the help of relevant topics in the fields of information systems and enterprise systems.

Reading:
will vary according to topic

### Intended learning outcomes
After completing the course "Wirtschaftsinformatik-Seminar", students will be able to
1. understand the fundamentals of scientific literature reviews;
2. integrate elaborated content in a scientific thesis;
3. create presentations independently.

### Courses
(type, number of weekly contact hours, language — if other than German)
S (2)

### Method of assessment
(type, scope, language — if other than German, examination offered — If not every semester, information on whether module is creditable for bonus)
term paper (approx. 20 pages) and presentation (approx. 20 minutes), (weighted 2:1)
Language of assessment: German and/or English
creditable for bonus

### Allocation of places
15 places. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Bachelor's students of Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) will be given preferential consideration. (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (1) and (2) and the number of applications exceeds the number of available places, places will be allocated by lot among applicants from this group. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)
## Module Catalogue for the Subject Economathematics

### Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Web Programming</td>
<td>12-WebP-F-152-m01</td>
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### Module coordinator

<table>
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<th>Holder of the Chair of Business Management and Business Information Systems</th>
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### Module offered by

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<th>Faculty of Business Management and Economics</th>
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### ECTS | Method of grading | Only after succ. compl. of module(s) |
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### Duration | Module level | Other prerequisites |
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<td>undergraduate</td>
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### Contents

The lecture "Web Programming" will introduce students to the basic principles of internet-based programming. After a general introduction to web technologies (one unit), the lecture will discuss the markup language HTML and the style sheet language CSS (four units). The basics of the scripting language PHP will be discussed in another four units.

### Intended learning outcomes

The module provides students with knowledge of:

(i) HTML, CSS, PHP
(ii) Databases
(iii) Database-based Internet applications

### Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or c) completion of programming exercises (approx. 20 hours) and written examination (approx. 60 minutes), weighted 1:1

Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

--
**Module title** | **Abbreviation**
--- | ---
E-Business | 12-Ebus-F-212-m01

**Module coordinator**
holder of the Chair of Information Systems Engineering

**Module offered by**
Faculty of Business Management and Economics

**ECTS** | **Method of grading** | **Only after succ. compl. of module(s)**
--- | --- | ---
5 | numerical grade | --

**Duration** | **Module level** | **Other prerequisites**
--- | --- | ---
1 semester | undergraduate | --

**Contents**

E-business is a comprehensive, digital processing of business transactions between private and public enterprises as well as institutions and their clients on global public and private networks such as the internet. Precisely because euphoria for e-business has waned considerably in recent years, a lot of emphasis is now being placed on introducing such solutions in a user-oriented way. This lecture will first discuss the supporting economic theories and will then describe and analyse individual solutions such as e-procurement, e-shop, e-marketplace and e-community in detail.

**Intended learning outcomes**
The module provides students with knowledge about:
(i) E-Procurement
(ii) E-Shop
(iii) E-Marketplace
(iv) E-Community

**Courses** (type, number of weekly contact hours, language — if other than German)
V (2) + T (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 minutes) or
b) term paper (approx. 15 pages) or
c) term paper (approx. 10 pages) and presentation (approx. 10 minutes), weighted 2:1 or
d) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)
Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
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<table>
<thead>
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<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Advanced Web Engineering</td>
<td>12-AWE-152-m01</td>
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**Module coordinator**

- **Holder of the Chair of Information Systems Engineering**
- Faculty of Business Management and Economics

**ECTS** | **Method of grading** | **Only after succ. compl. of module(s)** |
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**Duration** | **Module level** | **Other prerequisites** |
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<td>1 semester</td>
<td>undergraduate</td>
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</table>

**Contents**

The module provides an introduction to the development of web-based applications based on current development systems, software components and frameworks.

**Intended learning outcomes**

- Understand the technological foundations of web applications
- Designing the architecture and data model of an application system
- Implementing with the help of SW components and frameworks

**Courses** (type, number of weekly contact hours, language — if other than German)

\[ V (2) + Ü (2) \]

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or c) completion of programming exercises (approx. 20 hours) and written examination (approx. 60 minutes), weighted 1:1

Language of assessment: German and/or English

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Module title | Abbreviation
--- | ---
E-Business Project | 12-EBP-152-m01

| Module coordinator | Module offered by |
--- | ---
Holder of the Chair of Information Systems Engineering | Faculty of Business Management and Economics |

| ECTS | Method of grading | Only after succ. compl. of module(s) |
--- | --- | ---
5 | numerical grade | -- |

| Duration | Module level | Other prerequisites |
--- | --- | ---
1 semester | undergraduate | -- |

**Contents**

In this course, students will acquire the technical, organisational and social skills necessary for a real e-business. The principal distinguishing feature of this course is its high practical relevance. The project work - evolving from the conceptual design to status presentations and final report - will be completed in small groups.

**Intended learning outcomes**

- Understand challenges of real e-business organisations
- Apply the acquired knowledge to solve a specific, real problem
- Present the developed results

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 20 pages) or c) term paper (approx. 10 to 20 pages) and presentation (approx. 15 minutes), weighted 2:1 or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German and/or English

**Allocation of places**

--

**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
Module title: Business Intelligence
Abbreviation: 12-BIF-211-m01

Module coordinator: Holder of the Chair of Information Systems Engineering
Module offered by: Faculty of Business Management and Economics

ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: undergraduate

Contents:
Technologies and methods of "Business Intelligence" are aimed at supporting managerial decision-making processes by analyzing and presenting large amounts of data. The module provides an overview of the corresponding analytical information systems, their technical architecture and areas of application. In the practical exercises, the concepts taught are practically demonstrated and applied by the example of a state-of-the-art BI software suite.

Intended learning outcomes:
- Understand the technological foundations of data warehouses and BI tools.
- Analyse and design conceptual models for analytical information systems.
- Apply real-world BI software products to analyse large structured data sets.

Courses:
V (2) + Ü (2)

Method of assessment:
a) Written examination (approx. 60 minutes) or
b) Term paper (approx. 20 pages) or
c) Term paper (10 to 20 pages) and presentation (approx. 15 minutes), weighted 2:1 or
d) entirely or partly computerised written examination (approx. 60 minutes)
Language of assessment: German and/or English

Allocation of places:
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Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes):
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<table>
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<td>Programming for Management Students</td>
<td>12-PFM-192-m01</td>
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<th>Module offered by</th>
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<tr>
<td>Holder of the Chair of Business Analytics</td>
<td>Faculty of Business Management and Economics</td>
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### Contents

In the context of digitization, dealing with program code is regularly of great importance for economists, e.g. in automated data analysis or computer-aided modeling of value creation processes. Likewise, in digital transformation projects, it is of great importance to understand how a programmer thinks and implements the tasks assigned to him. This facilitates communication as well as the actual development, adaptation and debugging of the project.

- Introduction to the basics of algorithms
- Programmatic constructs and structures
- Data structures
- Concepts of object-oriented programming
- Practical examples and exercises

### Intended learning outcomes

The lecture teaches the basics of the programmer. At the end of the course, the participants should be able to understand simple Python programs and are able to independently implement simple small programming projects in practice with Python.

### Courses

**(type, number of weekly contact hours, language — if other than German)**

V (2) + Ü (2)

### Method of assessment

**(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)**

- a) Written examination (approx. 60 minutes) or
- b) Oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate) or
- c) Programming exercises (approx. 20 hours total) and written examination (approx. 60 minutes), weighted 1:1 or
- d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German and/or English

### Allocation of places

--

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

--
Module title: Data Management and Analysis
Abbreviation: 12-DM-F-202-m01

Module coordinator: Holder of the Chair of Business Analytics
Module offered by: Faculty of Business Management and Economics

ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents:
The module teaches on the one hand basics and concepts of modeling data and querying and manipulating databases. Additionally, fundamentals of data analysis as well as data analysis processes are introduced.

Focal points are:
- Fundamentals and application of semantic data modelling
- Fundamentals and application of the relational data model
- Fundamentals and application of data query languages
- Hypothesis-driven and model-building data analysis
- Data analysis processes and their comparison
- Supervised and unsupervised learning processes

Intended learning outcomes:
Upon completion of the module students are able
- to design good conceptual and logical data models;
- to transform conceptual data models into physical data schemas;
- to formulate complex database queries;
- to design different applications with databases
- perform and interpret hypothesis testing on real data
- understand the basics of supervised and unsupervised machine learning

Courses:
V (2) + Ü (2)

Method of assessment:
a) Written examination (approx. 60 minutes) or
b) term paper (approx. 15 pages) or
c) term paper (approx. 10 pages) and presentation (approx. 10 minutes); (weighted 2:1) or
d) oral examination (groups of up to 3; approx 10 minutes per candidate)

Language of assessment: German and/or English
Creditable for bonus: --

Allocation of places:
50 places.

(1) No restrictions with regard to available places for Bachelor's students of Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits).
(2) Additional places will be allocated to students of other subjects provided there is enough capacity. These additional places will be allocated by lot among all applicants irrespective of their subjects.
(3) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (4) A waiting list will be maintained and places re-allocated by lot as they become available.
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Additional information:
--
Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Planning and Decision Making in Business Information Systems

Module title
Planning and Decision Making in Business Information Systems

Abbreviation
12-PEBI-211-m01

Module coordinator
Holder of the Chair of Business Analytics

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
Numerical grade

Only after succ. compl. of module(s)
--

Duration
1 semester

Module level
Undergraduate

Other prerequisites
--

Contents
Quantitative methods form a central basis for business planning and decision-making. From the information systems perspective, these methods must be integrated into IT systems and processes. The lecture presents fundamental concepts and methods from the areas of decision theory and analysis, mathematical optimization and discrete Markov chains. The methods are applied in the exercise on the basis of examples and solved computer-aided.

Intended learning outcomes

- Normative and empirical decision theory
- Fundamentals of linear programming
- Sensitivity analysis
- Discrete Optimization
- Discrete Markov chains

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) Written examination (approx. 60 minutes) or
b) Oral examination of one candidate each (approx. 20 to 30 minutes)
c) Exercises (approx. 6 pages)

Language of assessment: German and/or English

Creditable for bonus

Allocation of places
--

Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Primer in Data Science</td>
<td>12-PDS-211-m01</td>
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<td>Faculty of Business Management and Economics</td>
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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

**Contents**

Data science is concerned with extracting knowledge and valuable insights from data assets. It is an emerging field that is currently in high demand in both academia and industry. This course provides a practical introduction to the full spectrum of data science techniques spanning data acquisition and processing, data visualization and presentation, creation and evaluation of machine learning models.

The course focuses on the practical aspects of data science, with emphasis on the implementation and use of the above techniques. Students will complete programming homework assignments that emphasize practical understanding of the methods described in the course.

**Intended learning outcomes**

Topics covered include:

- Data acquisition and processing
- Graph and network models
- Text analysis
- Working with geospatial data
- Usage of machine learning models (supervised and unsupervised)

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Module taught in: German and/or English

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) exercises (approx. 6 pages)

Language of assessment: German and/or English creditable for bonus

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
## Module Catalogue for the Subject
### Economathematics
#### Bachelor’s with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Business Strategy for Information and Network Industries</td>
<td>12-BSINI-212-m01</td>
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<tr>
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<td>holder of the Chair of Industrial Economics</td>
<td>Faculty of Business Management and Economics</td>
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### Contents

Outline of syllabus:
1. Pricing of information goods
   - market segmentation methods
   - digital rights management and piracy
   - alternative monetisation strategies
2. Network effects
   - consumer demand in markets with network effects, rational expectations
   - monopoly pricing
   - competition in markets with network effects
   - compatibility and multi-homing: dynamic competition
3. Competition in markets with switching costs
4. Two (multi)-sided markets and platforms
   - monopoly pricing in platform markets
   - competition in platform markets: non-price strategies

The course will be taught in English.

