Module Catalogue
for the Subject

Business Information Systems

as a Master’s with 1 major
with the degree "Master of Science"
(120 ECTS credits)

Examination regulations version: 2014
Responsible: Faculty of Business Management and Economics
Contents

The subject is divided into

Content and Objectives of the Programme

Abbreviations used, Conventions, Notes, In accordance with

Project

Project Seminar

Compulsory Electives

Fundamentals

Business Information Systems

Information Processing within Organizations

IT-Management

Computer Science

E-Learning

Databases 2

Program Design and Analysis

Information Retrieval

Artificial Intelligence 1 for Business Informatics

Artificial Intelligence 2 for Business Informatics

Computer Science in Media 1

Tracks

Enterprise Systems

Business Software 1: IS-based Enterprise Management

Business Software 2: Enterprise-Resource-Planning-Systeme

Advanced Seminar: Enterprise Systems

Business Analytics

Decision Support Systems

Analytical Information Systems

Business Analytics

E-Business Strategies

E-Business Strategies

Strategic Management of Innovation and International Business

E-Business Strategies

Global Operations and Information Management

Global Logistics & Supply Chain Management

Supply Network Information Management

Seminar: Operations Management

Business Computing for Shop Floor Automation

Work Order Planning for Automated Manufacturing

Advanced Automation

Business Computing for Shop Floor Automation

Electives

Business Management and Economics

European Macroeconomic Policy

Incentives in Organizations

Management Methods

Work and Information

Agency Theory

Procurement Management

Management and Leadership in Organizations

Social Insurance and the Welfare State

Public Debt
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Artificial Intelligence 2 for Business Informatics  
Computer Science in Media 1  
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Master Thesis Business Information Systems
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Content and Objectives of the Programme

The comprehension of conceptual ways of process functioning and process flows is today more important than ever before. Therefore professionals who are well grounded in this area are crucial for a national economy. The interdisciplinary course of studies »Business Information Systems« conveys knowledge on efficient and profitable business.

»Business Information Systems« comprises the two disciplines: business management und informatics, and at the same time it places special emphasis on the integration of economic processes and informational automatisation. The curriculum of the Bachelor of Science offers the students basic knowledge which is deepened and broadened in the consecutive Master programme.

The target of the programme is to learn academically grounded methods as well as up-to-date research methods. Practical applications are also part of the programme, for instance in the research project VULCAN. Here the students work as administrators, department heads or executive directors in an ERP-system of the model company LIVE PLC and act in a virtual world as a company. Within a mandatory internship students additionally build up capabilities for teamwork as well as planning, shaping, and implementing a project. Here skills such as analysis of business transactions, various approaches of problem solving and the independent work will be developed. Students have the freedom to develop creative and innovative concepts themselves and work on various solutions.

The specialized education and the training of social competences enable students to get insight into various fields of their future professional work. The students learn the basics in order to adapt themselves to the dynamic discipline in a quick and flexible manner.

The students should demonstrate in their written Master thesis and their previous academic papers that they are capable of working on a defined topic from the field of business information systems in limited time. Defining a theme, working on it by means of obtained academic methods as well as developing students' own ideas are crucial for the study. In this way they obtain the know-how and prerequisites necessary for a potential PhD qualification.
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:

ASPO2009

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

7-Apr-2014 (2014-17)

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.
Project
(15 ECTS credits)
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<tr>
<td>holder of the Chair of Business Management and Business Information Systems</td>
<td>Faculty of Business Management and Economics</td>
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**Contents**

Content:
In small project teams of 4 to 10 members, students will spend several months actively working on a specific and realistic problem with practical relevance. They will progress through several project stages including as-is analysis, to-be conception and implementation of an IS solution. The project teams will be required to work independently and will only receive advice and minor support from research assistants.

Reading:
will vary according to topic

**Intended learning outcomes**

After completing the course "Projektseminar", students will be able to
1. analyze business tasks and requirements and generate fitting IS solutions;
2. apply project management methods;
3. internalize stress, time and conflict management by means of practical teamwork.

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

S (no information on SWS (weekly contact hours) and course language available)

**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: preparing a conceptual design (approx. 150 hours), designing and implementing an approach to solution (approx. 300 hours) as well as presentation (approx. 20 minutes), weighted 1:2:1
Language of assessment: German, 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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Compulsory Electives
(75 ECTS credits)
Fundamentals
(20 ECTS credits)
Business Information Systems
(10 ECTS credits)
**Module title** | **Abbreviation**
---|---
Information Processing within Organizations | 12-IV-141-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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**Contents**

Content:
This course provides students with an in-depth overview of the structure and the application areas of business management information systems in enterprises and public institutions.

Outline of syllabus:
1. What is software: concepts, categories, application
2. Software life cycle: duration, phases, steps
3. As-is analysis: tasks, problems
4. To-be concept: system design, data design, dialog design, function design
5. Object orientation: paradigm shift
6. Change management: meaning, methodologies, project management
7. Office automation: tasks, areas of application

**Intended learning outcomes**

After completing the course "Integrated Information Processing", students will be able to
(i) understand the importance of integration in enterprises, especially in information systems;
(ii) assess the progress of development of a software project, estimate cycle costs, know and consider requirements, which brings a software implementation with;
(iii) select the correct procedures or practices in an as-is analysis and target conception and practically apply (with participation in the exercise);
(iv) understand the importance of change management and project management and know the appropriate methods for specific applications.

**Courses**
(type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) entirely or partly computerised written examination (approx. 60 minutes)
Language of assessment: German, English

**Allocation of places**
--

**Additional information**
--

**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
---|---
IT-Management | 12-M-ITM-141-m01

| Module coordinator | Module offered by |
---|---|
holder of the Chair of Business Management and Business Information Systems | 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 | graduate | -- |

Contents

Content:
This course provides students with an in-depth overview of aims, tasks and appropriate methods of IT management.

Outline of syllabus:
1. Organisation and distinction
2. IT strategy
3. IT organisation
4. Management of IT systems
5. Enterprise Architecture Management
6. IT project management
7. IT security
8. IT law
9. IT controlling

Reading:
- Tiemeyer: Handbuch IT-Management, Munich.
- Hanschke: Strategisches Management der IT-Landschaft, Munich.

Intended learning outcomes

After completing the course "IT Management", students will be able to
1. overview the different aspects to be considered regarding a purposeful IT management;
2. understand and apply appropriate methods and tools;
3. independently perform system search and selection in a team project (only after participation in the practice lessons).

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 15 to 20 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English creditable for bonus

Allocation of places

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Computer Science
(10 ECTS credits)

Students must choose two modules.
## Module title

**E-Learning**

### Abbreviation

10-I=EL-141-m01

## Module coordinator

holder of the Chair of Computer Science VI

## Module offered by

Institute of Computer Science

## ECTS

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## Contents

Learning paradigms, learning system types, author systems, learning platforms, standards for learning systems, intelligent tutoring systems, student models, didactics, problem-oriented learning and case-based training systems, adaptive tutoring systems, computer-supported cooperative learning, evaluation of learning systems.

## Intended learning outcomes

The students possess a theoretical and practical knowledge about eLearning and are able to assess possible applications.

## Courses

**V + Ü** (no information on SWS (weekly contact hours) and course language available)

## Method of assessment

written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

## 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

**Databases 2**

### Abbreviation

10-I=DB2-141-m01

### Module Coordinator

Dean of Studies Informatik (Computer Science)

### Module Offered by

Institute of Computer Science

### 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

--

### Contents

Data warehouses and data mining; web databases; introduction to Datalog.

### Intended Learning Outcomes

The students have advanced knowledge about relational databases, XML and data mining.

### Courses

(V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of Assessment

Written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes).

Language of assessment: German, English if agreed upon with the examiner

### Allocation of Places

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**Contents**

Program analysis, model creation in software engineering, program quality, test of programs, process models.

**Intended learning outcomes**

The students are able to analyse programs, to use testing frameworks and metrics as well as to judge program quality.

**Courses**

V + Ü (no information on SWS (weekly contact hours) and course language available)

**Method of assessment**

written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**Allocation of places**

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**Additional information**

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**Contents**

IR models (e.g. Boolean and vector space model, evaluation), processing of text (tokenising, text properties), data structures (e.g. inverted index), query elements (e.g. query operations, relevance feedback, query languages and paradigms, structured queries), search engine (e.g. architecture, crawling, interfaces, link analysis), methods to support IR (e.g. recommendation systems, text clustering and classification, information extraction).

**Intended learning outcomes**

The students possess theoretical and practical knowledge in the area of information retrieval and have acquired the technical know-how to create a search engine.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**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>Artificial Intelligence 1 for Business Informatics</td>
<td>10-I=KI1-141-m01</td>
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<th>Module offered by</th>
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<tr>
<td>holder of the Chair of Computer Science VI</td>
<td>Institute of Computer Science</td>
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<tr>
<td>1 semester</td>
<td>graduate</td>
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</table>

**Contents**

Intelligent agents, uninformed and heuristic search, constraint problem solving, search with partial information, propositional and predicate logic and inference, knowledge representation.

**Intended learning outcomes**

The students possess theoretical and practical knowledge about artificial intelligence in the area of agents, search and logic and are able to assess possible applications.

**Courses**

V + Ü (no information on SWS (weekly contact hours) and course language available)

**Method of assessment**

written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**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>Artificial Intelligence 2 for Business Informatics</td>
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</table>

**Contents**

Planning, probabilistic closure and Bayesian networks, utility theory and decidability problems, learning from observations, knowledge while learning, neural networks and statistical learning methods, reinforcement learning, processing of natural language.

**Intended learning outcomes**

The students possess theoretical and practical knowledge about artificial intelligence in the area of probabilistic closure, learning and language processing and are able to assess possible applications.

**Courses**

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**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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## Computer Science in Media 1

<table>
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<tr>
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<td>Computer Science in Media 1</td>
<td>06-MK-MedInf1-MCS-141-m01</td>
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<tr>
<td>holder of the Professorship of Media Informatics</td>
<td>Institute of Human Computer Media</td>
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<tr>
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<td>undergraduate</td>
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### Contents

The module Medieninformatik 2 (Computer Science for Media 2) provides deeper knowledge of digital media types and the fundamentals of digital media development and design.

### Intended learning outcomes

Students have gained a deeper insight into selected concepts of media computer science. In addition, they are able to develop digital media based on various processes. Thus, a basis is provided for academic work as well as for acquiring practically relevant media skills.

### Courses

V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

a) written examination (approx. 60 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) presentation (15 to 30 minutes) with written elaboration (10 to 15 pages) or d) term paper (15 to 20 pages) or e) portfolio (maximum 20 pages)

Language of assessment: German or English

### Additional information

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### Referred to in LPO 1

(examination regulations for teaching-degree programmes)
Tracks
(40 ECTS credits)

Students must choose two tracks.
Enterprise Systems

(20 ECTS credits)
Module title

Business Software 1: IS-based Enterprise Management

Abbreviation

12-GPU-141-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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Duration

1 semester

Module level

graduate

Other prerequisites

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Contents

Content:
This module provides students with an overview of the structure of a business information system (SAP Business ByDesign) in depth.