### Intended learning outcomes

After successful completion of this class, the students should be familiar with issues arising in many of the increasingly important hi-tech industries. They will be able to comment on emerging selling mechanisms for books, music and video. They will be able to explain the underlying logic for observed pricing patterns for software products, social media sites and the services found in the so called sharing economy. They will not only be able to understand observed behavior in information goods markets, industries which exhibit network effects and platform markets but will be able argue for new strategies in light of the specific features a market/product may exhibit.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Module taught in: German and/or English

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60-120 minutes) or
b) term paper (approx. 10 pages) and presentation (approx. 15 minutes); (weighted 2:1)

Language of assessment: German and/or English

### Allocation of places

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### Additional information

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
## Computational Economics

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<td>Computational Economics</td>
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**Module coordinator**

holder of the Chair of Public Finance

**Module offered by**

Faculty of Business Management and Economics

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**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

--

### Contents

This module introduces students to the numerical implementation of economic models. It consists of three main parts:

1. The programming language FORTRAN 90
2. Numerical solution methods
3. Economic applications:
   - The static general equilibrium model
   - Topics in finance and risk management
   - Life cycle model
   - Overlapping generations model

### Intended learning outcomes

After finishing this module students are able to

1. implement simple economic models on the computer using Fortran 90
2. using MonteCarlo techniques to find optimal portfolio structures and option prices
3. quantify the risks of portfolios of banks and insurance companies
4. simulate simple reforms of the tax and transfer system
5. interpret the simulation results economically.

### Courses

Module taught in: German and/or English

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<th>Type</th>
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**Method of assessment**

(written examination (approx. 60 minutes) and exercises (approx. 10 pages), (weighted 1:1)

Language of assessment: German and/or English

### Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)
Module title
Practice of Data Analysis

Abbreviation
12-PD-152-m01

Module coordinator
Holder of the Chair of Econometrics

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Only after succ. compl. of module(s)
--

Duration
1 semester

Module level
undergraduate

Other prerequisites
--

Contents
Daily work in all areas of business - companies, science, institutions and politics - is based on the acquisition, processing and analysis of various data. These must be collected or generated and then processed and analyzed. In addition, data-based processes and business models offer many opportunities and challenges. The course covers the above mentioned topics and includes a theoretical and a practical part. In the theoretical part, basic knowledge in dealing with data, empirical work and the statistical software R will be taught. In the practical part of the research seminar webinars & field trips are offered.

Intended learning outcomes
Students able to apply statistical methods to collect numerical data.

Courses
(type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 minutes) or b) term paper (approx. 10 pages) and presentation (approx. 20 minutes), weighted 2:1
Language of assessment: German and/or English

Allocation of places
--

Additional information
--

Referred to in LPO 1 (examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
--- | ---
Applied Econometrics | 12-CQW-212-m01

Module coordinator | Module offered by
holder of the Chair of Econometrics | Faculty of Business Management and Economics

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</table>

Contents

This module builds on the lectures "Grundlagen der Statistik" ("Descriptive Statistics and Introduction to Probability") and "Grundlagen der QWF" ("Introduction to Statistical Inference and Regression Analysis"). It introduces students to the simulation of different distributions and the application of linear regression analysis.

In the first part of the course, different distributions are introduced, simulated with Excel and their theoretical moments are estimated. In the second part, linear regression analysis is introduced, different specifications are estimated and interpreted and potential pitfalls are pointed out.

Intended learning outcomes

After finishing this course students acquired several skills. They
(i) get an overview of several distributions;
(ii) know how to simulate those distributions in MS Excel and are able to estimate and interpret the related theoretical moments;
(iii) can perform smaller simulations in Excel;
(iv) get to know a variety of different Excel commands which are important for statistical working;
(v) are introduced to the linear regression analysis, can perform it in Excel and Gretl, and know how to interpret the results.

Courses (type, number of weekly contact hours, language — if other than German)

P (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (approx. 10 pages) and presentation (approx. 20 minutes), weighted 2:1

Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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<table>
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<tr>
<th>Module title</th>
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<tr>
<td>Seminar: Econometrics</td>
<td>12-QWF-FS-212-m01</td>
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</table>

**Contents**

This module will take the form of a seminar. Participants will independently work on a subdomain of applied quantitative economics, either theoretically or applying the techniques they have acquired in an empirical study.

**Intended learning outcomes**

Students acquire the ability to work independently on a given topic in applied quantitative economics, write a summary, and present it to and discuss it with other seminar participants.

**Courses**

(type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 25 minutes), (weighted 2:1)

**Allocation of places**

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places reallocated by lot as they become available.

**Additional information**

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**Referred to in LPO 1**
(examination regulations for teaching-degree programmes)

--
Module title
Managerial Accounting

Abbreviation
12-IntUR-G-212-m01

Module coordinator
holder of the Chair of Business Management and Accounting

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Only after succ. compl. of module(s)
--

Duration
1 semester

Module level
undergraduate

Other prerequisites
--

Contents
Content:
This course offers an introduction to aims and methods of managerial accounting (cost accounting).

Outline of syllabus:
1. Managerial accounting and financial accounting
2. Managerial accounting: basic terms
3. Different types of costs
4. Cost centre accounting based on total costs
5. Job costing based on total costs
6. Cost centre accounting and job costing based on direct/variable costs
7. Budgeting and cost-variance analysis
8. Cost-volume-profit analysis
9. Cost information and operating decisions

Reading:
Friedl/Hofmann/Pedell: Kostenrechnung. Eine entscheidungsorientierte Einführung.
(most recent editions)

Intended learning outcomes
After completing the course "Management Accounting and Control", the students will be able to
(i) set out the responsibilities of the company's internal accounting and control;
(ii) define the central concepts of internal enterprise computing restriction and control and assign case studies
the terms;
(iii) apply the basic methods of internal corporate accounting and control on a full and cost base to idealized ca-
se studies of medium difficulty that calculate relevant costs and benefits and take on this basis a reasoned deci-
sion.

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + T (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether
module is creditable for bonus)
written examination (approx. 60 minutes)
Language of assessment: German and/or English

Allocation of places
--

Additional information
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
--- | ---
Financial Accounting | 12-Wipr1-F-212-m01

| Module coordinator | Module offered by |
--- | ---
holder of the Chair of Business Management and Accounting | Faculty of Business Management and Economics

| ECTS | Method of grading | Only after succ. compl. of module(s) |
--- | --- | ---
5 | numerical grade | -- |

| Duration | Module level | Other prerequisites |
--- | --- | ---
1 semester | undergraduate | -- |

**Contents**

Content: This module is based on introductory courses in the areas of financial and managerial accounting and includes essential aspects of corporate financial accounting. It delivers a systematic presentation and interpretation of financial reporting standards according to the Handelsgesetzbuch (German Commercial Code, HGB) and International Financial Reporting Standards (IFRS). In addition, it introduces students to financial statement analysis methods.

Outline of syllabus: Fundamentals of financial statements; purpose and basic assumptions of financial accounting; recognition, valuation and presentation of assets, liabilities and equity; financial statement analysis.

Reading:
Baetge, J./Kirsch, H-J./Thiele, St.: Bilanzen, Düsseldorf.

**Intended learning outcomes**

The students have a deeper understanding of business fundamentals in accounting according to national (HGB) and international (IFRS) principles. They can systematically arrange and play with the knowledge and apply the acquired knowledge, i.e. resolve accounting and financial statement analysis problems of medium difficulty.

**Courses**
(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (approx. 10 pages)

Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
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<tr>
<td>International Accounting</td>
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### Contents

Outline of syllabus:
1. Fundamentals of group accounting
2. Legal obligations for group accounts
3. Consolidated companies
4. Capital consolidation
5. Debt consolidation
6. Consolidation of intercompany results
7. Consolidation of income and expenses
8. Equity method
9. Selected problems

Reading:
Baetge/Kirsch/Thiele: Konzernbilanzen, Düsseldorf. (most recent edition)

### Intended learning outcomes

After finishing this module "Konzernrechnungslegung nach HGB und IFRS", the students will be able
(i) to present the purposes of group accounting;
(ii) to identify and interpret central legal rules;
(iii) to apply consolidation methods on problems of moderate difficulty (in terms of capital, debt, interim results, expenses and income) and preparing the necessary entries for the group accounts;
(iv) to name central differences for group accounts according to the German Commercial Code (HGB) and IFRS and give reasons for the differences.

### Courses

<table>
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<th>(type, number of weekly contact hours, language — if other than German)</th>
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### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) written examination (approx. 60 minutes) or
- b) term paper (approx. 10 pages)

Language of assessment: German and/or English

### Allocation of places

--

### Additional information

--

### Referred to in LPO I

(examination regulations for teaching-degree programmes)

--
**Module title** | **Abbreviation**
--- | ---
Financial Statement Analysis and Valuation | 12-Wipr3-F-212-m01

**Module coordinator** | **Module offered by**
--- | ---
holder of the Chair of Business Management and Accounting | Faculty of Business Management and Economics

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**Contents**

Content:
This module builds on the introductory courses in the areas of Financial and Managerial Accounting and, in particular, on the course "Jahresabschluss und -- analyse nach HGB und IFRS" ("Financial Accounting according to HGB and IFRS"). The module provides students with a systematic introduction to practical, methodical and theoretical aspects of business audits, i.e. financial statement audits.

Outline of syllabus:
1. Audits and audit-related services - introduction and overview
2. Audit process: functional aspects of economic examination
3. Audit institutions: institutional aspects of economic examination
4. Economical audit theory: the low-balling model of DeAngelo

Reading:

**Intended learning outcomes**
The students have a deeper understanding of the basics of business (balance) checks. They can organize, play back and apply the systematically gained knowledge, i.e solve simple problems of business (balance sheet) tests.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)
Module taught in: German and/or English

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (approx. 10 pages)
Language of assessment: German and/or English

**Allocation of places**
--

**Additional information**
--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)
--
## Module Catalogue for the Subject
### Economathematics

**Bachelor's with 1 major, 180 ECTS credits**

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<td>Seminar: Financial Accounting</td>
<td>12-Wipr-FS-212-m01</td>
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### Contents

The module provides students with deeper insights into current problems of external accounting and auditing, usually with the help of textbooks or adequate scientific primary literature in English or German language.

### Intended learning outcomes

After completing this module, students are able to
(i) consolidate what they have learned and if necessary apply additional techniques of scientific work;
(ii) create and defend a qualification level relevant scientific work;
(iii) carry out scientific analysis of the results from other seminar participant;
(iv) ability to present and reflect solution-oriented the own performance considering communication aspects.

### Courses

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<tr>
<th>type, number of weekly contact hours, language — if other than German</th>
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### Method of assessment

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<tbody>
<tr>
<td>term paper (approx. 15 pages) and presentation (approx. 20 minutes), weighted 2:1</td>
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### Allocation of places

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

--
Module title | Abbreviation
--- | ---
Decision Theory | 12-I&F-F-192-m01

Module coordinator | Module offered by
--- | ---
Holder of the Chair of Corporate Finance | Faculty of Business Management and Economics

ECTS | Method of grading | Only after succ. compl. of module(s)
--- | --- | ---
5 | numerical grade | --

Duration | Module level | Other prerequisites
--- | --- | ---
1 semester | undergraduate | --

Contents

Based on the decision theory under certainty, this module covers normative decision theory under uncertainty in its manifestations of the expected utility theory and the μ - # theory.

Syllabus:

Part 1: Decisions under certainty
1. Fisher mode
2. Revealed preferences
3. Preference relations

Part 2: Decisions under uncertainty: Expected Utility Theory
1. The basic model
1. Risk preferences
2. Intensity of risk aversion
3. Stochastic dominance
4. Prospect Theory

Part 3: Decisions under uncertainty: μ − # principle
1. Introduction
2. Relation to expected utility theory
3. Application in Portfolio Theory & Tobin-Separation
4. Properties

Intended learning outcomes

The students acquire knowledge about how to describe appropriate decision situations and how to solve them based on the learned concepts.

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
Written examination (approx. 60 minutes)

Allocation of places
--

Additional information
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
### Seminar: Investment and Finance

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<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Seminar: Investment and Finance</td>
<td>12-I&amp;F-FS-212-m01</td>
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<td>holder of the Chair of Business Management, Banking and Finance</td>
<td>Faculty of Business Management and Economics</td>
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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

**Contents**

This seminar deals with current topics of investments and finance. Students will be required to independently analyse a selected topic and to write a term paper. This term paper may be largely literature based or empirical or may be based on independent work with formal models. In addition, students will be required to deliver a talk on the topic.

**Intended learning outcomes**

After completing the seminar "Investments and Finance", the students acquired detailed knowledge of important fields of investments and finance. They are also able to process their research findings in a written assignment and to present their findings.

**Courses** (type, number of weekly contact hours, language — if other than German)

| S (2) |

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and oral examination (approx. 25 minutes), (weighted 3:2)

**Allocation of places**

15 places.

1. Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects.
2. Places on all courses of the module with a restricted number of places will be allocated in the same procedure.
3. A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
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<th>Contents</th>
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This module provides an overview of the form and approach of the systematic risk management process in a business context. This risk management process consists of the process steps of risk identification, risk assessment and aggregation, risk management and risk control.

This course is based on this process structure and is structured accordingly:

- Legal and business motivation for risk management.
- Risk identification
- Risk assessment and aggregation
- Risk control
- Risk control and reporting
- Risk management information systems (RMIS)

M1 | Legal and business motivation for risk management

In Germany, outside the banking sector, there have been legal regulations for setting up corporate risk management since the KonTraG came into force in 1998. In addition to the legal obligation to set up a risk management system, the systematic handling of risks is also of interest from a business management point of view, as the conscious acceptance of risks has a significant positive influence on the company's ability to plan and control.

M2 | Risk identification

Risk identification involves systematically recording all of a company's major risks. The earlier risks are identified, the more comprehensively appropriate countermeasures can be taken.

Risk identification is a fundamental task of risk management, as it provides the information basis for all further process steps, because only identified risks can be assessed, aggregated and controlled. Various methods can be used to identify risks.

M3 | Risk assessment and aggregation

Once risks have been identified, they must be assessed. Both qualitative and quantitative methods are available for this purpose. The objective of risk assessment is to describe the risk in terms of appropriate statistical distribution functions. Once the relevant risks have been described by distribution functions, the next task is to determine the company's overall risk position by means of a so-called risk aggregation.

M4 | Risk management

This module deals with the options for risk control. Risk management is strongly linked to a company's strategy, as this is also where the company's attitude towards risk is anchored (risk appetite). In addition, the risk coverage potential (=available equity capital) is of decisive and existential importance.

Various strategies can be used to manage risks.

M5 | Risk control and reporting

With the help of early warning indicators (so-called key risk indicators, KRI), (negative) changes in the scope or probability of risk occurrence can be monitored and identified in good time. However, risk control does not only...
monitor KRI, it is also used to control measures implemented as part of risk management and to evaluate them for efficiency and success. As part of risk reporting, all findings from the individual risk management process phases are transferred to a risk report. The addressees of the risk report are risk officers, department heads, the Board of Management, the Supervisory Board or external parties such as auditors, shareholders or rating agencies. The scope and level of detail of the risk report depend on the recipient of the report.

M6 | Risk management information systems (RMIS)

A prerequisite for the company-wide and sustainable establishment of a risk management system is the software support provided by risk management information systems. Although known risks can be recorded and processed using standard tools such as Excel spreadsheets, they quickly reach their limits. As soon as additional users are to be integrated, an integrated software approach is required, as risk management information systems entail.

**Intended learning outcomes**

Students are taught the fundamentals of risk management. The students are able to identify, record and evaluate risks in a structured manner and furthermore express the scope of risk on a mathematical basis. The students are able to derive suitable risk measures and know how risks can be monitored.

**Courses**

| (type, number of weekly contact hours, language — if other than German) |
| V (2) + Ü (2) |

**Method of assessment**

| (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus) |
| written examination (approx. 60 minutes) |

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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<td>Business Valuation between Financial Mathematics and Data on Capital Market</td>
<td>12-UBW-F-152-m01</td>
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**Contents**

**Content:**
This course deals with the "objectified corporate valuation" of public companies, the components of the discount rate and the mathematical structure of the DCF methods.

**Outline of syllabus:**
1. Introduction
2. Uncertainty as the central problem in the valuation of a company
3. Estimation of surpluses: accuracy and consistency
4. Risk free rate: capitalised value under certainty applying different interest rate structures
5. The risk premium: identification of the relevant risk and its equivalence for valuation object and alternative investment
6. Different discounted cash flow valuation methods: formal foundations and economic principles

**Intended learning outcomes**

After completion of the module "Business valuation between Financial Mathematics and capital market data" students can
(i) understand the modern process of objectified business valuation theory;
(ii) examine submitted reviews according to consistent application of these methods.

**Courses**
(V (2) + Ü (2))

**Method of assessment**
written examination (approx. 60 minutes)

**Allocation of places**
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**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
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<tr>
<td>holder of the Chair of Business Taxation</td>
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**Contents**

This course offers an introduction to the fundamentals of financial accounting, including the technique of double-entry book-keeping as well as the fundamentals of recognition, valuation and presentation of assets, liabilities and equity according to German commercial law.

**Intended learning outcomes**

Students acquire a basic understanding of the fundamentals of financial accounting. They are able to arrange, reproduce and apply this knowledge, i.e. they are able to solve simple accounting problems.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
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<td>Business Taxation 1: An Introduction to Tax Law &amp; Tax Planning</td>
<td>12-St1-F-152-m01</td>
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**Module coordinator**
Holder of the Chair of Business Taxation

**Module offered by**
Faculty of Business Management and Economics

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**Duration**
1 semester

**Module level**
undergraduate

**Other prerequisites**
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**Contents**
This module will introduce students to the field of business taxation. It will provide an overview of German tax law and will analyse tax effects on economic decisions in standard models for investment and financing decisions.

**Intended learning outcomes**
Students get an overview of the German tax law and they acquire the ability to recognize and understand the effect of taxation in fundamental economic decisions. Therefore, the module is recommended also for students who don’t want to specialize in finance and accounting but rather in management studies.

**Courses**
(type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written examination (approx. 60 minutes)
creditable for bonus

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
---|---
Business Taxation 2: The Taxation of Income in Germany | 12-St2-F-152-m01

Module coordinator | Module offered by
Holder of the Chair of Business Taxation | Faculty of Business Management and Economics

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Contents
In this module, students will acquire an in-depth knowledge of the system of income taxation in Germany which consists of personal income tax, corporate income tax and trade tax, a special income tax on business income.

Intended learning outcomes
Students acquire in-depth knowledge of the system of income taxation in Germany. They are able to solve practical problems of medium to high complexity in this field by means of the tax code, other legal texts and secondary literature.

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written examination (approx. 60 minutes)
credible for bonus

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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<td>Business Taxation 3: Introduction to VAT</td>
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</table>

**Contents**

Introduction to German value added tax.

**Intended learning outcomes**

Students acquire a thorough knowledge of German VAT law. They are able to solve VAT problems of low to medium complexity by using the tax code itself as well as related literature.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) oral examination (one candidate each: approx. 10 to 15 minutes, groups of 2: approx. 20 minutes, groups of 3: approx. 30 minutes) creditable for bonus

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<thead>
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### Contents

This module deals with selected problems and issues of business taxation.

### Intended learning outcomes

The students will be able to edit and solve selected problems and issues of business.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) written examination (approx. 60 minutes) or
- b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), (weighted 2:1) or
- c) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)

Language of assessment: German and/or English

creditable for bonus

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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</table>

### Contents

This module deals with selected problems and issues of business taxation.

### Intended learning outcomes

The students will be able to edit and solve selected problems and issues of business taxation.

### Courses (type, number of weekly contact hours, language — if other than German)

<table>
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### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or  

b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), (weighted 2:1) or  

c) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)  

Language of assessment: German and/or English  

creditable for bonus

### Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Module title | Managerial Accounting: cost-based decision-making and control
---|---
Abbreviation | 12-KR-152-m01

Module coordinator | Holder of the Chair of Business Management, Management Accounting and Control
Module offered by | Faculty of Business Management and Economics

ECTS | Method of grading | Only after succ. compl. of module(s)
---|---|---
5 | numerical grade | --

Duration | Module level | Other prerequisites
---|---|---
1 semester | undergraduate | --

Contents

First, this module will discuss basic principles of accounting such as full and direct costing as well as cost and performance accounting in the context of decision-making. The course will then focus on decision-making processes (short-term production planning, pricing decisions) and internal control calculations (the role of controls, deviation analyses).

Intended learning outcomes

This module provides competences in order to apply systems of full and direct costing, cost and performance accounting with regard to decision-making and internal control processes. After completing the course unit, students will be able to understand and assess the theoretical principles and interrelationships in decision-making and control as well as be able to apply them to examples from corporate practice. The goal is to promote analytical thinking and problem-solving abilities by analyses of complex problem structures.

Courses (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)

Allocation of places

--

Additional information

--

Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Module Catalogue for the Subject Economathematics

**Bachelor’s with 1 major, 180 ECTS credits**

<table>
<thead>
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<td>Sales Accounting &amp; Management</td>
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<tr>
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### Contents

The focus of the lecture is the support of sales management by controlling. The course covers the positioning of sales and sales management with a special emphasis on B2B sales of IT companies and the position of sales controlling as a subset of overall controlling in different business organisations. The course discusses basic requirements of an ideal support of sales by controlling as well as possible elements with which this support function can be realised, such as management information systems, target management and customer relationship management.

### Intended learning outcomes

Knowledge about the practice of working in sales management and the associated sales is acquired. By displaying theoretical tools to support sales management by the controlling and the balance with the reality in companies, participants further acquire skills to evaluate the possible use of sales management tools in practice.

### Courses

(type, number of weekly contact hours, language — if other than German)

V (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)

### Allocation of places

40 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Seminar: Managerial Accounting</td>
<td>12-AAC-212-m01</td>
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<table>
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<th>Module coordinator</th>
<th>Module offered by</th>
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<tbody>
<tr>
<td>holder of the Chair of Business Management, Controlling and Accounting</td>
<td>Faculty of Business Management and Economics</td>
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<tr>
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<tbody>
<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

**Contents**
In this course, students will acquire important knowledge and skills that will enable them to prepare a well-structured paper and to present the results of their work with the help of relevant topics in the field of the focuses of module "Entscheidungs- und Kontrollrechnung" ("Management Accounting: Decision Making and Control").

**Intended learning outcomes**
After completing the controlling bachelor seminar, students will be able to
(i) understand and apply the fundamentals of scientific literature reviews;
(ii) use elaborated content to write scientific papers;
(iii) create presentations and lectures independently.

**Courses** (type, number of weekly contact hours, language — if other than German)

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<thead>
<tr>
<th>Type</th>
<th>Number of weekly contact hours</th>
<th>Language</th>
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**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 12 pages) and presentation (approx. 20 minutes), (weighted 2:1)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<td>Monetary Policy and Financial Markets</td>
<td>12-EuGP-F-212-m01</td>
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<td>undergraduate</td>
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</table>

**Contents**

The course discusses the following questions:
1. Why is price stability the main objective of the ECB?
2. How can the ECB control interest rates and the creation of credit? Why did the financial crisis happen?
3. How does interest rate policy influence macroeconomic objectives (price stability and full employment)?
4. Why is it important for monetary policy to be independent?
5. How does the ECB know, how to set interest rates? (strategies of monetary policy)
6. Why did central banks engage in unconventional monetary policy during the last years?

**Intended learning outcomes**

By completing this course, students receive a profound understanding of theory and practice of monetary policy. Next to a profound knowledge of monetary policy in general, students are able to form a critical opinion about the conduct of monetary policy by the European Central Bank and in part about the policy of other central banks.

**Courses**

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)
Module taught in: German and/or English

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)
Language of assessment: German and/or English

**Allocation of places**

--

**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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### Module title

**International Money & Finance**

*Abbreviation: 12-IFM-212-m01*

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<tbody>
<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

### Contents

The module introduces students to exchange rate theory, the determinants of international financial flows and monetary open economy models for the analysis of monetary and fiscal policy. The module is divided into three parts. The first one covers exchange rates and the second one the balance of payments, international financial flows and financial market globalization. Based on these two, the third one focuses on economic policy applications including the exchange rate regime choice, exchange rate crises and optimum currency area theory.

Format of the module: Lectures and exercise sessions

Prerequisites: Basic knowledge of microeconomics and macroeconomics as taught for example in a Principles of Economics class or in Microeconomics I and Macroeconomics I.

Usability: Bachelor Wirtschaftswissenschaften

Requirements for getting credit points according to the European Credit Transfer System (ECTS): Passing the final exam.

ECTS and grading: 5 ECTS, Grading on a scale from 1-5 based on the final exam.

Frequency of the module: Each summer term

Workload: 150 hours (Lecture + Exercise Session + Self Study)

Duration: 1 Semester

### Intended learning outcomes

Students will acquire a basic understanding of international finance and learn analyzing practical examples with monetary models. Students gain expertise on institutional aspects and theoretical models. Having completed the module, students will be able to understand current developments in international finance and apply models and theories to analyze and evaluate these.

### Courses

<table>
<thead>
<tr>
<th>(type, number of weekly contact hours, language — if other than German)</th>
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<td>V (2) + Ü (2)</td>
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Module taught in: German and/or English

### Method of assessment

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<tr>
<th>(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)</th>
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<tbody>
<tr>
<td>written examination (approx. 60 minutes)</td>
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</table>

Language of assessment: German and/or English

### Allocation of places

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### Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)
Module title: Applied Business Cycle Analysis and Forecasting

Abbreviation: 12-AKP-211-m01

Module coordinator
Holder of the Chair of Monetary Policy and International Economics

Module offered by
Faculty of Business Management and Economics

ECTS: 5
Method of grading: numerical grade
Only after succ. compl. of module(s)

Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents
This module is an introduction to economic forecasting and business cycle analysis. The course is divided into three sections. In the first section, statistical and methodological basics on quantitative macroeconomic analysis and forecasting are discussed. The second section covers various aspects and issues related to economic forecasting. In the last sections, recent developments, topics, and research insights are presented.

Format of the module: lectures

Prerequisites: Basic knowledge of microeconomics and macroeconomics as taught for example in a Principles of Economics class or in Microeconomics I and Macroeconomics I.

Usability: Bachelor Wirtschaftswissenschaften

Requirements for getting credit points according to the European Credit Transfer System (ECTS): Passing the final exam.

ECTS and grading: 5 ECTS, Grading on a scale from 1-5 based on the final exam.

Frequency of the module: Each summer term

Workload: 150 hours (Lecture + Self Study)

Duration: 1 Semester

Intended learning outcomes
Students will acquire a basic understanding of the theory and practice of applied business cycle analysis and forecasting. Further, students will learn how to analyze and answer real-world economic problems using their economic toolkit. Students gain expertise on applying their knowledge gained in basic economics courses on policy-relevant issues. Having completed the module, students will be able to understand current macroeconomic and economic policy developments and to use models and theories to analyze and evaluate these.

Courses (type, number of weekly contact hours, language — if other than German)
S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) Written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes); (weighted 2:1) or d) oral examination (approx 20 minutes)
Language of assessment: German and/or English

Allocation of places
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Additional information
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### Module: Economic Policy

**Module title**: Seminar: Economic Policy  
**Abbreviation**: 12-VWL1-FS-212-m01

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**Module coordinator**: holder of the Chair of Monetary Policy and International Economics  
**Module offered by**: Faculty of Business Management and Economics

<table>
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<tr>
<th>Duration</th>
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<th>Other prerequisites</th>
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<tr>
<td>1 semester</td>
<td>undergraduate</td>
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</table>

**Contents**

Acquiring an in-depth understanding of specific problems of macroeconomics.

**Intended learning outcomes**

After the seminar, students can
(i) consolidate acquired knowledge and if necessary apply additional techniques of scientific work;
(ii) create, present and defend a scientific paper;
(iii) deal with the working papers of other participants;
(iv) prepare better for the processing of the bachelor thesis.

**Courses**

<table>
<thead>
<tr>
<th>S (2)</th>
<th>Module taught in: German and/or English</th>
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</thead>
</table>

**Method of assessment**

(2) (weighted 2:1)  
Language of assessment: German and/or English

### Allocation of places

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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**Referred to in LPO I**

(Examination regulations for teaching-degree programmes)

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<table>
<thead>
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<td>Seminar: Public Finance</td>
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<td>holder of the Chair of Public Finance</td>
<td>Faculty of Business Management and Economics</td>
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**Contents**

In this course, students will acquire an in-depth understanding of specific problems discussed in "Makroökonomik II" ("Macroeconomics II") and "Mikroökonomik III" ("Microeconomics III"). The course will use scientific economic journal articles in German and English language.

**Intended learning outcomes**

After completing this module, students
(i) consolidate what they have learned and if necessary apply additional techniques of scientific work;
(ii) create, present and defend a research paper;
(iii) deal with the working papers of other participants;
(iv) are better prepared for the processing of the bachelor thesis.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 25 minutes), weighted 2:1

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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# Insurance Markets

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<th>Abbreviation</th>
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<tbody>
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<td>Insurance Markets</td>
<td>12-VM-152-m01</td>
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## Module coordinator

- **Holder of the Chair of Economics, Information and Contract Economics**
- **Faculty of Business Management and Economics**

## ECTS

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## Duration

- **1 semester**
- **undergraduate**
- **--**

## Contents

Asymmetric information makes insurance markets different from common goods markets. Research questions and methods thus have to take these special features into account. Typical subjects covered in the course:

1. Demand for insurance
2. Supply of insurance
3. Adverse selection in insurance markets
4. Moral hazard in insurance markets
5. Empirical assessment of information problems
6. Informal insurance schemes
7. Insurance and bounded rationality

## Intended learning outcomes

After completing the course students are able to

1. explain the essential results of the economic analysis of insurance markets,
2. apply the involved methods to given simple examples on their own,
3. recognise, in which real life situations and how the results can be applied,
4. analyse the impact of certain insurance contracts on market outcomes.

## Courses

<table>
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<th>Courses</th>
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## Method of assessment

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## Allocation of places

- **--**

## Additional information

- **--**

## Referred to in LPO I

(examination regulations for teaching-degree programmes)

- **--**
## Module Catalogue for the Subject
### Economathematics
#### Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Business Cycle Analysis</td>
<td>12-Konj1-F-212-m01</td>
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### Contents

The course will introduce students to the theory of business cycle dynamics. Capitalist based economies are subject to pronounced cycles of economic booms and busts. In this course, we will find out why! Kicking off the lecture, we will look at some stylised empirical facts of business cycles. Afterwards, we will give a structural interpretation, focusing in particular on housing and asset markets and their role for the business cycle. We will also take a closer look at investment, one of the main cycle-makers. Afterwards, we will ask the question of how monetary and fiscal policy can safeguard the business cycle. Special attention will be given to the euro area. We will also invite an expert to give a practical introduction to business cycle indicators.

### Intended learning outcomes

The course offers an introduction into a vast array of analytical tools. Students (i) are exposed to 1st and 2nd order difference equations and learn how to solve them; (ii) learn how business cycle indicator are constructed; (iii) are supplied with up to date knowledge on the interaction of business cycles, asset markets and economic policy which enables them to critically access contemporaneous policy.

### Courses

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<td>a) written examination (approx. 60 minutes) or</td>
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<tr>
<td>b) term paper (as group or individual work, approx. 10 pages each person) or</td>
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<tr>
<td>c) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate)</td>
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### Allocation of places

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### Additional information

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### Referred to in LPO I

( examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
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<tbody>
<tr>
<td>Seminar: Business cycles, corporate finance and asset markets</td>
<td>12-KUV-211-m01</td>
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**Module coordinator**

Head of the Work Group of Empirical Economics

**Module offered by**

Faculty of Business Management and Economics

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**Contents**

The modul is located in the nexus of business cycles, corporate finance and asset markets. Being located at the intersection between economics and finance the modul addresses the interaction between business cycles, corporate finance and asset markets. Concretely students can work on subjects like „what is the impact of interest rate changes by the central bank on the housing market“, „how do asset markets and household consumption interact“ and „what is the interrelationship between financing conditions and the business cycle“. From a methodological point of view the course targets to build on existing methodological toolkits acquired during the bachelor studies. Students are guided to deepen their understanding on those toolkits to analyze data and to generate results.

**Intended learning outcomes**

The module equips students with the necessary tools to analyze data to generate results on topics of interest. Besides students need to present their findings and communicate their results to other students.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 25 minutes), weighted 2:1

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
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<th>Module title</th>
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<td>European Macroeconomics</td>
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<td>Holder of the Senior Professorship for Economics, Money and International Economic Relations</td>
<td>Faculty of Business Management and Economics</td>
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### Contents

This course focuses on the macroeconomics of the euro area. It is based on a theoretical part which provides a critical presentation of the two core macroeconomic paradigms: the (neo)classical approach and the Keynesian approach. This allows a comparative analysis of policy implications for important macroeconomic topics (unemployment, inflation, government debt, financial system). The policy-oriented part discusses the monetary policy of the ECB and the challenges for fiscal policy in the euro area, which are due to the lack of fiscal policy integration. The course will also present other euro area specific topics (e.g. Optimum currency area, euro crises, Next Generation EU).

### Intended learning outcomes

After completing this course, students will have gained a profound understanding of (applied) macroeconomic policies in general and specifically in the EMU. The students will have a deeper understanding of the two core macroeconomic models and their application for economic policy by using empirical data. Thus, they will enhance their general macroeconomic understanding by applying it to real world problems. In addition, students will develop a sound knowledge of the institutions of common fiscal and monetary policy in Europe.

### Courses

(type, number of weekly contact hours, language — if other than German)

| V (2) |

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

| a) Written examination (approx. 60 minutes) or b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes); (weighted 2:1) or c) oral examination (approx 20 minutes)  |
| Language of assessment: German and/or English |

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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<table>
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<td>Human Resource Management</td>
<td>12-P&amp;O-F-212-m01</td>
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<tbody>
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<td>holder of the Chair of Human Resource Management and</td>
<td>Faculty of Business Management and Economics</td>
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<tbody>
<tr>
<td>The lecture &quot;Personal und Organisation&quot; (&quot;Human Resources Management and Organisation&quot;) presents and discusses basic theories, estimation techniques and empirical results from the area of personnel economics and organisation. Reading list to be provided during lecture</td>
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<th>Intended learning outcomes</th>
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<tr>
<td>The aim of the lecture is to enable students to understand and apply basic theories, estimation techniques and empirical results in the area personnel economics and organisation on the basis of text books and scientific literature.</td>
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<tr>
<td>Seminar: Human Resource Management &amp; Organizational Theory</td>
<td>12-P&amp;O-FS-212-m01</td>
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<tr>
<td>holder of the Chair of Human Resource Management and Organisation</td>
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**Contents**

Students will write a seminar paper on, deliver a talk on and discuss current issues in the field of human resources management and organisation in class.

**Intended learning outcomes**

The students learn to handle, formulate in own words, present, and discuss current research literature.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

term paper (approx. 15 pages) and presentation (approx. 20 minutes), (weighted 1:1)

Language of assessment: German and/or English

**Allocation of places**

15 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO 1** (examination regulations for teaching-degree programmes)

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### Module title
International Economics

### Abbreviation
12-IntÖk-152-m01

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## Contents

### Content
The course starts with an introduction into facts, trends and issues pertaining to the real side of globalization. The main part of the course deals with explanations of international trade (comparative advantage, product variety) and for international factor movements (if time permits). Current issues and controversies (e.g. globalization and labor; globalization and the environment; migration within the European Union) are analyzed on this background.

### Outline

I International Economics – Trends and current developments

II Internationale Trade

1 Ricardian Theory: Labor productivity and comparative advantage

2 Heckscher-Ohlin-factor proportion theory and the general neoclassical model

3 New Trade Theory: Product differentiation, scale economies, firm heterogeneity

III International Factor Movements [time permitting]

### Literature:
This course does not strictly follow a single textbook. The best general reference is Krugman, P.R., M. Obstfeld, M.J. Melitz (2018), International Economics. Theory and policy (older versions will also do).

The course develops case studies that use additional references.

### Intended learning outcomes
The students acquire the ability to critically reflect and understand trends and developments concerning the real side of the world economy: trade flows and international factor movements. They are enabled to understand and defend the causes and consequences of globalization both analytically as well as in an intuitive manner. They acquire the scientific knowledge to evaluate controversies associated with the ongoing deepening of the international division of labor.

### Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written examination (approx. 60 minutes)

Language of assessment: German and/or English
### Allocation of places

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### Additional information

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Module title**
Seminar: International Economics

**Abbreviation**
12-IntÖk-FS-152-m01

**Module coordinator**
Holder of the Chair of International Economics

**Module offered by**
Faculty of Business Management and Economics

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**Duration**
1 semester

**Module level**
undergraduate

**Other prerequisites**
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**Contents**

**Content**
Current topics in international economics and economic geography [e.g. Urbanization and Inequality; Tasks, Trade, and Cities; Outsourcing, Offshoring and Multinational Firms; Competition of Locations, Jurisdictions and Systems; Globalization and the Environment; Trade, Multinational Firms and Labor Markets; Triumph of the City]

**Literature**
Peer-reviewed articles and/or monographs.

**Intended learning outcomes**
Drawing on current cutting-edge research, students are enabled to analyze current research questions and to learn and apply research methods. The seminar style of the course teaches them to present their own seminar papers and research both in written and in oral form. Students are enabled to critically analyze and discuss the work of their peers.