Outline of syllabus:
1. Integrated information systems: integration, standard software, system architecture
2. Working with standard business software
3. Consulting in integrated information systems: project management, project organisation, presentation skills

Description:
The lecture will be accompanied by an exercise that will present students with an opportunity to access, in small groups, the enterprise resource planning system operated by the Chair in its ERP laboratory and to work with the software, dealing with a wide variety of business processes.

If you would like to register for this course, please submit an application to the consultants (cover letter, CV, certificates; please also specify your degree programme and student ID number).

Intended learning outcomes

After completing the course "Business Software 1", students will be able to
(i) understand an ERP system in its depth;
(ii) understand the interaction of business processes;
(iii) execute business tasks and processes in an ERP system independently (after participation in the practice lessons).

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English creditable for bonus

Allocation of places

Number of places: 20, thereof 15 places for Master’s students of Business Information Systems and Master’s students of Business Management with specialization BIS, if the number of applicants exceeds the number of available places. (x) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this proce-
Applicants who have already successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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: Business Software 2: Enterprise-Resource-Planning-Systeme

Abbreviation: 12-M-ERP-141-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: graduate

Other prerequisites: --

Contents:

Content:
This module provides students with an overview of the structure of business information systems in width as well as the selection and implementation of business information systems in organisations.

Outline of syllabus:
1. Integrated information systems: integration, standard software, system architectures, operating models
2. Selection of integrated information systems: methods, cost-benefit analysis
3. Implementation of integrated information systems: project management, project organisation, project marketing

The lecture will be accompanied by an exercise that will present students with an opportunity to access, in small groups, the enterprise resource planning system operated by the Chair in its ERP laboratory and to work with the software, dealing with a wide variety of business processes.

Intended learning outcomes:
After completing the course "Business Software 2", students will be able to
1. differentiate between system architectures and -philosophies;
2. understand the interaction of business processes;
3. come to a selection decision for an ERP system using a structured approach and compare different ERP systems;
4. execute business tasks and processes in an ERP system independently (after participation in the practice lessons).

Courses (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English creditable for bonus

Allocation of places:
Number of places: 20, thereof 15 places for Master's students of Business Information Systems and Master's students of Business Management with specialization BIS, if the number of applications exceeds the number of available places. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree sub-
Among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

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

| -- |
Advanced Seminar: Enterprise Systems

<table>
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<tr>
<th>Module title</th>
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<tr>
<td>Advanced Seminar: Enterprise Systems</td>
<td>12-M-ES-141-m01</td>
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**Module coordinator**
holder of the Chair of Business Management and Business Information Systems

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

**ECTS**
10

**Method of grading**
numerical grade

**Duration**
1 semester

**Module level**
graduate

**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 "Enterprise Systems", 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

S (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

term paper (approx. 20 to 25 pages) and presentation (approx. 20 minutes), weighted 2:1

Assessment offered: once a year, summer semester

Language of assessment: German, English

### Allocation of places

Number of places: 20, thereof 15 places for Master’s students of Business Information Systems and Master’s students of Business Management with specialization BIS, if the number of applications exceeds the number of available places. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

### Additional information

Referred to in LPO I (examination regulations for teaching-degree programmes)
Business Analytics
(20 ECTS credits)
Module title | Abbreviation
---|---
Decision Support Systems | 12-M-DSS-141-m01

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

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<th>Other prerequisites</th>
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<tr>
<td>1 semester</td>
<td>graduate</td>
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</table>

Contents

The course discusses advanced approaches for modelling and solving decision problems in business settings. The acquired insights are used to design and implement decision support systems using standard software tools.

Intended learning outcomes

After successfully completing the course, students should be able to

- Understand the structure of classic business decision problems
- Isolate key elements from general problem descriptions and convert them to quantitative decision models
- Solve different classes of optimization problems (linear, network, integer, multi-objective, non-linear, stochastic)
- Implement spreadsheet-based decision support systems

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English
creditable for bonus

Allocation of places

Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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
Analytical Information Systems

### Abbreviation
12-B1-141-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

### Only after succ. compl. of module(s)
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### Duration
1 semester

### Module level
graduate

### Other prerequisites
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### Contents
The course provides an overview of the structure and applications of analytical information systems. A special focus is on individual quantitative methods of data analysis. A basic knowledge of statistics and data modelling is a prerequisite for participation in this module.

### Intended learning outcomes
The module provides students with knowledge of:
(i) Data Warehousing & OLAP
(ii) Operational application areas and methods of data analysis

### Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment
(a) written examination (approx. 60 minutes) or (b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or (c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or (d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

### creditable for bonus
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### Allocation of places
Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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: Business Analytics
Abbreviation: 12-M-BUA-141-m01

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

ECTS: 10
Method of grading: numerical grade
Duration: 1 semester
Module level: graduate
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 field of business management decision models and methods and their application in the development of decision-support systems as well as analytical information systems and quantitative methods of data analysis.

Intended learning outcomes
The module provides students with knowledge of:
1. Scientific literature
2. Integration of developed results in scientific papers
3. Creating presentations and lectures

Courses
S (no information on SWS (weekly contact hours) and course language available)

Method of assessment
Term paper (approx. 20 to 25 pages) and presentation (approx. 20 minutes), weighted 2:1
Assessment offered: once a year, winter semester
Language of assessment: German, English

Allocation of places
Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated as they become available.

Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
E-Business Strategies
(20 ECTS credits)
**Module title**

E-Business Strategies

**Abbreviation**

12-M-IBS-141-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**

graduate

**Other prerequisites**

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**Contents**

The lecture provides an overview of the relationships between the advent of web-based platforms (electronic markets, Web 2.0 etc.) and the strategic management of a company.

**Intended learning outcomes**

The module provides students with knowledge of:

(i) Theoretical concepts of strategy development and implementation in e-business context;

(ii) The strengths and weaknesses of different frameworks and approaches as well as the conditions for their meaningful application;

(iii) Transfer of concepts to other situations of entrepreneurial studies or work.

**Courses**

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

credible for bonus

**Allocation of places**

Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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
Business Information Systems

**Master's with 1 major, 120 ECTS credits**

<table>
<thead>
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<th>Module title</th>
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<tr>
<td>Strategic Management of Innovation and International Business</td>
<td>12-M-MWT-141-m01</td>
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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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### Contents

In this course, students will acquire an overview of the strategic aspects of innovation management. They will acquire the knowledge necessary to understand the range, scope and complexity of the issues and problems related to the strategic management of innovations. The lecture will focus on innovation teams and the different roles in the innovation process. It will also discuss how users can be involved in the innovation process. In addition, the course will address the concepts of open innovation, lean innovation and crowdsourcing and will discuss how platform strategies can be used for the new product development process as well as what market entry strategies and patent management strategies are currently used. Practical examples and case studies will be used to provide students with a better understanding of the theoretical concepts.

### Intended learning outcomes

At the end of the module students are able to understand:

- The tasks of the strategic innovation management
- The state of the art and importance of innovations
- The current trends in strategic innovation management
- The importance of patent strategies
- The market entry strategies
- Concepts of the marketing mix

### Courses

(V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

(a) written elaboration (approx. 15 to 20 pages) or b) presentation (approx. 15 minutes) or c) written examination (approx. 60 minutes)

Language of assessment: German, 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
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E-Business Strategies | 12-M-SEBS-132-m01

**Module coordinator**

holder of the Chair of Information Systems Engineering

**Module offered by**

Faculty of Business Management and Economics

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<th>Method of grading</th>
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**Duration**

1 semester

**Module level**

graduate

**Other prerequisites**

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**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 web-based platforms (electronic markets, Web 2.0 etc.) and strategic management of a company.

**Intended learning outcomes**

The module provides students with knowledge of:

1. Scientific literature
2. Integration of developed results in scientific papers
3. Creating presentations and lectures

**Courses**

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

S (no information on SWS (weekly contact hours) and course language available)

**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 to 25 pages) and presentation (approx. 20 minutes), weighted 2:1
Assessment offered: once a year, winter semester
Language of assessment: German, English

**Allocation of places**

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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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Global Operations and Information Management

(20 ECTS credits)
## Module title
Global Logistics & Supply Chain Management

### Abbreviation
12-M-GLSC-141-m01

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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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### Contents
The course "Global Logistics & Supply Chain Management" acquaints students with advanced methods for the planning of global production networks and demonstrates the application of these with the help of multiple case studies.

### Intended learning outcomes
After completing this course students can
(i) analyze and evaluate global production networks;
(ii) develop and apply appropriate methods to plan production networks;
(iii) evaluate the consequences of uncertainties in processes and apply concepts and methods to plan uncertain processes.

### Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment
a) written examination (approx. 60 minutes) or b) written elaboration (approx. 15 to 20 pages)
Language of assessment: German, English creditable for bonus

### Allocation of places
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### Additional information
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### Referred to in LPO
(examination regulations for teaching-degree programmes)
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<td>Supply Network Information Management</td>
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### Contents

Since mass production on the assembly line with continuous deliveries (supply chain) revolutionised the procurement process in the 19th century, the usage of information processing has made more flexible operations possible and the demand of customers for individualised products has made more flexible operations necessary. It has become possible to adopt a much more differentiated and sophisticated approach to the electronic supply chain and the planning of the same so that the challenge we are facing today is designing procurement networks (supply networks) that also take into account the delivery sequence for all deterministically procured parts of all suppliers. This module will discuss these conceptual fundamentals of supply management and, in particular, how the managing of procurement activities can be supported by information processing. The module will look at how well ERP systems can support these activities, how new hardware and software technologies can be used to accelerate the currently time-consuming procurement processes and how formerly isolated information systems of individual firms can be integrated into a network of supply management.

### Intended learning outcomes

Students will earn an overall understanding of the complex structure of supply relationships for individual products and their dependencies for a variety of products. Student will also be trained to recognize (from the perspective of the parties involved into the production process) opportunities and to make decisions in these regards. These relations will be of crucial importance for all production-oriented managers because only a solid understanding of these relationships will help to be successful in the marketplace.

### Courses

(V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, 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)
### Seminar: Operations Management

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#### Contents

With the help of topics from the area of "Operations Management", this course will provide students with knowledge and skills that will enable them to prepare a well-structured term paper and to present the key results of their work.

#### Intended learning outcomes

Students will learn how to convince a critical audience by giving a presentation regarding a topic from the area of Operations Management. By developing and giving a presentation as well as by answering questions the students will practice their skills to deal with difficult communication situations and to argument for and against a certain topic.

#### Courses

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#### Method of assessment

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<td>term paper (approx. 20 to 25 pages) and presentation (approx. 20 minutes), weighted 2:1</td>
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<td>Assessment offered: once a year, winter semester</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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Business Computing for Shop Floor Automation
(20 ECTS credits)
Module title: Work Order Planning for Automated Manufacturing

Abbreviation: 12-M-AGAF-141-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: graduate

Other prerequisites: --

Contents:
The idea of integration of business information systems is primarily practiced and developed as an ERP system in terms of business application areas, their temporal overlap (data warehouse), their spatial relationship (supply network) and connection of legal tasks (eGovernment). However, linking the commercial view of incoming customer orders with the logistic or more technical view of the scheduling of production orders and the resulting consequences for the processes is a critical success factor.

Intended learning outcomes:
Linking research and lectures of the Institute of Robotics and Telematics as well as the orientation of the Chair of Business Integration allows students a conceptual as well as practical insight into the challenges of this in the future essential part of the operational automation development.

Courses:
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

Allocation of places:
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Additional information:
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<td>Institute of Computer Science</td>
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### Contents

Advanced topics in automation systems as well as instrumentation and control engineering, for example from the fields of sensor data processing, actuators, cooperating systems, mission and trajectory planning.

### Intended learning outcomes

The students have an advanced knowledge of selected topics in automation systems. They are able to implement advanced automation systems.

### Courses

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### Method of assessment

- written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)
- Language of assessment: German, 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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<th>Other prerequisites</th>
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<tr>
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<td>graduate</td>
<td>Admission prerequisite to assessment: regular attendance (minimum 70%) of seminar.</td>
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</table>

**Contents**

With the help of topics from the area of business information systems and manufacturing automation, this module will provide students with an opportunity to consolidate their knowledge and skills regarding the preparation of a well-structured term paper and the presentation of the key results of their work.

**Intended learning outcomes**

The presentation as a result of the substantive research into the various fields of information processing task has to convince the critical participants. Through the presentation and answering the questions the participants practice to engage in critical situations for their own view of the problem and to represent their opinion convincingly.

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

S (no information on SWS (weekly contact hours) and course language available)

**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 to 25 pages) and presentation (approx. 20 minutes), weighted 2:1
Assessment offered: once a year, summer semester
Language of assessment: German, English

**Allocation of places**

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**Additional information**

--

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

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Electives

(15 ECTS credits)
Business Management and Economics
(ECTS credits)
### European Macroeconomic Policy

**Module title:** European Macroeconomic Policy  
**Abbreviation:** 12-M-EMP-132-m01  
**Module coordinator:** holder of the Chair of Monetary Policy and International Economics  
**Module offered by:** Faculty of Business Management and Economics  
**ECTS:** 5  
**Duration:** 1 semester  
**Method of grading:** numerical grade  
**Only after succ. compl. of module(s):** --  

### Contents

**Description:** The course provides students with an overview of the macroeconomic conditions and consequences of European integration and monetary union. The course thus helps students gain a deeper understanding of the current crisis in the euro area as well as the debate on the future of European economic integration.

**Content:** The first part of the course provides students with an overview of the history of European integration with a focus on economic and monetary integration. We then discuss the institutional framework of the European Monetary System, the predecessor of the euro area in the period from 1979 to 1998. Next, the criteria for admission to the European Monetary Union (EMU) and the monetary policy strategy of the European Central Bank will be presented and discussed. Building on the traditional Mundell-Fleming model, the course will make students familiar with the theory of the optimum monetary area and will then provide them with deeper insights into this theory on the basis of a simple New Keynesian model. Students will thus be able to make a well-founded assessment of the advantages and disadvantages of monetary union as well as the conditions under which monetary union can be successful. In the final part of the course, we analyse the coordination and incentive problems that arise for fiscal policy in a monetary union. In particular, we deal with the question of how these issues are addressed within the European Monetary Union. Current macroeconomic developments within the euro area as well as the causes and consequences of the euro crisis are discussed at various points in the course.

### Intended learning outcomes

After completing this course students will have gained a profound understanding of the costs and benefits of monetary integration in general and specifically in the EMU. Thus, they will enhance their general macroeconomic understanding by applying it to real world problems. In addition, students will have knowledge of the institutions of common fiscal and monetary policy in Europe.

### Courses

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### Method of assessment

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<tbody>
<tr>
<td>a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)</td>
<td>Language of assessment: German, English</td>
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### Allocation of places

Number of places: 30, thereof 10 places for Master’s students of Business Management and Master’s students of Economics assigned as described below and 10 places each for Master’s students of Applied Human Geography and Master’s students of Political and Social Sciences, assigned by lot. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Pla-
ces on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

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**Referred to in LPO I**  
(examination regulations for teaching-degree programmes)  
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Module title: Incentives in Organizations

Module coordinator: holder of the Chair of Human Resource Management and Organisation

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: graduate

Other prerequisites:

Contents:
The lecture "Anreize in Organisationen" ("Incentives in Organisations") is based on the principal agent theory. This theory will be used to develop financial and economic solutions to help overcome the conflict of interests between employers and employees. In addition to the most widely used theories, estimation techniques and empirical results are also introduced and discussed. Reading list to be provided in class.

Intended learning outcomes:
The aim of the lectures is to enable students to understand and apply advanced theories, estimation techniques and empirical results in organisation on the basis of scientific literature.

Courses:

V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment:

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)

Language of assessment: German, English

Allocation of places:

Additional information:

Referred to in LPO I (examination regulations for teaching-degree programmes)
Module title | Abbreviation
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Management Methods | 12-MM-132-m01

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Contents

Description:
The module familiarises students with relevant management methods.

Content:
- Principles of Management
- Corporate strategy and processes
- Determination of strategy
- Performance tasks within the company

Intended learning outcomes

After completing the course "Management Methods", students
(i) have substantial knowledge in the application of relevant management methods and
(ii) recognize their economic importance and consequences;
(iii) succumbed to an idea of the scope of managers’ activities;
(iv) recognize the challenges businesses to deal with and
(v) understand processes of an industrial company.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) presentation (15 to 20 minutes) with written elaboration (approx. 20 pages), weighted 1:2 or d) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or e) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, 15 places will be set aside for Master's students of Business Information Systems. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

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<td>Faculty of Business Management and Economics</td>
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**Contents**

This module discusses relevant principles, concepts and applications of business information processing and its impact on organisational and process structures in today's business world.

**Intended learning outcomes**

The expertise gained from other modules related to business management issues can be interpreted and classified in a certain way by participating in this module. For decisions in regards to human resources planning, investment, and a company's strategy, the students will get to know all the relevant concepts and interdependencies, which come with taking information processing into account as the so called "fourth" factor of production.

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

V + D (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 15 to 20 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, 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>Faculty of Business Management and Economics</td>
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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>graduate</td>
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### Contents

**Content:**
This course deals with the fundamentals of agency theory and financial contracting with information symmetric and information asymmetric.

**Outline of syllabus:**
1. Agency theory
2. Financial contracting

### Intended learning outcomes

After completing the course "Agency Theory and Financial contracting", the students will be able
(i) to understand the fundamentals of agency theory and solve problems concerning optimal financial contracting given e.g. different capital endowments;
(ii) to understand the central problems of controlling work assignments in theory and solve basic case studies;
(iii) to generate and evaluate financial contracting given a non-trivial risk allocation and the resulting agency problems.

### Courses

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<th>type, number of weekly contact hours, language — if other than German</th>
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<td>V + Ü (no information on SWS (weekly contact hours) and course language available)</td>
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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 examination (approx. 60 minutes)</td>
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<td>Language of assessment: German, English</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)

--
Module title: Procurement Management
Abbreviation: 12-M-BE-141-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: graduate
Other prerequisites: --

Contents:
This course will develop the objectives, principles and structure of electronically supported procurement processes with a special focus on catalogue-based procurement systems, electronic tendering systems, electronic (reverse) auctions, e-marketplaces, supplier relationship management systems and eSupply chain management systems.

Intended learning outcomes:
The students will be able to describe and evaluate both the potentials and goals of electronic supported procurement systems and will be able to design appropriate systems for real-life applications. Students will get insight into the essentials of operational procurement management, especially e-procurement with a focus on catalog-based procurement systems, electronic tendering systems, electronic (reverse) auctions, e-marketplaces, supplier relationship management systems and eSupply chain management systems. After completing this module, students can define and analyze the related tasks and processes and show or develop theory-based and application-oriented possible solutions at a high professional level.

Courses (type, number of weekly contact hours, language — if other than German)
S (no information on SWS (weekly contact hours) and course language available)

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. 40 to 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:1 or c) written elaboration (approx. 30 to 40 pages) or d) entirely or partly computerised written examination (approx. 60 minutes)
Language of assessment: German, English
creditable for bonus

Allocation of places:
Number of places: 20. Should the number of applications exceed the number of available places, 15 places will be set aside for Master's students of Business Management and Economics and 5 places will be set aside for Master's students of Business Information Systems. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

Additional information:
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
---|---
**Management and Leadership in Organizations** | 12-MFO-132-m01

**Module coordinator** | **Module offered by**
holder of the Chair of Business Management and Business Information Systems | Faculty of Business Management and Economics

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**Duration** | **Module level** | **Other prerequisites** |
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**Contents**

**Part I:**
The complexity of the modern work environment and the constantly changing organisational structures of companies lead to a demand for young managers with a high diversity of expertise that are able to play their part in managing the organisational world. The lecture will provide students with an insight into the characteristics, tasks and instruments as well as the challenges of management in organisations and situations that are becoming ever more complex.

Outline of syllabus:
- Introduction -- Power in the daily management routine
- Fundamentals of management in complex organisations
- Tasks and instruments of management
- Leadership in an intercultural context
- Assurance of employability
- Conclusion -- Management of supervisors and colleagues

**Part II:**
Today's world of work is characterised by continuous change in a global context. Mergers, integrations and acquisitions - these are key terms in this context. The majority of change processes does not have the desired effect or even fails. This is not least due to the fact that not enough attention is paid to the complexity of these processes and to employees. The support and integration of successful change processes is a central responsibility of managers as well as a complex and central task that requires sound preparation.

Outline of syllabus:
- Introduction - typical change scenarios
- Psychological basics and concepts
- Approaches and control in change projects
- Measures and instruments of change management
- The role of management
- Conclusion - example of application acquisitions and cases

**Intended learning outcomes**

**Part I:** Course objectives:
- Provide a widespread insight into the current status of theory and practice regarding management in complex organizations
- Introduction of essential tasks and instruments of managers and their apply to authentic cases.
- To illustrate and reflect the tensions of management in complex situations and international context

**Part II:** Course objectives:
- Provide a widespread insight into the current status of theory and practice regarding changes
- Introduction, suitability of daily use and critical reflection of essential concepts, models and methods
- Foster the understanding for the necessity, complexity of changes as well as their constraints and barriers.