**Courses** (type, number of weekly contact hours, language — if other than German)
S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
term paper (approx. 15 pages) and presentation (approx. 30 minutes), weighted 3:1
Language of assessment: German and/or English

**Allocation of places**
10 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
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Module title | Abbreviation
---|---
Applied Regional and Urban Economics | 12-ARS-152-m01

Module coordinator | Module offered by
Holder of the Chair of Industrial Economics | Faculty of Business Management and Economics

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Contents
I A brief revision of econometrics: OLS and fixed effects regression
II Geographical agglomeration of economic activity
III Firm heterogeneity and the exporter wage premium
IV A brief revision of econometrics: Instrumental variables regression
V German local labor markets and "the Rise of the East"

Intended learning outcomes
This course focuses on the empirical analysis of current topics in international and regional economics. After reviewing some theoretical background and empirical methods, students learn to comprehend empirical studies, recognize possible pitfalls and conduct their own analyses using statistical software packages and authentic datasets. A strong focus is put on the identification of causal effects. Students should already have basic knowledge in econometric analysis and international trade theory.

The lecture starts with a revision of basic empirical methods. The first application is to analyse if and why (and to what magnitude) firms benefit from being located in agglomerations such as the Silicon Valley. Next, we analyse the role of firms in international trade. What distinguishes exporters from non-exporters and are employees of exporters better off? Returning to a regional perspective, we then discuss several recent research papers on the adjustment of local labor markets to increasing trade with China and Eastern Europe.

In a complementary lab tutorial (Übung) students learn to conduct empirical analyses by themselves. In hands-on exercises, they first practice how to obtain and prepare datasets and how to use summary statistics to find general patterns in the data. We then apply our theoretical knowledge from the lecture to devise empirical strategies and to interpret our results.

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 minutes) or b) term paper (approx. 10 pages) including empirical analysis prepared by candidates
Language of assessment: German and/or English

Allocation of places
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Additional information
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Bachelor's with 1 major Economathematics (2022)
### Module title
Labour Economics

### Abbreviation
12-A&S-F-212-m01

### Module coordinator
holder of the Chair of Economic Order and Social Policy

### Module offered by
Faculty of Business Management and Economics

### ECTS
5

### Method of grading
Numerical grade

### Only after succ. compl. of module(s)
--

### Duration
1 semester

### Module level
Undergraduate

### Other prerequisites
--

## Contents

### Description:
This course offers an introduction to labour economics and social policy.

### Outline of syllabus:
1. Worlds of welfare capitalism
2. Labour economics
3. Social policy

### Basic reading:

### Intended learning outcomes
The students analyze the function of the labor market and get an impression of relevant aspects in social policy. The students are able to illustrate the underlying theoretical models, can interpret them economically and apply to the current situation.

### Courses
(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)
Module taught in: German and/or English

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) portfolio (approx. 20 pages)

Language of assessment: German and/or English

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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Seminars: Labour Economics

12-LES-211-m01

**Module coordinator**
Holder of the Chair of Labor Economics

**Module offered by**
Faculty of Business Management and Economics

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**Contents**

This course provides an introduction into modern labor economics. The lecture will cover the following three core topics:

I. Structure of the labor market

1. Labor supply
2. Labor demand
3. Labor market equilibrium

The objective of this part is to provide an understanding of the determinants of labor supply and labor demand and how they match and finally reach an equilibrium. This also implies studying the design and effects of policy interventions in order to combat inefficiencies.

II. Wage formation

4. Human capital formation
5. Compensating wage differentials
6. Discrimination
7. Wage structure and inequality

The objective of the second part is to investigate the different determinants of wages and to understand the reasons (justified or unjustified) why some people earn more than others.

III. Unemployment

The third and last part of the lecture deals with one of the biggest challenges to policy makers: unemployment.

**Intended learning outcomes**

Participants will be familiarized with the core theoretical models of modern labor economics and the basic methods of modern empirical labor economics. As such the course will be divided into two parts: the lecture where the theory is taught as well as the exercise class which are "hands on" sessions in order to be able to conduct an economic analysis both theoretically as well as empirically.

**Courses**

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<td>Term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 3:2</td>
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**Allocation of places**

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**Additional information**

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module title
Economics of Information

Abbreviation
12-IÖ-152-m01

Module coordinator
Holder of the Chair of Economics, Information and Contract Economics

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Duration
1 semester

Module level
undergraduate

Only after succ. compl. of module(s)
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Other prerequisites
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Contents
During the 1960/70s, microeconomic theory came to acknowledge that many (if not most) economic transactions are characterized by asymmetric distribution of information – i.e., at least one of the parties participating in a transaction usually is privy to information that the remaining parties do not have access to. This asymmetric distribution of information subsequently was recognized to be a major impediment for transactions to be economically efficient. Contract theory addresses the question how the inefficiencies arising from asymmetric distribution of information can best be mitigated by appropriate design of the contractual (or, more generally, institutional) framework that governs the transaction under consideration. This lecture covers the baseline models of “moral hazard” (i.e., situations where one party has private knowledge after a contract has been signed) and “adverse selection” (i.e., situations where one party has private knowledge before a contract is signed). As applications we will address questions discussed in organizational, personnel or industrial economics, such as incentive design within organizations or the design of labor law regulations and competition laws.

Even though we will work with precise mathematical formalizations of the ideas that we want to think and talk about, this course requires little more than a solid understanding of basic differential calculus. More important than having a solid mathematical background is having a strong interest in formal economic analysis and fun with logical thinking and puzzle solving.

The exposition is primarily based on the following textbook:


Intended learning outcomes
After completing the course students will be able to
- explain essential findings of contract theory,
- apply the involved methods to given stylized examples on their own,
- interpret the properties of real-life contracts as the outcome of the interaction between two or more contracting parties in the presence of asymmetric information,
- evaluate government interventions with regard to their effect on the efficiency properties of the interaction between the contracting parties.

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
written examination (approx. 60 minutes)

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module title | Abbreviation
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Seminar: Decision Making and Incentive Design | 12-IAO-212-m01

Module coordinator | Module offered by
holder of the Chair of Economics, Information and Contract Economics | Faculty of Business Management and Economics

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Contents

This seminar covers the following special topics in organisational economics:

- Hidden costs of control - theory and evidence
- Reciprocity and incentives - experimental evidence
- Task meaning, respect, and performance effects - experimental evidence
- Leadership - theory and evidence

Intended learning outcomes

Drawing on current cutting-edge research, students are enabled to critically and independently analyze current research questions and to learn and apply research methods. The seminar style of the course teaches them to present their own seminar papers and research both in written and in oral form. Students are enabled to critically analyze and discuss the work of their peers.

Courses (type, number of weekly contact hours, language — if other than German)

S (2)
Module taught in: German and/or English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Term paper (approx. 10 pages) and presentation (approx. 20 minutes), (weighted 2:1)
Language of assessment: German and/or English

Allocation of places

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Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

--
Module title
Introduction to Business Journalism

Abbreviation
12-EWJ-192-m01

Module coordinator
Holder of the Professorship of Economic Journalism

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Duration
1 semester

Module level
undergraduate

Other prerequisites
--

Contents
The course provides a practical introduction to the functions and goals of business journalism and gives an initial overview of the subject area of journalism. The focus is on the following questions: What is communication? What are the special features of business journalism? How does one communicate complex economic-political contexts? What needs to be taken into account when providing information and conducting research? How are sources handled in journalism? How are journalistic products such as a report or news item or a report written? How does storytelling work? What is the most efficient way to disseminate journalistic products? What comprises the field of journalistic ethics?

Intended learning outcomes
Through practical exercises, students learn about different forms of presentation and gain insight into research techniques. After completing the "Introduction to Business Journalism" module, students are able to comprehend and evaluate the work of journalists and likewise write journalistic products independently.

Courses
(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Portfolio (approx. 20 pages)
Language of assessment: German and/or English

Allocation of places
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Additional information
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(examination regulations for teaching-degree programmes)

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<td>Crossmedia Storytelling in Business Communication</td>
<td>12-CWK-192-m01</td>
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**Module coordinator**

Holder of the Professorship of Economic Journalism

**Module offered by**

Faculty of Business Management and Economics

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**Contents**

Online and cross-media journalism takes into account the current media convergence. This seminar focuses on the individual elements and phases of production for the website, Facebook, Instagram, Twitter, and Tiktok against the background of current trends and developments. In addition, the seminar covers current trends in journalism. In addition to content-related topics, the focus is also on new methods (e.g. of storytelling), as well as technical developments.

**Intended learning outcomes**

After successful completion, students will be able to name the individual phases of online and cross-media journalism and carry them out on sample projects, explain and go through the individual production stages, use methods and tools for the individual steps.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Portfolio (approx. 20 pages)

Language of assessment: German and/or English

**Allocation of places**

20 places.

1. Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects.

2. Places on all courses of the module with a restricted number of places will be allocated in the same procedure.

3. A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Module title**  
Seminar: Business Journalism and Business Communication

**Abbreviation**  
12-WUW-211-m01

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**Module coordinator**  
Holder of the Professorship of Economic Journalism

**Module offered by**  
Faculty of Business Management and Economics

**Contents**
This seminar is offered as a preparatory seminar for the bachelor thesis. Basic scientific knowledge is taught. The focus is on the goal of independently preparing a well-founded scientific thesis. For this purpose, the individual steps from the generation of a research question to the actual survey are explained. In addition, an overview of scientific writing is provided.

**Intended learning outcomes**
Upon completion of the seminar, students will be able to independently prepare a scientific paper.
- Consolidation of the learned and, if necessary, application of further techniques of scientific work
- Preparation, presentation, and defense of a scientific paper
- Examination of the working papers of other seminar participants
- Preparation for the Bachelor and Master Thesis

**Courses**
(type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
term paper (approx. 10 to 15 pages) and presentation (approx. 15 minutes); (weighted 1:1)
Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
--
### Module title
Managerial Practice Lectures

| Abbreviation       | 12-VGP-192-m01 |

### Module coordinator
Holder of the Professorship of Economic Journalism

### Module offered by
Faculty of Business Management and Economics

### ECTS Method of grading
Only after succ. compl. of module(s)

| 5 | numerical grade | -- |

### Duration Module level
Other prerequisites

| 1 semester | undergraduate | -- |

### Contents
In this lecture, we invite board members of publicly listed companies, SMEs and Startups to discuss contemporary challenges of corporate management.

Students gain sustainable insights into current management practices, challenges of corporate management in various industries, and discuss pressing managerial issues with C-level executives. In individual and group assignments, students are required to connect management theories with the managerial challenges of the speakers.

Managers of the different companies are required to address the following questions that will foster a detailed discussion at the end of each lecture:

- What are the current challenges facing your company?
- Which strategies do you employ to respond to these challenges?
- How have leadership concepts and approaches changed in your company?

### Intended learning outcomes
After participating in this module, students should be able to combine theoretical approaches with current challenges in management. The students obtain a realistic insight into a cross-section of the German economy. Through discussions reports and group presentations students' social skills are trained in addition to professional skills.

### Courses
(type, number of weekly contact hours, language — if other than German)

| S (2) |

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

| Portfolio (approx. 20 pages) | Language of assessment: German and/or English |

### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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**Contents**

The content of the seminar is the active participation in as well as the follow-up of the lectures of economists from different national and international fields of activity, which are organized for the event.

The invitation of speakers from practice strengthens the practical orientation of the scientifically founded and at the same time internationally oriented education at the faculty of economics of the University of Würzburg.

In this way, students will gain lasting insights into the fields of activity of economists, gain an insight into practical activities, discuss these with high-ranking economists and combine them with theoretical economic knowledge gained during their studies.

**Intended learning outcomes**

By participating in the seminar, Master’s students of the faculty of economics and business administration should get to know the different fields of activity of economists and the questions that determine the daily work of the speakers in the course of the lectures.

In addition, the participants of the seminar will have the opportunity to apply the knowledge of economics they have acquired during their studies. For this purpose, in addition to a discussion with the speakers following the respective lecture, a debating workshop is offered to the participants of the seminar, in which the students are to learn economic argumentation and debate management. The learned contents and competencies will be tested at the end of the semester.