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

This module comprises 2 module components. Information on courses will be listed separately for each module component.
- 12-MFO-1-132: V (no information on SWS (weekly contact hours) and course language available)
- 12-MFO-2-132: V (no information on SWS (weekly contact hours) and course language available)
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<tr>
<td>Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.</td>
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**Assessment in module component 12-MFO-1-132: General Management - Key Skills for Young Professionals**
- 3 ECTS, Method of grading: numerical grade
- written examination (approx. 60 minutes)
- Language of assessment: German, English

**Assessment in module component 12-MFO-2-132: Managing Change**
- 2 ECTS, Method of grading: numerical grade
- written examination (approx. 60 minutes)
- Language of assessment: German, English

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<th>Additional information</th>
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<th>Referred to in LPO I (examination regulations for teaching-degree programmes)</th>
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Module Catalogue for the Subject
Business Information Systems
Master’s with 1 major, 120 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Social Insurance and the Welfare State</td>
<td>12-M-F3-132-m01</td>
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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 Public Finance</td>
<td>Faculty of Business Management and Economics</td>
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<td>1 semester</td>
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Contents

Description:
This module discusses the economic justification for implementing social security systems in a market economy and provides students with deeper insights into this topic with the help of specific issues of public health and retirement policy.
Reading: lecture notes provided by Chair.

Contents:
1. Public intervention in insurance markets
2. The insurance function of social security
3. Social security and social morale
4. The optimal health insurance contract
5. Alternative financing schemes for public health in Germany
6. Why do we need a public pension system?
7. Funding vs pay-as-you-go financing of public pensions

Intended learning outcomes

After completing the module "Theorie der Sozialversicherung" students are able to explain the theoretical foundation of the social security system in a market economy. Using simple partial equilibrium models they can discuss the financing and contract structure of the public health and pension system. Finally they are able to analyze the consequences of policy reforms.

Courses

V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment

a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages)
Language of assessment: German, 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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<tr>
<th>Module title</th>
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<td>Public Debt</td>
<td>12-M-F2-132-m01</td>
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**Contents**

**Description:**
The module provides an introduction to some specific issues of public debt that are in the focus of the public and scientific debate.

**Reading:** lecture notes provided by Chair.

**Outline of syllabus:**
1. Measurement of public debt
2. Growth effects of public debt
3. Intergenerational effects of public debt
4. Public debt in open economies
5. Neutrality of public debt
6. Political economy of public debt
7. Theory of soveriegn debtors

**Intended learning outcomes**

After completing the course "National Debt" students are able to distinguish and discuss the most important measurement concepts and problems of public debt. They can discuss the growth and distributional consequences using simple equilibrium models of closed and open economies. They can evaluate the relevance of Ricardian neutrality and know the political economy explanations of rising debt levels and debt overhangs in specific countries.

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

V + Ú (no information on SWS (weekly contact hours) and course language available)

**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)

Language of assessment: German, 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: Policy of Taxation
Abbreviation: 12-M-F1-132-m01
Module coordinator: holder of the Chair of Public Finance
Module offered by: Faculty of Business Management and Economics
ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: graduate
Other prerequisites: --

Contents:
Description: In this module, students will acquire a basic understanding of the tax system and structure applied to households in Germany. In addition, the course will include simple tax incidence analyses of specific tax policies. Reading: lecture notes provided by Chair.

Contents:
1. Fiscal harmonisation system in Germany
2. Mechanics and problems of the VAT system
3. Tax incidence analysis
4. Income tax code
5. Taxation of married couples and families
6. Progressive taxation and income leveling
7. Taxation and household decisions

Intended learning outcomes:
After completing the course "Tax Policy" students know the most important tax revenues in Germany and how they are divided between the Federation and the federal provinces. They are able to explain the incidence of specific taxes using simple case studies. Finally they can discuss tax induced distortions of individual decisions using simple partial equilibrium models.

Courses (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

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)
Language of assessment: German, English

Allocation of places: --

Additional information: --

Referred to in LPO I (examination regulations for teaching-degree programmes): --
Risk Management - Compliance and Financial Reporting

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<td>Risk Management - Compliance and Financial Reporting</td>
<td>12-M-RM1-141-m01</td>
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**Module coordinator**

holder of the Chair of Business Management and Accounting

**Module offered by**

Faculty of Business Management and Economics

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<td>1 semester</td>
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**Contents**

Content: This module analyses the presentation of opportunities and risks in financial reports, i.e. annual or interim reports, in conjunction with selected value-based management and profitability analysis approaches.

Outline of syllabus:

1. Basics of financial reporting and risk management;
2. Practice of risk reporting;
3. Profitability analysis according to Penman;
4. Value-based management and risk management;
5. Residual income and business valuation;
6. Analysis of equity risk;
7. Analysis of credit risk;
8. Risk management monitoring by audit committees and auditors.

Reading list to be provided in class.

**Intended learning outcomes**

After completing the course, the students will be able

1. to present the relation between risk management and financial reporting;
2. to analyze and solve independently complex problems with respect to the presentation of opportunities and risk in financial reports based on national and international standards;
3. to identify the relation between risks and value-based management;
4. to evaluate independently selected research results concerning risk reporting and desing own research- or practice-oriented projects.

**Courses**

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 12-M-RM1-1-141: V (no information on SWS (weekly contact hours) and course language available)
- 12-RM1-2-141: V (no information on SWS (weekly contact hours) and course language available)

**Method of assessment**

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

**Assessment in module component 12-M-RM1-1-141: Legal Foundations of Risk Management and Compliance**

- 2 ECTS, Method of grading: numerical grade
- a) written examination (approx. 60 to 90 minutes) or b) term paper (approx. 15 pages)
- Language of assessment: German, English
- creditable for bonus
### Assessment in module component 12-RM1-2-141: Financial Reporting and Risk Management
- 3 ECTS, Method of grading: numerical grade
- a) written examination (approx. 60 to 90 minutes) or b) term paper (approx. 15 pages)
- Language of assessment: German, English
- creditable for bonus

### Allocation of places
Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places reallocated as they become available.

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

**Project Management and Controlling**

### Abbreviation

12-M-PROM-132-m01

### Module coordinator

holder of the Chair of Business Management, Controlling and Accounting

### Module offered by

Faculty of Business Management and Economics

### ECTS

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### Duration

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<td>1 semester</td>
<td>graduate</td>
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</table>

### Contents

The module focuses on the discussion and critical examination of instruments and methods used in the context of project management and controlling within enterprises. It covers characteristic features and structures of projects, their possible success factors, methods and instruments of the controlling and management of projects in various project phases as well as approaches to multi-project management. The theoretical basis as well as potential applications of these instruments are discussed.

### Intended learning outcomes

Initially knowledge about fundamental requirements concerning instruments of project management and controlling is acquired. What is more the module conveys knowledge about strengths and weaknesses and with fields of application and limits of commonly used instruments and methods of practitioners. Competences within the configuration and development of the project management and -controlling are obtained as well as skills within the practical use of the project management software MS Project.

### Courses

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

### 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, 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
Coordination, Budgeting and Incentives in Enterprises

### Abbreviation
12-M-KOBO-132-m01

### Module coordinator
holder of the Chair of Business Management, Controlling 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
graduate

### Other prerequisites
--

### Contents
This module focuses on accounting-based instruments to control behaviour in decentralised enterprises. The course first discusses the role of accounting in the context of decision making and behavioural controlling as well as informational analyses. Afterwards, the most common instruments of behavioural controlling (budgeting, value-oriented management, transfer prices) are discussed with regard to theory and practice.

### Intended learning outcomes
This module aims to provide knowledge in the context of behavioral controlling in enterprises. Knowledge about Requirements on instruments used for behavioral controlling are discussed and competencies for deployment, structure and development of coordination tools are provided.

### Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

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

### Allocation of places
--

### Additional information
--

### Referred to in LPO I
(examination regulations for teaching-degree programmes)
--
Module title: Strategic Management of Innovation and International Business
Abbreviation: 12-M-MWT-141-m01

Module coordinator: holder of the Chair of Entrepreneurship and Management
Module offered by: Faculty of Business Management and Economics
ECTS: 5
Method of grading: numerical grade
Duration: 1 semester
Module level: graduate
Other prerequisites: --

Contents:
In this course, students will acquire an overview of the strategic aspects of innovation management. They will acquire the knowledge necessary to understand the range, scope and complexity of the issues and problems related to the strategic management of innovations. The lecture will focus on innovation teams and the different roles in the innovation process. It will also discuss how users can be involved in the innovation process. In addition, the course will address the concepts of open innovation, lean innovation and crowdsourcing and will discuss how platform strategies can be used for the new product development process as well as what market entry strategies and patent management strategies are currently used. Practical examples and case studies will be used to provide students with a better understanding of the theoretical concepts.

Intended learning outcomes:
At the end of the module students are able to understand:
- The tasks of the strategic innovation management
- The state of the art and importance of innovations
- The current trends in strategic innovation management
- The importance of patent strategies
- The market entry strategies
- Concepts of the marketing mix

Courses:
(type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

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 elaboration (approx. 15 to 20 pages) or b) presentation (approx. 15 minutes) or c) written examination (approx. 60 minutes)
Language of assessment: German, 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

**Business Information Systems**

**Master’s with 1 major, 120 ECTS credits**

<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Portfolio Selection and Capital Market Theory</td>
<td>12-M-B1a-132-m01</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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<td>1 semester</td>
<td>graduate</td>
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### Contents

**Content:**
This course deals with the fundamentals of individual investment decisions (portfolio selection), the capital market equilibrium and the resulting CAPM.

**Outline of syllabus:**
1. Fundamentals of decision theory
2. Portfolio selection
3. CAPM
4. Information efficiency and event analysis

### Intended learning outcomes

After completing the course "Portfolio Selection and Capital Market Theory", the students will be able
(i) to explain the optimal capital market position of an investor given the different investment opportunities and its individual utility function in theory and calculate it;
(ii) to understand the central propositions made by the CAPM and use the CAPM for valuating assets and firms.

### Courses

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### Method of assessment

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<tr>
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</table>
| written examination (approx. 60 minutes)  
Language of assessment: German, 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: Financial Statement Analysis and Business Valuation
Abbreviation: 12-M-UA-141-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: graduate
Other prerequisites: --

Contents:
Content:
Underlying value is referred to as fundamental value, the analysis of information about fundamental value is referred to as fundamental analysis. This module discusses fundamental analysis. Fundamental analysis was developed as a matter of appropriate financial statement analysis.

Outline of syllabus:
1. Introduction: investing, valuation and financial statements
2. How financial statements are used in valuation
4. Viewing business through the financial statement lens
5. Analysis of the balance sheet and income statement
6. Analysis of the cash flow statement
7. Analysis of profitability
8. The value of operations and the evaluation of enterprise price-to-book-ratios and price-earnings-ratios

Reading:

Intended learning outcomes:
The students should be able to analyze financial statements and to value businesses and business strategies using the best technologies available. They should be able to sort out what are good methods, i.e. practical as well as conceptually sound, and what are poor ones. They should demonstrate their knowledge in applying the methods on real cases.

Method of assessment:
written examination (approx. 60 to 90 minutes)

Allocation of places:
--

Additional information:
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
---|---
European Competition Policy | 12-M-WPE-141-m01

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

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<th>ECTS</th>
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Duration | Module level | Other prerequisites
1 semester | graduate | --

Contents

Outline of syllabus:
1. Legal environment, competition laws
2. Market definition
   - Qualitative methods
   - Simple quantitative methods
   - Hypothetical monopoly test
3. Horizontal agreements and collusion: repeated games and factors affecting likelihood of collusion
4. Horizontal mergers and collusion
   - Economic theory
   - Efficiency effects
   - Coordinated effects
5. Vertical relations and contracts
   - Economic analysis of contracts
   - "More economic approach"
6. Abuse of dominant position
   - Classification of abusive conduct
   - Economic analysis of abusive conduct and theory of harm

The course will be taught in English.

Intended learning outcomes

After completion of the module students can use the advanced concepts introduced in the lecture of competition policy, including the legal framework, the trace models and methods for the study of competition policy issues, as well as understand the approach of European competition policy in high profile cases. When they are confronted with practical problems, they can refer to these cases, and the same logic to practical examples apply by draining the relevant economic theories that identify variables to be measured and methodologies for assessing, and based on that adequate conclusions for appropriate cases. They will sufficiently understand the subject in order to open up that build upon literature in journals and being able to think critically.

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

V (no information on SWS (weekly contact hours) and course language available)

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) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages)
Language of assessment: German, English creditable for bonus

Allocation of places

Business Management Master’s, Economics Master’s, Business Information Systems Master’s, Mathematics for Economics Master’s, Chinese and Economics Master’s and China Business und Economics Master’s: no restrictions. Applied Human Geography Master’s and Political and Social Sciences Master’s: 10 places. 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: Theory of Industrial Organization 1

Abbreviation: 12-M-TI1-141-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: graduate

Theory of industrial organisation:
1. Monopoly pricing
   - Nonlinear pricing and mechanism design
   - Dynamic pricing: experience goods, durable goods
2. Oligopoly pricing
   - Static price and quantity competition in homogeneous and differentiated goods markets
   - Comparative statics
   - Equilibrium market structure
3. Dynamic competition in oligopoly markets
   - Repeated games and collusion
   - Markov perfect equilibrium and models of dynamic competition
4. Strategic behaviour by incumbent firms
   - Entry deterrence and predation
   - Signalling and reputation
5. Auctions
   - Second price auctions
   - First price auctions
6. Advertising and product design

The course will be taught in English.

Intended learning outcomes:
Students which complete this class will acquire a working knowledge of advanced theoretical models of competition in oligopoly markets as well as sophisticated pricing techniques in monopoly markets. They will learn the conditions under which the predictions of these models are valid. They will become familiar with applications of advanced game theoretic tools, such as dynamic models of competition and auction theory, for studying interactions between firms in markets. By means of comprehensive exercises, they will apply the methods they learn in class to practically relevant problems. They will be in a position to read academic papers on related topics, assess the strengths and weaknesses of approach, summarize and comment on these papers and suggest possible extensions.

Courses:
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
(a) written examination (approx. 60 to 90 minutes) or (b) written examination (questions concerning mathematical methodology; approx. 120 minutes) or (c) term paper (approx. 15 to 20 pages)

Language of assessment: German, English

Allocation of places:
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Additional information:
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</table>
### Module title

**Principles of European Regulation**

### Abbreviation

12-M-PRE-141-m01

### Module coordinator

holder of the Chair of Industrial Economics

### Module offered by

Faculty of Business Management and Economics

### ECTS

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### Duration

1 semester

### Module level

graduate

### Other prerequisites

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### Contents

**Description:**

This module examines the regulation of traditional network industries (railroads, electricity, telecommunications) in Europe: theory and practice.

**Outline of syllabus:**

1. Overview of the regulation of railroads in Germany and Europe in practice
2. Overview of the regulation of the electricity industry in Germany and Europe in practice
3. Overview of the regulation of the telecommunications industry in Germany and Europe in practice
4. Political economy of regulation
5. Natural monopoly and price regulation under ideal conditions
6. Price regulation under realistic circumstances
7. Procurement: advantages and disadvantages
8. Network access regulation

### Intended learning outcomes

After successfully completing this module, students will be able to

(i) describe central problems in regulation of the traditional network industries;
(ii) identify and apply the appropriate results from Industrial Organization;
(iii) assess the advantages and disadvantages of existing regulatory mechanisms by using results from the industrial organization theory.

### Courses

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

V (no information on SWS (weekly contact hours) and course language available)

### 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) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages)

Language of assessment: German, 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)

--
Module title
Advanced Microeconomics

Abbreviation
12-M-AM-141-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)
--

Duration
1 semester

Module level
graduate

Other prerequisites
--

Contents
This course deals with essential microeconomic methods and problems at an advanced level (e.g. Mas-Colell, Whinston, Green: Microeconometric Theory). As this is a huge field, the course will concentrate on two or three topics such as

1. Game theory
2. Principal-agent models
3. Theory of auctions
4. General equilibrium theory
5. Mechanism design

Intended learning outcomes
After completing the course students are able to

1. explain essential findings of microeconomic theory,
2. apply the involved methods to given simple examples on their own,
3. recognize, in which real life situations and how the results can be applied.

Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment
a) written examination (approx. 60 to 90 minutes) or b) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages)

Language of assessment: German, 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
Business Information Systems
Master's with 1 major, 120 ECTS credits

<table>
<thead>
<tr>
<th>Module title</th>
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<td>Multinational Enterprises</td>
<td>12-M-MNE-141-m01</td>
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**Contents**

This module will be discontinued, no courses are offered currently or will be offered in future.

This may be due to one of the following reasons:

- the module belongs to a version of the examination regulations that no longer has any enrolled students
- the lecturer who offered the course is no longer employed at the University of Würzburg
- the contents are no longer taught and were substituted with comparable offers

For more information, please contact the Office of the Dean of Studies of the Faculty of Business Management and Economics.

**Intended learning outcomes**

Due to the lack of relevance, no learning outcomes description is available because no courses are held for this module.

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

V (no information on SWS (weekly contact hours) and course language available)

**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. 120 minutes) or b) oral examination (approx. 15 minutes)

Language of assessment: German, English

**Allocation of places**

Business Management Master’s, Economics Master’s, Business Information Systems Master’s, Mathematics for Economics Master’s, Chinese and Economics Master’s and China Business und Economics Master’s: no restrictions. Applied Human Geography Master’s: 10 places. 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** | **Abbreviation**
---|---
European Economic Statistics | 12-M-EWS-132-m01

**Module coordinator**
holder of the Chair of Econometrics

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

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**Contents**
Outline of syllabus:
1. Subject and tasks of business and economic statistics
2. The European system of national accounting
3. The harmonised consumer price index
4. Structural indicators
5. Money and loans in the European monetary union
6. Data bases of EuroStat

**Intended learning outcomes**
Students acquire comprehension on the most important indicators and accounting systems of the European and German business and economic statistics. They will be able to use these reporting systems for different macroeconomic questions.

**Courses** (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

**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)
Language of assessment: German, 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 | Abbreviation
---|---
Stochastic Models for Risk Assessment | 12-RM-RW-102-m01

Module coordinator | Module offered by
Dean of the Faculty of Business Management and Economics | Faculty of Business Management and Economics

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Contents


Intended learning outcomes

The student knows the schemes and concepts of risk analysis, risk assessment, risk measurement, and the theoretical background. The student knows the concepts of advanced stochastic risk modeling. In a practical business situation, the student is able to identify an appropriate scheme of risk assessment and corresponding meaningful risk measures.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Master’s students of Wirtschaftsinformatik (Business Information Systems) 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 among applicants from this group according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. (4) Within the groups according to (1) and (2), applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (5) Places on all courses of the module component
with a restricted number of places will be allocated in the same procedure. (6) A waiting list will be maintained and places re-allocated as they become available.

Additional information

Referred to in LPO I (examination regulations for teaching-degree programmes)
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<th>Module title</th>
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<td>European Public Finance</td>
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**Contents**

**Description:**
In this course, students will acquire a basic understanding of the financial system of the European Union as well as selected aspects of European agricultural, tax and climate policy.

**Reading:** lecture notes provided by Chair.

**Outline of syllabus:**
1. The budget of the European Union
2. The Common Agricultural Policy (CAP)
3. The Stability and Growth Pact (SGP)
4. Tax competition or tax coordination in Europe?
5. Emissions trading and European climate policy

**Intended learning outcomes**
After completing the course "Europäische Finanzpolitik" students know the central revenues and expenditures of the budget of the European Union. They also know the most important instruments of the agricultural policy and the debt problem within the European currency union. Finally they will be able to discuss international tax policy and climate issues using simple partial equilibrium models.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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)

Language of assessment: German, English

**Allocation of places**
Business Management Master’s, Economics Master’s, Business Information Systems Master’s, Mathematics for Economics Master’s, Chinese and Economics Master’s and China Business and Economics Master’s: no restrictions. Applied Human Geography Master’s and Political and Social Sciences Master’s: 10 places. 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: Strategic Production Management
Abbreviation: 12-M-SPM-141-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: graduate
Other prerequisites: --

Contents:
This module will discuss contents and procedures of strategic production management and, in particular, planning and control concepts. Students will become familiar with the essentials of strategic production management. Theoretical and analytical models will be used for analysing both economic and ecological issues. In addition, the module will discuss principles of value structure optimisation and will develop competences regarding the development of integrated mathematical models.

Intended learning outcomes:
After completion of the module students are able to process, to analyze and answer questions of operations strategy structured and goal-oriented in a global context using appropriate methods. Furthermore, they know the main strategic tasks and objectives in production management and evaluate and apply planning and control concepts for the production in realistic application situations.

Courses:
S (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
a) written examination (approx. 40 to 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:1 or c) written elaboration (approx. 30 to 40 pages)
Language of assessment: German, English
creditable for bonus:

Allocation of places:
Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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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<tr>
<td>Strategic Supply Management</td>
<td>12-M-SBM-141-m01</td>
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**Contents**

The course addresses central issues of strategic supply management. The supply function of the company (purchasing, materials management, procurement logistics) and its strategic importance is analysed and basic methods are developed that are relevant in this area.

**Intended learning outcomes**

Students learn the principles of performance-oriented optimization of all procurement activities to develop long-term, competitively sensitive potential for success. After completion of the module students are able to prepare structured, to goal-oriented analyze and to respond to performance-oriented issues of strategic procurement based on key instruments. Students are able to accurately classify the tasks of the procurement and to describe and discuss their strategic importance and dominate essential methods and procedures used in this area to apply.

**Courses**

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

S (no information on SWS (weekly contact hours) and course language available)

**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. 40 to 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:1 or c) written elaboration (approx. 30 to 40 pages)

Language of assessment: German, English creditable for bonus

**Allocation of places**

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated as they become available.

**Additional information**

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**Referred to in LPO I**

(examination regulations for teaching-degree programmes)
Module title | Abbreviation
---|---
Brand Management & Market Research | 12-M-MM-141-m01

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

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Contents

Description:
At the beginning of the 21st century, marketing - until then interpreted as a market-oriented corporate management approach - was further developed to be seen as the entrepreneurial task of creating "shared value" for the organisation on the one hand and - broadly speaking - for society on the other hand. This idea leads to high requirements regarding the strategic sustainable positioning of the brand as well as brand management itself.