**Courses**

(S (2))

**Method of assessment**

(a) oral examination (approx. 30 minutes) or (b) term paper (approx. 10 pages) and presentation (approx. 15 minutes); (weighted 2:1) or (c) written examination (approx. 60 minutes)

Language of assessment: German and/or English

**Allocation of places**

--

**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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## Module Title

**Challenges of China’s Economic Rise**

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<th>Module Offered by</th>
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### Contents

This course will be taught in English. Over the last 30 years, China has experienced an unprecedented economic growth period. This economic success is awesome and challenging at the same time. Within this seminar we take a look at a selection of challenges resulting from China’s economic rise. We look into challenges arising within China, but also into selected international ones. We approach the challenges by first looking at how they have been discussed in Western media. Starting from there we look ‘behind the curtain’ to analyse the topics and debates more in-depth in the context of China’s economic rise and relevant economic theories. To attend this class you do not need ex ante knowledge about China. You should, however, be willing to read texts, also academic texts, in English language. Apart from reading, participants of the seminar are expected to prepare inputs for the seminar and to participate in class discussion. The seminar ends with a written examination.

### Intended Learning Outcomes

Students of the seminar gain knowledge about China and its global relevance. In addition they learn how the experiences of an emerging markets at times defy mainstream economic theory.

### Courses

- **Method of Assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
  
a) written examination (approx. 60 minutes) or
b) term paper (approx. 15 to 20 pages) and presentation (approx. 10 to 15 minutes), (weighted 2:1)

### Allocation of Places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional Information

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Contents**

This module serves the purpose of transferring credits from:
- courses taken at other German or non-German universities
- additional courses offered on a short-term basis
- courses offered by new Chairs that are yet to be included in the FSB (subject-specific provisions)

The holders of the respective Chairs will ensure that the courses are eligible for credit transfer.

**Intended learning outcomes**

As a result of accrediting multiple kinds of modules, a description of acquired skills cannot be given.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- written examination (approx. 60 minutes) or
- term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
- oral examination (approx. 20 minutes)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Contents**

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- courses taken at other German or non-German universities
- additional courses offered on a short-term basis
- courses offered by new Chairs that are yet to be included in the FSB (subject-specific provisions)

The holders of the respective Chairs will ensure that the courses are eligible for credit transfer.

**Intended learning outcomes**

As a result of accrediting multiple kinds of modules, a description of acquired skills cannot be given.

**Courses**

(type, number of weekly contact hours, language — if other than German)

V (2) + Ü (2)

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes) or
term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
oral examination (approx. 20 minutes)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

--
Subfield Computer Science
(0-10 ECTS credits)
Module title: Software Technology
Abbreviation: 10-I-ST-152-m01

Module coordinator: Dean of Studies Informatik (Computer Science)
Module offered by: Institute of Computer Science

ECTS: 10
Method of grading: numerical grade
Only after succ. compl. of module(s)
Duration: 1 semester
Module level: undergraduate
Other prerequisites: --

Contents:
Object-oriented software development with UML, development of graphical user interfaces, foundations of databases and object-relational mapping, foundations of web programming (HTML, XML), software development processes, unified process, agile software development, project management, quality assurance.

Intended learning outcomes:
The students possess a fundamental theoretical and practical knowledge on the design and development of software systems.

Courses:
(type, number of weekly contact hours, language — if other than German)
V (4) + Ü (2)

Method of assessment:
(type, scope, language — if other than German, examination offered — If not every semester, information on whether module is creditable for bonus)
written examination (approx. 60 to 120 minutes).
If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).
creditable for bonus

Allocation of places:
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Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes)
§ 49 I Nr. 1b
§ 69 I Nr. 1b
Compulsory Electives Analysis

(5 ECTS credits)
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### Contents

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### Intended learning outcomes

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### Courses (type, number of weekly contact hours, language — if other than German)

| Ü (2) |

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each)
Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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Intended learning outcomes

Courses (type, number of weekly contact hours, language — if other than German)

- Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each)
- Language of assessment: German and/or English

Allocation of places

Additional information

Referred to in LPO I (examination regulations for teaching-degree programmes)
Compulsory Electives Linear Algebra
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## Contents

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## Intended learning outcomes

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## Courses (type, number of weekly contact hours, language — if other than German)

Ü (2)

## Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each)

Language of assessment: German and/or English

## Allocation of places

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## Additional information

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## Referred to in LPO I (examination regulations for teaching-degree programmes)

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**Module coordinator**

**Module offered by**

Institute of Mathematics

**ECTS** | **Method of grading** | **Only after succ. compl. of module(s)** |
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**Contents**

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**Intended learning outcomes**

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**Courses** (type, number of weekly contact hours, language — if other than German)

Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each)

Language of assessment: German and/or English

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
Key Skills Area

(20 ECTS credits)
General Key Skills
(5 ECTS credits)

In addition to the modules listed below, students may also take modules offered by JMU as part of the pool of general transferable skills (ASQ).
General Key Skills (subject-specific)

(ECTS credits)
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<td>Please direct application to teaching coordinator Mathematics, he/she will select participants.</td>
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</table>

**Contents**

Tutoring or grading homework for one of the basic courses in the Bachelor's or teaching degree programmes under supervision of the respective lecturer or exercise supervisor.

**Intended learning outcomes**

The student is able to support the acquisition of mathematical skills and knowledge. He/She helps to identify mistakes in mathematical proof exercises and to find possible solutions.

**Courses**

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**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Assessment of tutoring activities or correcting work by supervising lecturers or exercise supervisors (1 to 2 teaching units or approx. 5 pieces of correcting work)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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<tr>
<td>1 semester</td>
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</table>

**Contents**

Becoming familiar with and reflecting techniques in e-learning and blended learning in mathematics.

**Intended learning outcomes**

The student is able to employ basic methods of e-learning and blended learning in mathematics.

<table>
<thead>
<tr>
<th>Courses (type, number of weekly contact hours, language — if other than German)</th>
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</thead>
<tbody>
<tr>
<td>Ü (2)</td>
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</table>

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- project (web-based, 15 to 20 hours)
- Assessment offered: Once a year, winter semester

**Allocation of places**

- --

**Additional information**

- --

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
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<td>E-Learning and Blended Learning Mathematics 2</td>
<td>10-M-VHB2-152-m01</td>
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</thead>
<tbody>
<tr>
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### Contents
Becoming familiar with and reflecting techniques in e-learning and blended learning in mathematics.

### Intended learning outcomes
The student is able to employ advanced methods of e-learning and blended learning in mathematics.

### Courses
(type, number of weekly contact hours, language — if other than German)

<table>
<thead>
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<tbody>
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### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

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### Allocation of places
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### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

--
Subject-specific Key Skills
(15 ECTS credits)
Subject-specific Key Skills, Compulsory Courses
(12 ECTS credits)
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<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Basic Notions and Methods of Mathematical Reasoning</td>
<td>10-M-GBM-152-m01</td>
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<tr>
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<td>undergraduate</td>
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**Contents**

Introduction to the basic notions and proof techniques in mathematics: approach to sets, formal logic and maps.

**Intended learning outcomes**

The student gets acquainted with the basic working techniques which are prerequisites for the further courses in the Bachelor’s degree study programme.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (1) + Ü (1)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Project (10 to 15 pages)

Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

§ 22 II Nr. 1 h)
§ 22 II Nr. 2 f)
<table>
<thead>
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<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Reasoning and Writing in Mathematics</td>
<td>10-M-ASM-152-m01</td>
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</table>

**Contents**

Introduction to fundamental methods of thinking and proving, basic techniques in mathematics as well as mathematical writing; insight into examples of abstract concepts in mathematics; approach to axiomatic and deduction.

**Intended learning outcomes**

The student is acquainted with the basic proof methods and techniques in mathematics. He/She is able to perform easy mathematical arguments independently and present them adequately and reasonably in written and oral form.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (1) + Ü (1)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

project (10 to 20 pages)

Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
<thead>
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<td>10-M-EPW-152-m01</td>
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</table>

**Contents**

The module consists of a placement of approximately six weeks at a company or another organisation related to business mathematics and the subsequent presentation of the placement report.

**Intended learning outcomes**

The student has practical experience in the relevant fields and is able to apply the skills obtained in his/her studies.

**Courses** (type, number of weekly contact hours, language — if other than German)

Ü (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

report on practical course (10 to 20 pages) and oral presentation thereof (approx. 20 minutes)

Language of assessment: German and/or English

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

--
Subject-specific Key Skills, Compulsory Electives

(3 ECTS credits)
Module title | Abbreviation
--- | ---
Computational Mathematics | 10-M-COM-152-m01

Module coordinator | Module offered by
Dean of Studies Mathematik (Mathematics) | Institute of Mathematics

ECTS | Method of grading | Only after succ. compl. of module(s)
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4 | (not) successfully completed | --

Duration | Module level | Other prerequisites
--- | --- | ---
1 semester | undergraduate | --

Contents
Introduction to modern mathematical software for symbolic computation (e. g. Mathematica or Maple) and numerical computation (e. g. Matlab) to supplement the basic modules in analysis and linear algebra (10-M-ANA-G and 10-M-LNA-G). Computer-based solution of problems in linear algebra, geometry, analysis, in particular differential and integral calculus; visualisation of functions.

Intended learning outcomes
The student learns the use of advanced modern mathematical software packages, and is able to assess their fields of application to solve mathematical problems.

Courses (type, number of weekly contact hours, language — if other than German)
V (1) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
Project in the form of programming exercises (approx. 20 to 25 hours)
Assessment offered: Once a year, winter semester
Language of assessment: German and/or English

Allocation of places
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Additional information
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Referred to in LPO 1 (examination regulations for teaching-degree programmes)
§ 22 II Nr. 3 f)
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<td>Programming course for students of Mathematics and other subjects</td>
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</table>

**Contents**
Basics of a modern programming language (e.g. C).

**Intended learning outcomes**
The student is able to work independently on small programming exercises and standard programming problems in mathematics.

**Courses** (type, number of weekly contact hours, language — if other than German)
P (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
project in the form of programming exercises (approx. 20 to 25 hours)
Assessment offered: Once a year, summer semester
Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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**Referred to in LPO I** (examination regulations for teaching-degree programmes)
§ 22 II Nr. 3 f)
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### Contents

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### Intended learning outcomes

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### Courses (type, number of weekly contact hours, language — if other than German)

**Ü (2)**

Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)

Module taught in: English

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 90 minutes); web-based

Language of assessment: English

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Contents

This module includes tutoring activities in a tutorial offered by a Chair at the Faculty of Business Management and Economics.

### Intended learning outcomes

Students have the ability to guide a group, to present content understandable and to develop training materials.

### Courses

<table>
<thead>
<tr>
<th>Type, number of weekly contact hours, language (if other than German)</th>
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### Method of assessment

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<th>Type, scope, language (if other than German, examination offered (if not every semester, information on whether module is creditable for bonus)</th>
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<tbody>
<tr>
<td>written elaboration (approx. 15 to 25 pages) and presentation (approx. 90 minutes), weighted 1:1</td>
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### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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**Module coordinator**  
Dean of the Faculty of Business Management and Economics

**Module offered by**  
Faculty of Business Management and Economics

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</table>

**Contents**

This module includes tutoring activities in a tutorial offered by a Chair at the Faculty of Business Management and Economics.

**Intended learning outcomes**

Students have the ability to guide a group, to present content understandable and to develop training materials.

**Courses** (type, number of weekly contact hours, language — if other than German)

\[ \text{Ä (2)} \]

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written elaboration (approx. 15 to 25 pages) and presentation (approx. 90 minutes), weighted 1:1

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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<table>
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**Module coordinator**
Dean of the Faculty of Business Management and Economics

**Module offered by**
Faculty of Business Management and Economics

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</table>

**Duration**
1 semester

**Module level**
undergraduate

**Other prerequisites**
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**Contents**
The following topics will be covered:
- Introduction to the subject: explanation of terms, purpose and benefits of academic writing and research
- Stages of academic writing and research:
  - Stage 1: orientation and planning
  - Stage 2: collecting and evaluating material
  - Stage 3: writing a draft
  - Stage 4: revision and submission
- Time management
- Presentation

**Intended learning outcomes**
Students acquire knowledge of scientific methods. Many chairs and departments of the faculty recommend to participate or expect successful participation ahead of the application process for the bachelor thesis.

**Courses**
(type, number of weekly contact hours, language — if other than German)
S (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Written elaboration (approx. 5 pages)
Language of assessment: German and/or English

**Allocation of places**
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**Additional information**
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<td>Seminar: Cross-Cultural Management 1 - Introduction to Cross-Cultural Management</td>
<td>12-EinCCM-152-m01</td>
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**Module coordinator**

Holder of the Chair of Business Management and Industrial Management

**Module offered by**

Faculty of Business Management and Economics

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**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

--

### Contents

**Description:**

This course provides students with the necessary background knowledge and an overall understanding of culture and prepares them for the course "Wenn Kulturen aufeinander treffen - Führen zwischen den Kulturen" ("When Cultures Collide -- Leading Across Cultures"). The series of courses is taught on the basis of the context of daily international business and is filled with many international business scenarios, simulations and case studies.

**Outline of syllabus:**

1. Culture and its origins - the roots and routes of culture
2. How culture is influenced by climate and religion
3. Cultural black holes
4. Culture and globalisation
5. Life after September 11th
6. The categorisation of cultures

**Intended learning outcomes**

Students have gained a deeper understanding and background of what culture is and where culture comes from. They have learned about their culture in order to gain insight into their own individual cultural make-up.

**Courses**

(type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or d) term paper (approx. 20 pages)

Language of assessment: German and/or English

**Allocation of places**

35 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

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## Module Catalogue for the Subject Economathematics
Bachelor's with 1 major, 180 ECTS credits

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<tr>
<th>Module title</th>
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### Contents

**Description:**
This is the intermediate module of the Cross-Cultural Management series. On the surface, communication appears to be a relatively simple operation requiring two basic components -- a speaker and a listener. This module focuses mainly on the world of business and tackles head on the issues and problems of international exchanges. The series is taught on the basis of the context of daily international business and is filled with many international business scenarios, simulations and case studies. Reading includes the texts "Wenn Kulturen aufeinander treffen - Führung zwischen Kulturen" ("When Cultures Collide -- Leading Across Cultures") and "Cross-Cultural Communication - Ein visueller Ansatz" ("Cross-Cultural Communication -- A visual Approach"). "For a German and a Finn, the truth is the truth. In Japan and Britain, it is all right if it doesn't rock the boat. In China, there is no absolute truth. In Italy, it is negotiable." The course will look at the link between values and communication and at how cultural messages unconsciously filter through into the language we use to influence others and how our words may have a different impact than intended which often times can lead to misunderstanding and a loss of trust and business.

**Outline of syllabus:**
1. Brief review of the origins of culture
2. Status, leadership & organisation
3. Team building & horizons
4. Motivating people & trust
5. Business meetings
6. Introduction to 80 cultures in 8 regions of the world

### Intended learning outcomes

Students have continued to deepen their understanding of culture including their own personal cultural background. Students have gained a heightened awareness of the importance of cross-cultural competence and the dangers of relying on culturally bound intuitions.

### Courses

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**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or d) term paper (approx. 20 pages)

Language of assessment: German and/or English

### Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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<table>
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<tr>
<td>China: Business location and trading partner</td>
<td>12-IBL-SG-212-m01</td>
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### Module coordinator
holder of the Chair of Business Management and Industrial Management

### Module offered by
Faculty of Business Management and Economics

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### Contents
This module will discuss reasons as well as implications of the globalisation of our society, both from the point of view of private persons and from the point of view of companies. Current examples from the media will be used to illustrate the impact of globalisation on everyday life.

### Intended learning outcomes
The students will know how globalization influences both, the private life of people as well as the conditions under which companies can perform their businesses. Accordingly, they will be able to discuss the issue of globalization based on advanced knowledge.

### Courses
(type, number of weekly contact hours, language — if other than German)

- S (2)

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) written examination (approx. 60 minutes) or
- b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or
- c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or
- d) term paper (approx. 20 pages)

### Allocation of places
30

1. Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects.
2. Places on all courses of the module with a restricted number of places will be allocated in the same procedure.
3. A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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Module title: India: Business location and trading partner
Abbreviation: 12-WSI-212-m01

Module coordinator: holder of the Chair of Business Management and Industrial Management
Module offered by: Faculty of Business Management and Economics

ECTS: 5
Duration: 1 semester

Contents:
This module introduces students to the economic development as well as economic policy in India. In addition, the course will discuss the general conditions for business investments and activities in India. To illustrate the topic and provide students with more in-depth insights, the course will also address current economic issues and their backgrounds.

Intended learning outcomes:
The students will be able to discuss and evaluate the economic structures of India. They will have the abilities to analyze the development of the South-Asian economy by applying adequate methods and theories. Furthermore, students will gain a good understanding of the Indian culture and its influence on business relationships.

Courses (type, number of weekly contact hours, language — if other than German):
S (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus):
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c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or
d) term paper (approx. 20 pages)

Allocation of places:
30 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

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**Contents**

This lecture discusses challenges of globalisation from an economic point of view. Based on a basic overview of leadership in a global world, the topic of multiculturality in a business context is discussed in detail. Simulations, case studies and exercises are used to illustrate relevant issues.

**Intended learning outcomes**

Students have gained a comprehensive understanding of relevant topics regarding globalization in the business context. In addition, students have learned how to interact with colleagues and business partners in a cross-cultural environment.

**Courses**

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**Method of assessment**

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- a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or d) term paper (approx. 20 pages)

**Allocation of places**

30 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Contents**

This module offers an introduction to intercultural management. It will sensitize students to the international world of business, in which an awareness of cultural differences is essential, and will thus prepare them for entering an international labour market. Having discussed globalisation as a context of justification and having put intercultural management in the context of international management, the course will introduce students to different concepts of culture and will investigate how international operations affect corporate culture. In addition, the course will discuss special forms of international cooperation, such as sending employees abroad. The course will not only equip students with the theoretical basics of intercultural management but will also provide them with an opportunity to apply the theories in practice, working on case studies and team exercises.

Outline of syllabus:
1. Multiculturalism: a phenomenon in a global(ised) economy
2. The phenomenon of culture
3. Cultural dimensions
4. Corporate culture
5. Typical application situations

**Intended learning outcomes**

Students are able to evaluate key concepts, theories and models in intercultural management and have developed an in-depth understanding of their own cultural backgrounds as well as the cultural backgrounds of others. They understand how culture influences perception, both on an individual and on a collective level, and thus also impacts processes of perception in the world of work. The course places particular emphasis on enhancing the students’ intercultural skills.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or d) term paper (approx. 20 pages)

**Allocation of places**

30 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places reallocated by lot as they become available.

**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Module title | Abbreviation
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Intercultural Management 2 | 12-IM2-152-m01

Module coordinator | Module offered by
Holder of the Chair of Business Management and Industrial Management | Faculty of Business Management and Economics

ECTS | Method of grading | Only after succ. compl. of module(s)
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5 | numerical grade | --

Duration | Module level | Other prerequisites
---|---|---
1 semester | undergraduate | --

Contents
This module will provide students with more in-depth insights into selected topics in intercultural management from an economic point of view. Students will prepare a term paper, exploring a topic in more detail.

Intended learning outcomes
The students have gained a deeper understanding of specific issues of intercultural management and will be able to communicate this verbally and in writing.

Courses (type, number of weekly contact hours, language — if other than German)
S (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or b) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or c) term paper (approx. 20 pages)

Allocation of places
10 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information
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<td>12-EinGS-152-m01</td>
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**Contents**

This module introduces students to the topic of "Global Systems" from an economic point of view. In addition to imparting factual knowledge about global connections, the course also focuses on issues of intercultural management.

**Intended learning outcomes**

Students have acquired a basic understanding of the underlying processes of globalization and are able to recognize the resulting requirements for individuals and companies. In particular, the students are sensitized of the importance and the influence of cultural differences in the business world.

**Courses**

(type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment**

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or d) term paper (approx. 20 pages)

**Allocation of places**

10 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Contents**

Building on introductory courses, this module will provide students with more in-depth insights into the topic of #Global Systems# from an economic point of view. Students will prepare a term paper exploring a topic in more depth and will present the contents during the seminar.

**Intended learning outcomes**

The students have gained a deeper understanding of specific issues of globalization and will be able to communicate this verbally and in writing.

**Courses**
(type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or b) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or c) term paper (approx. 20 pages)

**Allocation of places**

10 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

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<td>Economic and Business Ethics</td>
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**Module coordinator**

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<td>Holder of the Chair of Financial Accounting</td>
<td>Faculty of Business Management and Economics</td>
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**ECTS Method of grading Only after succ. compl. of module(s)**

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**Duration Module level Other prerequisites**

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### Contents

The aim of the seminar is to provide students with an overview of business ethics. First, basic philosophical terms are clarified and important philosophical theories such as utilitarianism or discourse ethics are introduced. The course discusses how business ethics can be justified and what purpose it can serve. The seminar focuses on the question of what ethical challenges companies face and to what extent companies are moral agents and should include ethical considerations in their actions. Afterwards, the seminar discusses the relationship between the free market and morality and the role of the state for the frame order.

### Intended learning outcomes

After finishing this course, the student should be able by using common scientific methods to write a seminar paper dealing with a selected ethical problem in business. They should be able to present a complex problem in an clear and understandable way and they should discuss the own position with convincing arguments with other participants in the class.

### Courses (type, number of weekly contact hours, language — if other than German)

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### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) written examination (approx. 60 minutes) or b) presentation (approx. 20 minutes) and written elaboration (approx. 15 to 20 pages), weighted 1:2

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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### Securities Management

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**Module coordinator**

Holder of the Chair of Corporate Finance

**Module offered by**

Faculty of Business Management and Economics

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**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

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### Contents

Within the framework of this module, students are familiarized with the management of an investment portfolio. Each participant has to manage a special area, for which he/she presents the most important market events in a condensed form in each session and observes the securities account positions belonging to his/her special area. A securities account provided by Castell-Bank Würzburg is managed. Each participant has to prepare his own investment proposals and take part in the general discussion. Based on group discussions, investment decisions are made to buy and sell securities within the securities account. These investment decisions are based on risk considerations as well as tax aspects, which will be introduced to the participants during the course. Furthermore, in addition to macroeconomic topics closely related to securities investment, the course also focuses on the development of the real estate sector.

### Intended learning outcomes

Upon completion of the securities seminar, students will be able to

(i) independently assess securities of different asset classes with regard to their risk/reward profile, both on an individual security level and in a portfolio context

(ii) and present and discuss their assessments in a target group-oriented manner.

### Courses

(type, number of weekly contact hours, language — if other than German)

S (4)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Presentation (approx. 60 minutes)

### Allocation of places

20 places.

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2. Places on all courses of the module with a restricted number of places will be allocated in the same procedure.

3. A waiting list will be maintained and places re-allocated by lot as they become available.

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**Contents**

The module will introduce students to processes regarding accounting, taxation, financial statements and the audit of these using the DATEV software. DATEV is one of the standard systems used by tax consultants and accountants. Students will not only become familiar with the basics, they will also acquire insights into the processes and functionalities. In the theoretical part, students will acquire the necessary skills that will serve as a basis for the practical part. This practical part will present students with an opportunity to apply their newly acquired knowledge by working with a DATEV system on case studies on the model company Müller & Thurgau GmbH.

**Intended learning outcomes**

Students acquire practical knowledge in using the DATEV software package for daily book-keeping and for producing annual reports.

**Courses** (type, number of weekly contact hours, language — if other than German)

| V (2) |

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

| written examination (approx. 60 minutes) |

**Allocation of places**

10 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Module title | Abbreviation
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SAP ERP Human Capital Management | 12-SAP-152-m01

<table>
<thead>
<tr>
<th>Module coordinator</th>
<th>Module offered by</th>
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<tbody>
<tr>
<td>Holder of the Chair of Human Resource Management and Organisation</td>
<td>Faculty of Business Management and Economics</td>
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ECTS | Method of grading | Only after succ. compl. of module(s)
--- | --- | ---
5 | numerical grade | --

Duration | Module level | Other prerequisites
--- | --- | ---
1 semester | undergraduate | --

Contents

This course will familiarise students not only with basic concepts but also with the processes and functions of SAP Enterprise Resource Planning Human Capital Management. In the theoretical part of the course, students will first acquire the knowledge and skills that will serve as a basis for the practical part. This practical part will then present students with an opportunity to apply what they have learned by working with an ERP system on case studies on the model company LIVE AG.