Outline of syllabus:
1. Brand leadership and brand assessment
2. Brand leadership, identity and relevance according to David Aaker's approach
3. Brand strategies
4. Consumer behaviour
5. Market research methods and the development of brand strategies
6. Market research methods

Intended learning outcomes
Based on the theories of Meffert and Aaker, students will gain a profound understanding for brand leadership, which will be deepened by many practical implications and examples. Provided by cases studies and market research tools, it's the defined goal of this lecture to convey an in-depth knowledge for consumer behavior and sustainable brand management.

Courses (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

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, English

Allocation of places
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Additional information
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Module title | Abbreviation
--- | ---
International Marketing | 12-M-IIM-141-m01

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

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Contents

Description:
The module builds on the knowledge acquired during the Bachelor’s degree programme or the Grundstudium (stage I studies). It provides a systematic introduction to strategic marketing decisions in global and international contexts. These are explained mainly by Porter’s diamond and cluster models. Another focus is on internationalisation strategies, which require country analyses and decisions on the selection of national markets as well as a timing of the countries market development. In addition, the module discusses different strategies for market entry and market development.

Outline of syllabus:
1. Internationalisation of the economy and regional integration processes
   - Globalisation
   - Competitiveness of countries, industries and companies in an international context
2. International strategic marketing decisions
   - Market entry forms
   - Market development strategies
   - Timing strategies
   - International organisation structures
3. Theories and strategies of internationalisation
   - Foreign trade theory
   - Multinational enterprise
   - Internationalisation strategies

Reading:

Intended learning outcomes

Students acquire in-depth skills in the field of strategic and operational management with particular attention to the international context. Students achieve particular expertise in the analysis, assessment and implementation of international business decisions and gain skills thus guiding the execution of marketing and management positions in globally-active companies.

Courses (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

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, English

Allocation of places
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<th>Additional information</th>
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<tr>
<td>Referred to in LPO I</td>
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<td>(examination regulations for teaching-degree programmes)</td>
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### Module Title

**Econometrics 1**

**Abbreviation:** 12-M-OE1-141-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

Graduate

### Other Prerequisites

--

### Contents

**Description:**

This module deals with the basic concept and methodology of the ordinary least squares (OLS) regression model. In particular, model assumptions and properties are discussed and formally motivated. In addition, the module examines linear restrictions on the models explanatory variables as well as dummy variables and introduces tests to verify simple and multiple linear restrictions.

Linear algebra is used as formal aid.

**Outline of syllabus:**

1. Random variables
2. Important distributions
3. Point estimates
4. Simple linear regression model
5. Model assumptions
6. Model properties
7. Simple hypothesis tests
8. Multiple linear regression model
9. Linear restrictions
10. Dummy variables
11. Multiple hypothesis tests

### Intended Learning Outcomes

The students acquire knowledge of the basics, concepts and methods used in the classical linear regression model and understand the role of econometrics in science and data analysis. In particular, they learn how to analytically derive, calculate and interpret the coefficients, standard errors and p-values of a classic regression output of the multiple regression model. Furthermore, they are able to state and motivate formally the assumptions and properties of OLS and know how to deal with transformed and dummy variables. Additionally, students are able to test multiple linear restrictions on the parameters and are able to apply these tests to real economic, business and social science questions.

The competences acquired in this course serve as a prerequisite for "Econometrics II", "Econometrics III", "Microeconometrics" und "Financial Econometrics".

### Courses

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

### 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 (60 minutes) or b) term paper (approx. 15 pages)

Language of assessment: German, 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 | Abbreviation
---|---
Selected Topics in Business Management and Economics 1 | 12-M-APW1-141-m01

Module coordinator | Module offered by
Dean of the Faculty of Business Management and Economics | 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 + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages) or d) presentation (approx. 30 to 45 minutes)

Assessment offered: in the semester in which the course is offered

Language of assessment: German, 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
Selected Topics in Business Management and Economics 2

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### Module coordinator
Dean of the Faculty of Business Management and Economics

### 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 | graduate       | -- |

### 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 + Ü (no information on SWS (weekly contact hours) and course language available)

### 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) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages) or d) presentation (approx. 30 to 45 minutes)
Assessment offered: in the semester in which the course is offered
Language of assessment: German, 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>Faculty of Business Management and Economics</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 + Ü (no information on SWS (weekly contact hours) and course language available)

**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) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages) or d) presentation (approx. 30 to 45 minutes)

Assessment offered: in the semester in which the course is offered

Language of assessment: German, English

Creditable for bonus

**Allocation of places**

--

**Additional information**

--

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

--
## Module title

**Selected Topics in Business Management and Economics 4**

### Abbreviation

12-M-APW4-141-m01

## Module coordinator

**Abbreviation**

Faculty of Business Management and Economics

## Module offered by

**Abbreviation**

Dean of the Faculty of Business Management and Economics

## 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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<tr>
<th>Type</th>
<th>Number of weekly contact hours</th>
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## Method of assessment

a) written examination (approx. 60 to 90 minutes) or b) written examination (questions concerning mathematical methodology; approx. 120 minutes) or c) term paper (approx. 15 to 20 pages) or d) presentation (approx. 30 to 45 minutes)

Assessment offered: in the semester in which the course is offered

Language of assessment: German, 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)

--
Module title
Managerial Analytics & Decision Making

Abbreviation
12-M-MADM-141-m01

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

Module offered by
Faculty of Business Management and Economics

ECTS
5

Method of grading
numerical grade

Duration
1 semester

Other prerequisites
graduate

Contents
The course "Managerial Analytics & Decision Making" discusses quantitative methods to structure and solve a diverse set of management problems and demonstrates the application of modern methods with the help of multiple case studies.

Intended learning outcomes
After completing this course students can
(i) better understand and structure problems;
(ii) apply important theoretical and empirical frameworks to practical problems that evaluate good and bad decision making;
(iii) implement advanced analytical methods to support decision making under risk.

Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment
a) written examination (approx. 60 minutes) or b) written elaboration (approx. 15 to 20 pages)
Language of assessment: German, 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)
--
## Stochastic Models for Risk Analysis

<table>
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<tr>
<td>Stochastic Models for Risk Analysis</td>
<td>12-RM-RA-102-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

graduate  

### Other prerequisites

--

### Contents

- Point and interval estimation for the value at risk
- Prediction of value at risk in time series
- Risk of forecasts in time series, in particular exponential smoothing under covariates
- Conditional heteroscedasticity: ARCH, GARCH, EGARCH, DVEC, BEKK, DCC
- Aggregated losses and their empirical analysis
- Empirical analysis of statistical distributions
- Nonparametric bounds for the value at risk and conditional value at risk
- Market model: definition, derivation, parameters, empirical analysis
- Capital asset pricing model: definition, risk parameters
- Estimation of portfolio parameters: variance, value at risk, conditional value at risk, shortfall
- Optimum portfolios: concepts, theory, numerical analysis

### Intended learning outcomes

The student is able to estimate risk measures and the parameters of risk models from data. In particular, the student knows software packages and routines which enable empirical risk evaluation in a business context.

### Courses

 Ü + V (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

written examination (approx. 60 minutes)

### Allocation of places

Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Master's students of Wirtschaftsinformatik (Business Information Systems) 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 among applicants from this group according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. (4) Within the groups according to (1) and (2), applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (5) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (6) A waiting list will be maintained and places re-allocated 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
---|---
Strategic Networks in Industry | 12-M-MS-141-m01

<table>
<thead>
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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 and Marketing</td>
<td>Faculty of Business Management and Economics</td>
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**Contents**

The primary object of this course is to gain a detailed understanding of strategic networks and of the phenomenon of clustering in the industrial industry. The example of the international automotive industry is used for clarification of the theoretical contents.

The focus is on marketing in industrial companies and also on CSR - CSR is considered the “driver” of sustainable innovations - as well as the different strategy types of sustainable innovations.

Outline of syllabus:

1. Strategic networks and clusters in industrial industries such as the automotive industry
2. Transaction types of Williamson as well as strategic cooperation between automobile manufacturers and suppliers
3. Management of business types, in particular the business of suppliers in the automotive industry
4. Cluster and entrepreneurship activities
5. Sustainable innovation strategies

**Intended learning outcomes**

By the end of the course, students gain a profound understanding above the basics of network research. Furthermore, students will acquire sectoral knowledge of the automotive industry as well as detailed cluster skills.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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, 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>Strategic Marketing</td>
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### Contents

**Description:**
The module raises awareness in students of the relevance and necessity of strategic management in a competitive and dynamical competitive process.

**Content:**
Based on the marketing strategies as well as the stakeholder and entrepreneurship approaches, this module discusses the roots of the concept of strategy in marketing based on Drucker, Porter, Ansoff and Mintzberg. The focus of the module is on thinking in competitive advantages, which is directly related to responsible leadership.

**Outline of syllabus:**
1. Competitive dynamics requires strategy and leadership
2. Marketing strategies, stakeholder management and entrepreneurship
3. Objectives and tasks of corporate governance in management practice
4. Competitive forces, strategies and benefits according to Michael Porter
5. Growth strategies and marketing myths
6. Future technologies, new businesses and dynamic capabilities
7. Nature and principles of responsible management

**Reading:**


**Intended learning outcomes**

The students have a deeper understanding of the sustainable corporate management and have the basics of the competitive process and competitive dynamics available. In addition, they can use the acquired knowledge, while taking into account the conventional problems of the strategic and sustainable management, to solve business case studies on their own.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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, 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
Business Information Systems

**Master's with 1 major, 120 ECTS credits**

<table>
<thead>
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<th>Module title</th>
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<td>Seminar: Managerial Decision Making</td>
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### Contents

This module will be discontinued, no courses are offered currently or will be offered in future.

This may be due to one of the following reasons:

- the module belongs to a version of the examination regulations that no longer has any enrolled students
- the lecturer who offered the course is no longer employed at the University of Würzburg
- the contents are no longer taught and were substituted with comparable offers

For more information, please contact the Office of the Dean of Studies of the Faculty of Business Management and Economics.

### Intended learning outcomes

Due to the lack of relevance, no learning outcomes description is available because no courses are held for this module.

### Courses

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

S (no information on SWS (weekly contact hours) and course language available)

### 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 20 pages) and presentation (approx. 10 minutes), weighted 2:1

Assessment offered: once a year, winter semester

### Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Students who already have successfully completed courses offered by the Chair of Logistics and Quantitative Methods will be given preferential consideration. Among applicants with the same number of successfully completed modules, places will be allocated according to the total number of ECTS credits achieved in mandatory courses of the focus Logistik und Supply Chain Management (Logistics and Supply Chain Management) or Value Chain Management or another specialisation the applicant has selected which includes courses offered by the Chair. (2) Among applicants with the same number of ECTS credits, 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

**Advanced Operations & Logistics Management**

### Abbreviation

12-M-AOLM-141-m01

## Module coordinator

holder of the Chair of Logistics and Quantitative Methods in Business Administration

## 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

The course "Advanced Operations & Logistics Management" acquaints students with advanced methods for the planning of integrated production and logistics systems and demonstrates the application of these with the help of multiple case studies.

## Intended learning outcomes

After completing this course students can:

(i) analyze and evaluate integrated production and logistics systems;
(ii) develop and apply appropriate methods to plan complex production and logistics systems;
(iii) evaluate the consequences of uncertainties in processes, and
(iv) apply concepts and methods to plan uncertainties processes.

## Courses

V + Ü (no information on SWS (weekly contact hours) and course language available)

## Method of assessment

(a) written examination (approx. 60 minutes) or (b) written elaboration (approx. 15 to 20 pages)

Language of assessment: German, 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: Production Planning and Scheduling
Abbreviation: 12-M-LA-141-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

Duration: 1 semester
Module level: graduate

Other prerequisites:
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Contents
This module analyses and classifies approaches of production planning and control. In addition, it develops methods and models of lot sizing and scheduling. The focus is on the determination of optimal production and transport volumes as well as the planning of orders and manufacturing orders.

Intended learning outcomes
Students learn essential concepts, principles and methods of production planning and control with emphasis on the determination of optimal production and transport volumes as well as the planning of production and order sequences. Then, based on this expertise related knowledge broadening and deepening, essential competencies are conveyed, which allow the imaging of realistic situations and problems using mathematical and quantitative models for the derivation and assessment of alternative courses of action. After completion of the module students can answer, analyze and structure questions of production planning and control, goal-oriented. They can also arrange the planning areas in the overall business context and have an in-depth overview of the production planning and control.

Courses
(type, number of weekly contact hours, language — if other than German)
S (no information on SWS (weekly contact hours) and course language available)

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. 40 to 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:1 or c) written elaboration (approx. 30 to 40 pages)
Language of assessment: German, English
creditable for bonus

Allocation of places
Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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
--- | ---
Instruments of Strategic Controlling | 12-M-INST-141-m01

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<tbody>
<tr>
<td>holder of the Chair of Chair of Business Management, Controlling and Accounting</td>
<td>Faculty of Business Management and Economics</td>
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<td>1 semester</td>
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**Contents**

The module focuses on controlling instruments, which are applied in the context of the strategic management of enterprises. The module covers analytical and heuristic techniques of planning and control. In the context of these techniques, instruments of target costing, life cycle analysis, value chain analysis and various portfolio techniques are discussed with regard to their theoretical foundation and fields of application.

**Intended learning outcomes**

Initially knowledge about fundamental requirements concerning instruments of decision making and behavior control within enterprises is acquired. What is more the module conveys the obtaining of knowledge about the strengths and weaknesses and therewith fields of application and limits of prevalent instruments of strategic corporate management used by practitioners.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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, 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
--- | ---
Accounting and Capital Markets | 12-M-REKA-132-m01

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

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Contents

The module focuses on financial and management accounting, their functions, possible configurations as well as their impact on internal and external recipients under consideration of the institutional setting. In this context, an economic perspective has priority over detailed legal arrangements and regulations by the standard setters. Based on the theoretical foundations of information economics as well as decision-making and balance sheet theories, typical issues concerning cost accounting and controlling as well as financial accounting and publicity are discussed.

Intended learning outcomes

Initially a fundamental knowledge about the conception and impact of management and financial accounting as information systems is acquired. In the following, the module mainly sharpens the understanding of the economic impacts of the configuration of management and financial accounting. What is more, extensive knowledge about possible impacts of changes in institutional general frameworks is conveyed. For example changes in valuation standards, publicity rules or regulations about the distribution of profits in enterprises and on capital markets are considered.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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, 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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<tr>
<th>Module title</th>
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<td>Human Resource Management and Industrial Relations</td>
<td>12-M-HRM-132-m01</td>
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**Contents**

The lecture "Human Resource Management und Industrielle Beziehungen" ("Human Resource Management and Industrial Relations") introduces advanced theories, estimation techniques and empirical results from the areas of human resources and institutional frameworks such as industrial relations. Reading list to be provided in class.

**Intended learning outcomes**

The aim of the lectures is to enable students to understand and apply advanced theories, estimation techniques and empirical results in the area human resource management and industrial relations on the basis of scientific literature.

**Courses**

(No information on SWS (weekly contact hours) and course language available)

**Method of assessment**

(a) written examination (approx. 60 minutes) or (b) term paper (approx. 15 pages)

Language of assessment: German, English

**Allocation of places**

Business Management Master’s, Economics Master’s, Business Information Systems Master’s, Mathematics for Economics Master’s, Chinese and Economics Master’s and China Business und Economics Master’s: no restrictions. Political and Social Sciences Master’s: 10 places. 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

Project Seminar: Management of Sustainability

Abbreviation

12-M-BCS-141-m01

Module coordinator

holder of the Chair of Entrepreneurship and 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

graduate

Other prerequisites

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Contents

This module will be discontinued, no courses are offered currently or will be offered in future.

This may be due to one of the following reasons:

• the module belongs to a version of the examination regulations that no longer has any enrolled students
• the lecturer who offered the course is no longer employed at the University of Würzburg
• the contents are no longer taught and were substituted with comparable offers

For more information, please contact the Office of the Dean of Studies of the Faculty of Business Management and Economics.

Intended learning outcomes

Due to the lack of relevance, no learning outcomes description is available because no courses are held for this module.

Courses

S (no information on SWS (weekly contact hours) and course language available)

Method of assessment

a) written examination (approx. 60 minutes) or b) written elaboration (approx. 15 to 20 pages)

Assessment offered: once a year, winter semester

Language of assessment: German, 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>Option Pricing Theory</td>
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### Contents

Content:
The module deals with the nature of stock options using the Black Scholes and Binominal models. It assesses companies as well as shares as derivative financial instruments and discusses delta hedging to hedge equity portfolios.

Outline of syllabus:
1. Share options
2. Other financial derivatives
3. Immunising portfolios against interest rate changes

### Intended learning outcomes

After completing the course “Option pricing”, the students will be able
(i) to price options using the Black-Scholes formula and the binominal model;
(ii) to understand the use of options as a part of compensation and for share hedging.

### Courses

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

### 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) oral examination

Language of assessment: German, 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>Financial Markets: Institutions and Regulation</td>
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### Contents

**Content:**
This course deals with the fundamentals of the organisation and functioning of the German commercial banking system, the aims and restrictions of operating decisions in commercial banks, the special characteristics of bank regulation and of balance sheets of commercial banks as well as the construction and function of financial innovations.

**Outline of syllabus:**
1. The German commercial banking system
2. Aims and restrictions of operating decisions
3. Equity and balance sheet analysis of commercial banks
4. Financial innovations

**Reading:**

### Intended learning outcomes

After completing the course "Finanzmarktinstitutionen und Finanzmarktregulierung", the students will provide fundamental and advanced knowledge of
(i) the organisation and function of the German commercial banking system;
(ii) the aims and restrictions of operating decisions in commercial banks;
(iii) the special characteristics of bank regulation and of the balance sheet of commercial banks;
(iv) the construction and function of financial innovations.

### Courses

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### Method of assessment

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Language of assessment: German, 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
- **Economics of Tax Planning**

### Abbreviation
- 12-M-SP-141-m01

### Module coordinator
- holder of the Chair of Business Taxation

### 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
- graduate

### Other prerequisites
- --

### Contents
This course deals with tax effects on fundamental economic decisions. Taxes are integrated into standard models for investment decisions, financing decisions, firm valuation, dividend policy and remuneration of employees. Therefore, the interaction of corporate and personal income taxes is analysed. A reading list in English is available on request.

### Intended learning outcomes
This course enables students to  
(i) combine their knowledge of tax law with microeconomic analyses in the areas of corporate and personal finance;  
(ii) understand the effect of taxes on fundamental economic decisions, e.g. investment and financing decisions, evaluation of investment, financial assets, forms of remuneration for employees including managing and assessing;  
(iii) read and discuss primary scientific literature.

### Courses
- **V + Ü** (no information on SWS (weekly contact hours) and course language available)

### Method of assessment
- a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) oral examination

Language of assessment: German, 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>Contents</td>
<td>This module introduces the various methods of income recognition in the German Income Tax Code (Einkommensteuergesetz, EStG). It discusses the main reporting and valuation provisions as well as the specific problems and techniques of income calculation for partnerships.</td>
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<tr>
<td>Intended learning outcomes</td>
<td>Students have in-depth knowledge of tax accounting of companies and are able to solve moderate to complex problems of tax accounting in particular of sole proprietorships and partnerships using legal source.</td>
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<td>Method of assessment</td>
<td>a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) oral examination of one candidate each (approx. 20 minutes)</td>
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### Module Catalogue for the Subject
#### Business Information Systems

<table>
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<tr>
<th>Module title</th>
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<td>Advanced VAT</td>
<td>12-M-UF-141-m01</td>
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### Contents
The module provides students with more in-depth insights into complex national issues (e.g., holding structures) and international constellations with respect to other EU member states as well as non-EU states from a VAT point of view. The relevant rulings of the German Federal Fiscal Court as well as the ECJ are also discussed.

### Intended learning outcomes
Students acquire deeper knowledge and understanding of German VAT law as well as basic skills in VAT on EU and international levels. The students are able to analyze and solve complex facts of a case from a German VAT point of view as well as to recognize problems arising from international constellations. They are able to determine the VAT-treatment using German VAT law and the European VAT directive. The students are able to identify and make use of simplification rules (intra-Community triangulation simplification) as well as to proactively shape the facts of a case to create a favorable VAT treatment. They are able to read critically and judge primary tax literature.

### Courses
(V + Ü (no information on SWS (weekly contact hours) and course language available)

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### Method of assessment
(a) written examination (approx. 60 minutes) or (b) term paper (approx. 15 pages) or (c) oral examination

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### Additional information

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

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<table>
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<td>Management of Corporate Sustainability</td>
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</table>

**Contents**

**Description:**
This module introduces students to sustainability management.
First, essential concepts such as sustainability and corporate social responsibility are explained, the role of businesses within society is discussed. Afterwards, the module addresses different aspects of corporate sustainability as well as environmental and social management with particular regard to the dimensions of corporate and economic performance and competitiveness.

**Content:**
1. Basic overview of sustainability and (legal) frameworks
2. Business and society
3. System theory
4. Sustainable as well as eco-innovation
5. Operational sustainability management (sustainable strategies, environmental performance indicators)
6. The impact of environmental and social management on corporate performance and competitiveness

**Intended learning outcomes**
After successfully completing the module "Sustainability Management", students will be able to
(i) explain and define the basic principles and concepts of Sustainability Management as well as to deal with the contributions and aspects of sustainable development in a critical way;
(ii) assess and analyse the complex problems and implementation strategies of Sustainability Management based on the gained knowledge and experiences of this course;
(iii) evaluate different strategic and operational approaches of Sustainability Management as well as to transfer these approaches onto various case studies.