Intended learning outcomes

Goal of this course is to give students insights in the practical application and the possibilities and limits of SAP Enterprise Resource Planning Human Capital Management covering several human capital and organisation topics.

Courses (type, number of weekly contact hours, language — if other than German)

| V (2) |

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written examination (approx. 60 minutes)

Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-assigned by lot as they become available.

Additional information

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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Managerial Problem Solving

Module coordinator
Holder of the Chair of Business Analytics
Faculty of Business Management and Economics

ECTS | Method of grading | Only after succ. compl. of module(s)
---|---|---
5 | numerical grade | --

Duration | Module level | Other prerequisites
---|---|---
1 semester | undergraduate | --

Contents
The course provides an introduction to data-based methods for modeling and solving quantitative business problems. In particular, Microsoft Excel is used to manage, visualize, and analyze data. In addition, mathematical optimization problems are solved using Excel Solver and the fundamentals of programming with VBA are discussed.

Intended learning outcomes
1. Prepare, visualize and analyze data sets using Excel
2. Select and forecast different time series problems
3. Understand simple, multiple and dummy regressions
4. Implement and solve linear optimization problems using the Excel Solver
5. Fundamentals of Excel VBA programming

Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 minutes) or b) portfolio: completion of exercises (approx. 12 exercise sheets, approx. 3 pages each)
Language of assessment: German and/or English creditable for bonus

Allocation of places
40 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
# Module: Basics of Supply Networks

**Module title**: Basics of Supply Networks  
**Abbreviation**: 12-GSN-152-m01

## Module coordinator

**Holder of the Chair of Business Management and Business Information Systems**

**Module offered by**: Faculty of Business Management and Economics

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<th>ECTS</th>
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<td>1 semester</td>
<td>undergraduate</td>
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</table>

## Contents

1. Introduction  
2. Development of supply networks  
3. Structural and methodical deficits of classic order processing  
4. Collaborative networks  
5. Supply network models  
6. Five steps towards a collaborative network  
7. Demands on SNM solutions  
8. Architecture of SNM solutions  
9. Integration of SNM, ERP and CRM

## Intended learning outcomes

This course provides the bases in the area Supply of Networks (SN) for students of the economic informatics and the economics.

### Courses

- **V (2) + Ü (2)**

### Method of assessment

- a) written examination (approx. 60 minutes)  
- b) term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1  
- c) presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1  
- d) term paper (approx. 20 pages)

Language of assessment: German and/or English

### Allocation of places

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### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

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# Module Catalogue for the Subject
Economathematics
Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
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<td>Management of Supply Networks</td>
<td>12-MSN-192-m01</td>
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</table>

## Contents
1. Execution of SCM projects
2. Critical factors for success in SCM projects
3. Effects of SCM on business processes
4. Supply chain performance management/measurement
5. Supply chain risk management
6. New demands on firms and networks

## Intended learning outcomes
This course advances students of the economic informatics and economics which already orders of grounding in the area Supply of Networks (cf. moreover the basis course "bases of the Supply Network"), to the management of Supply Networks and the duties linked with it and effects.

## Courses (type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

## Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- a) Written examination (approx. 60 minutes)
- b) Term paper (approx. 15 pages) and presentation (approx. 15 minutes), weighted 2:1 or
- c) Presentation (approx. 45 minutes) and term paper (approx. 10 pages), weighted 1:1 or
- d) Term paper (approx. 20 pages)

Language of assessment: German and/or English

## Allocation of places
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## Additional information
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## Referred to in LPO I (examination regulations for teaching-degree programmes)
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<td>Professional Apply</td>
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## Contents

In this course, students will learn how to be professional when applying and interviewing for jobs. **Part 1: Application documents** Topic 1: Cover letter Topic 2: Curriculum vitae Topic 3: Certificates and other documents **Part 2: Job interview** Topic 1: Preparation Topic 2: Typical structure Topic 3: Appearance and behaviour

### Intended learning outcomes

Students are able to write a professional motivational letter, as well as an ideal CV, related on their professional field. They are also familiar with the typical process of a job interview and have skills to appear properly.

### Courses (type, number of weekly contact hours, language — if other than German)

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### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

- written elaboration (approx. 5 to 10 pages) and presentation (approx. 15 minutes), weighted 1:1

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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**Contents**

In this course, students will acquire professional presentation skills. Topic 1: structuring a presentation Topic 2: visual representation (PPP) Topic 3: professional appearance Topic 4: moderating discussions

**Intended learning outcomes**

Students are able to structure presentations useful and to illustrate them visually. Furthermore, they have the necessary rules for professional demeanor and appearance. They are able to moderate (critical) discussions professionell.

**Courses** (type, number of weekly contact hours, language — if other than German)

S (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

presentation (approx. 15 to 30 minutes)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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**Contents**

The module will focus on equipping students with the skills necessary for solving a variety of case studies. These case studies will focus on the practical application of theoretical knowledge for the solution of practical problems and will provide students with an opportunity to apply the management tools they were taught. A particular emphasis will be on equipping students with skills in the areas of strategic thinking and the operational implementation of strategies. Participants will be issued a certificate of attendance.

**Intended learning outcomes**

Students are able to solve case studies according to international standards.

**Courses** (type, number of weekly contact hours, language — if other than German)

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**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

written elaboration (approx. 5 to 10 pages) and presentation (approx. 20 to 30 minutes), weighted 1:1

Language of assessment: German and/or English

**Allocation of places**

16 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

**Additional information**

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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## Module Catalogue for the Subject
### Economathematics

Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
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<tbody>
<tr>
<td>Managing interactive - Business Simulation Game</td>
<td>12-MIU-152-m01</td>
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</table>

### Contents

Consolidation of business knowledge in virtually all functional areas (procurement/logistics, human resources, investment, finance, business planning, accounting etc.).

The module should make participants aware of the fact that business decisions require joined-up thinking between the different functional areas. The companies that participants are confronted with are fictitious but very close to reality. Participants will learn to understand the complexity of these companies as well as the business solutions and techniques applied by them. For a simulated period of time, participants will be required to make autonomous decisions (in groups).

### Intended learning outcomes

Students learn to apply the necessary data for corporate management methods and tools in concrete, simulated business situations.

### Courses

(type, number of weekly contact hours, language — if other than German)

S (2)

### Method of assessment

(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes), weighted 2:1 or d) presentation (approx. 20 to 30 minutes) or e) project (approx. 20 hours)

Language of assessment: German and/or English

### Allocation of places

20 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)

--
## Module Catalogue for the Subject
### Economathematics
#### Bachelor’s with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
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<tr>
<td>Project Management</td>
<td>12-PM-F-152-m01</td>
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</table>

### Contents
**Description:**
This module will acquaint students with basic concepts and methods of project management and project planning with a special focus on IT projects.

The following contents will be covered:
- Organisational forms in projects
- Project management tasks
- Project team and project responsibilities
- Project planning (structure, schedule, capacity, time and cost planning)
- Project phases (project initiation, project planning, project execution, project close, project control)
- Project management tools
- Critical path methods (CPM, MPM, PERT)
- Risk analysis
- Project management software

### Intended learning outcomes
The students recognize the economic potential of a consistent project planning and the influence on compliance of project objectives such as deadlines and costs. The students are familiar with methods and tools of project planning and may use them in work.

### Courses
**Type, number of weekly contact hours, language — if other than German**

<table>
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<th>Course</th>
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### Method of assessment
**Type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus**

- a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes), weighted 2:1 or d) project (approx. 20 hours)

Language of assessment: German and/or English creditable for bonus

### Allocation of places
35 places. (1) Should the number of applications exceed the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (2) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated by lot as they become available.

### Additional information
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### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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### Module Catalogue for the Subject Economathematics

**Bachelor’s with 1 major, 180 ECTS credits**

<table>
<thead>
<tr>
<th>Module title</th>
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<td>General Management 1</td>
<td>12-GM1-212-m01</td>
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**Module coordinator**

Dean of the Faculty of Business Management and Economics

**Module offered by**

Faculty of Business Management and Economics

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**Duration**

1 semester

**Module level**

undergraduate

**Other prerequisites**

--

### Contents

This module serves the purpose of transferring credits from:
- courses taken at other German or non-German universities
- additional courses offered on a short-term basis
- courses offered by new Chairs that are yet to be included in the FSB (subject-specific provisions)

The holders of the respective Chairs will ensure that the courses are eligible for credit transfer.

### Intended learning outcomes

As a result of accrediting multiple kinds of modules, a description of acquired skills cannot be given.

### Courses

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### Method of assessment

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<td>b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or</td>
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<td>c) oral examination (approx. 20 minutes)</td>
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### Allocation of places

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### Additional information

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### Referred to in LPO 1

(examination regulations for teaching-degree programmes)

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<td>General Management 2</td>
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**Module coordinator**
Dean of the Faculty of Business Management and Economics

**Module offered by**
Faculty of Business Management and Economics

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**Contents**
This module serves the purpose of transferring credits from
- courses taken at other German or non-German universities
- additional courses offered on a short-term basis
- courses offered by new Chairs that are yet to be included in the FSB (subject-specific provisions)
The holders of the respective Chairs will ensure that the courses are eligible for credit transfer.

**Intended learning outcomes**
As a result of accrediting multiple kinds of modules, a description of acquired skills cannot be given.

**Courses**
(type, number of weekly contact hours, language — if other than German)
V (2) + Ü (2)

**Method of assessment**
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)
a) written examination (approx. 60 minutes) or
b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
c) oral examination (approx. 20 minutes)

**Allocation of places**
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**Additional information**
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**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
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### Module title
General Management 3

### Abbreviation
12-GM3-212-m01

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<th>Other prerequisites</th>
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</thead>
<tbody>
<tr>
<td>1 semester</td>
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### Contents
This module serves the purpose of transferring credits from
- courses taken at other German or non-German universities
- additional courses offered on a short-term basis
- courses offered by new Chairs that are yet to be included in the FSB (subject-specific provisions)

The holders of the respective Chairs will ensure that the courses are eligible for credit transfer.

### Intended learning outcomes
As a result of accrediting multiple kinds of modules, a description of acquired skills cannot be given.

### Courses
(type, number of weekly contact hours, language — if other than German)

\[
V (2) + Ü (2)
\]

### Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

a) written examination (approx. 60 minutes) or
b) term paper (approx. 10 to 15 pages) and presentation (approx. 20 minutes), weighted 2:1 or
c) oral examination (approx. 20 minutes)

### Allocation of places
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### Additional information
--

### Referred to in LPO I
(examination regulations for teaching-degree programmes)

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<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>General Management 4</td>
<td>12-GM4-212-m01</td>
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<tr>
<th>Module coordinator</th>
<th>Module offered by</th>
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<tbody>
<tr>
<td>Dean of the Faculty of Business Management and Economics</td>
<td>Faculty of Business Management and Economics</td>
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<th>ECTS</th>
<th>Method of grading</th>
<th>Only after succ. compl. of module(s)</th>
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**Intended learning outcomes**

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**Courses** (type, number of weekly contact hours, language — if other than German)

| V (2) + Ú (2) |

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

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- c) oral examination (approx. 20 minutes)

**Allocation of places**

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**Additional information**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Thesis Area
(10 ECTS credits)

Students may write their theses in Mathematik (Mathematics), Wirtschaftsmathematik (Mathematics for Economics) or Informatik (Computer Science) or may write an interdisciplinary thesis within these three subjects.
## Module Catalogue for the Subject Economathematics

### Bachelor's with 1 major, 180 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<td>Thesis Economathematics</td>
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<td>Dean of Studies Mathematik (Mathematics)</td>
<td>Institute of Mathematics</td>
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<table>
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<tbody>
<tr>
<td></td>
<td>undergraduate</td>
<td></td>
</tr>
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</table>

The supervisor may make the successful completion of certain modules that are relevant for the respective topic a prerequisite for the assignment of the topic.

### Contents

Independently researching and writing on a (potentially interdisciplinary) topic in mathematics, economics or computer science selected in consultation with the supervisor.

### Intended learning outcomes

The student is able to work independently on a given, possibly interdisciplinary topic in mathematics, economics or computer science and apply the skills and methods obtained during the study programme. He/She can write down the result of his/her work in a suitable form.

### Courses (type, number of weekly contact hours, language — if other than German)

No courses assigned to module.

### Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

Bachelor's thesis (approx. 275 to 330 hours)

### Allocation of places

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### Additional information

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### Referred to in LPO I (examination regulations for teaching-degree programmes)

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