**Courses** (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

**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, 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
---|---
Sustainability in logistics and information processing | 12-M-NLI-141-m01

| Module coordinator | Module offered by |
---|---|
holder of the Chair of Business Management and Business Information Systems | 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 | graduate | -- |

Contents
Ecological, social and ethical factors play an increasingly important role in today's (business) world - not only for private households and enterprises but also for the national economy as a whole. This course will therefore discuss relevant issues from both points of view.

**Part A: Environmental economics and environmental policy**
1. Environment and endangerment of the environment
2. Environmental protection and environmental policy
3. Fundamental principles of environmental economics
4. Market economy instruments
5. State economy instruments
6. Example of application: promotion of innovation
7. Example of application: ecological tax and financial reform
8. Alternative economic growth **Part B: Green Logistics and Green IT**
1. Intra and inter-corporate division of labour
2. Fundamental principles of ecologically and economically oriented production
3. Typical changes in a globalised world concerning the environment
4. Corporate environmental information systems
5. Green IT measures
6. Role of personal logistics for economising

**Intended learning outcomes**
**Goals Part A: Environmental economics and environmental policy**
- Creation of environmental- and energy-political rudiments
- Explanation of economical connections based on economical questions
- Presentation of different instruments of implementation along with practical examples

**Goals Part B: Green Logistics and Green IT**
- Creation of logistical and information-technological rudiments
- Explanation of economic connections based on economical questions
- Presentation of different ways of implementation along with selected practical examples

**Courses** (type, number of weekly contact hours, language — if other than German)
V (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) entirely or partly computerised written examination (approx. 60 minutes)
Language of assessment: German, 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)
Business Information Systems
(ECTS credits)
Adaption and Continuous System Engineering

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<td>Adaption and Continuous System Engineering</td>
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### Contents

**Business Suite:** The constantly changing environment with its organisational and IT-oriented developments forces companies to adapt their standard business software solutions. With the help of dynamic adaptation (Continuous System Engineering), this process of change can be supported effectively and efficiently. This module discusses both the systematic implementation of adaptation steps (so-called customising) using the example of the mySAP Business Suite and the concept of Continuous System Engineering using various practical examples. **Business Apps:** The course combines theory and practice in the area of cloud computing and ERP. Participants gain an insight into the architecture of the ByDesign platform and are presented with an opportunity to gain practical experience working with the corresponding software development kit.

Content:
- Fundamentals of cloud computing
- Cloud business solutions
- Architecture of the SAP Business ByDesign platform
- Platform adaption and extensibility
- Basics of software development in SAP Cloud Applications Studio
- Hands-on SDK: independently designing and developing a demo app

### Intended learning outcomes

**Business Suite:** Students learn about the various ways of adapting a standard business software solution to the special requirements of a company. They also develop a fundamental understanding of the dynamic adaptation of business software libraries. Based on selected examples from the SAP Business Suite that the acquired knowledge will be deepened by using case studies. **Business Apps:** The course imparts knowledge and delivers skills in cloud computing for businesses, ERP systems architecture and software development at the example of the SAP Business ByDesign platform. The independent planning, implementation and documentation of a business app trains important core competencies of technology-oriented Business Informatics.

### Courses

This module has 2 components; information on courses listed separately for each component.

- 12-ACSE-1-141: V + Ü (no information on language and number of weekly contact hours available)
- 12-ACSE-2-141: V + Ü (no information on language and number of weekly contact hours available)

### Method of assessment

This module has the following 2 assessment components. To pass the module as a whole students must pass one of the two assessment components.

**Assessment component to module component 12-ACSE-1-141:** Adaption and Continuous System Engineering - Business Suite

- 5 ECTS credits, method of grading: numerical grade
- a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) schriftliche Ausarbeitung (approx. 20 pages) or d) oral examination (one candidate approx. 10 bis 15 minutes, groups of two, approx. 20 minutes, groups of three, approx. 30 minutes) or e) entirely or partly computerised written examination (approx. 60 minutes).
- Language of assessment: German, English
Assessment component to module component 12-ACSE-2-141: Adaption and Continuous System Engineering - Business Apps

• 5 ECTS credits, method of grading: numerical grade
• a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) schriftliche Ausarbeitung (approx. 20 pages) or d) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or e) entirely or partly computerised written examination (approx. 60 minutes)
• Language of assessment: German, English
• bonusfähig

Allocation of places

Information on the allocation of places listed separately for each module component.

• 12-ACSE-2-141: Number of places: 10. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated as they become available.

• 12-ACSE-1-141: Number of places: 20, thereof 15 places für Master’s students of Business Information Systems. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated 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: Information systems research
Abbreviation: 12-M-ISR-141-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
Only after succ. compl. of module(s): --

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

Contents:
The course provides an overview of theoretical scientific foundations, theories, research topics and methods of international research in business informatics.

Intended learning outcomes:
The module provides students with knowledge of:
(i) Exploration of classical themes of WI / IS research;
(ii) Getting to know the relevant paradigms, theories and methods;
(iii) Recognition of the interfaces to other areas of business administration and management practice;
(iv) Gain experience in finding and evaluation of scientific literature.

Courses:
V + Ü (no information on SWS (weekly contact hours) and course language available)

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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English creditable for bonus

Allocation of places:
Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas:
Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot.
Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot.
Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated 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
---|---
Risk Management - Concepts and Systems | 12-RM-KS-141-m01

Module coordinator
holder of the Chair of Business Management and Accounting

Module offered by
Faculty of Business Management and Economics

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Contents

**Concepts:** The course will provide students with an overview of the main goals, contents, methods and instruments of opportunity and risk management in industrial and commercial enterprises. **Systems:** The course will provide students with an overview of the design and functionality of essential information systems for risk management.

Intended learning outcomes

**Concepts:** After completion of the module students have a sound understanding of basic concepts, processes, methods and tools of risk management. They are able to justify the duties and functions of risk management in the company in theory and practice. They can also evaluate proposed solutions for the design of a risk management system, analyze selected issues of risk management and building on that, develop their own solutions. **Systems:** After completing this module, students can

(i) judge legal, organizational and methodological requirements for the implementation of risk management processes in a risk management information system (RMIS);

(ii) understand the technical basis for RMIS;

(iii) estimate the different characteristics of various information systems for the RM;

(iv) understand the workings of RMIS.

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

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 12-RM-KS-1-141: V (no information on SWS (weekly contact hours) and course language available)
- 12-RM-KS-2-141: V (no information on SWS (weekly contact hours) and course language available)

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 in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

**Assessment in module component 12-RM-KS-1-141: Risk Management Concepts**

- 3 ECTS, Method of grading: numerical grade
- a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)
- Language of assessment: German, English
- creditable for bonus

**Assessment in module component 12-RM-KS-2-141: Risk Management**

- 2 ECTS, Method of grading: numerical grade
- a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)
- Language of assessment: German, English
Allocation of places

Number of places: 25, thereof 15 places for Master's students of Business Management with specialization Risk Management, if the number of applications exceeds the number of available places. Proof of the specialization has to given. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated 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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<tr>
<th>Module title</th>
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<td>Process and System Modelling</td>
<td>12-PSM-132-m01</td>
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<td>holder of the Chair of Business Management and Business Information Systems</td>
<td>Faculty of Business Management and Economics</td>
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<td>1 semester</td>
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**Contents**

The course familiarises students with relevant principles, concepts and methods of process and system modeling. It is divided up into two parts:

**Part A: Introduction to business process management**

Contents Part A:
- Purpose of business process management
- How are business processes modelled?
- What is business process management?
- Strategic Management

**Part B: Simulation**

Contents Part B:
- Simulation
- Theoretical foundations
- Petri nets
- Smalltalk inscription language

**Intended learning outcomes**

The students have

1. substantial knowledge of the basic principles, concepts and methods of process and system modeling and
2. recognize their economic importance and consequences.

**Courses**

(V + Ü (no information on SWS (weekly contact hours) and course language available)

**Method of assessment**

(a) written examination (approx. 60 minutes) or (b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or (c) presentation (15 to 20 minutes) with written elaboration (approx. 20 pages), weighted 1:2 or (d) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or (e) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English
## Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, 15 places will be set aside for Master's students of Business Information Systems. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated 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

**Business Processes Organisation, Business Software and Process Industries**

### Abbreviation

12-GLP-141-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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### Contents

ERP systems have become key elements of successful companies. Business processes in companies can no longer be managed without using such ERP systems. In financial departments of companies, such systems have been used for a long time, but business processes e.g. for logistical tasks have so far not been supported by ERP solutions. This module explains how this issue could be resolved as well as what constraints and what dependencies have to be considered.

### Intended learning outcomes

After completing this module, students should be able to
(i) know about actual business processes in companies;
(ii) understand selected problems in the organization and design of logistical business processes and work out solutions;
(iii) know and design basic data structures and data flows of an ERP system;
(iv) map business processes within an ERP system;
(v) consider the specifics of a certain industry (e.g. the process industry) when organizing business processes;
(vi) map the core business processes within an ERP system.

### Courses

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

- a) written examination (approx. 60 minutes) or
- b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or
- c) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

### Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, 15 places will be set aside for Master's students of Business Information Systems. (1) Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. (2) Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. (3) A waiting list will be maintained and places re-allocated as they become available.

### Additional information

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### Referred to in LPO I

(examination regulations for teaching-degree programmes)
### Module Title:
Adaptive Business Platforms 1

### Abbreviation:
12-BSA-141-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):
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### Duration:
1 semester

### Module Level:
Graduate

### Other Prerequisites:
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### Contents:
A next generation of enterprise systems called business service platforms is emerging using new disruptive technologies such as cloud computing, big data and mobility. These business service platforms apply the concept of product platforms to software. They will

1. be services based
2. be offered as a service in the cloud
3. address new classes of users and types of business especially in the service business
4. allow for a high degree of business adaptability and extensibility.
5. be supplemented by a broad offer of partner add-ons supporting accelerated innovation.

These new business service platforms will play a key role in the digital transformation of the software industry.

### Intended Learning Outcomes:
Be aware of the big business productivity progress enabled by BIS in the last 50 years. Understand the limits of these systems in spite of the digital transformation of the software industry ahead. Be able to critically assess the business potential of new IC technologies. Understand the business demand for change. Understand the necessary organizational learning needed to leverage new technology for business change management.

### Courses:
V (no information on SWS (weekly contact hours) and course language available)

### Method of Assessment:
(a) written examination (approx. 60 minutes) or (b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or (c) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, English

### Creditable for Bonus:
creditable for bonus

### Allocation of Places:
Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places reallocated 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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Mobile and Ubiquitous Systems

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<td>Mobile and Ubiquitous Systems</td>
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### Contents

The course will provide students with an overview of basic technologies and business applications of mobile and ubiquitous computing. Exercises running in parallel to lectures will present students with an opportunity to gain experience with mobile development platforms.

Prerequisite for participation in this module: knowledge of the basics of e-business; basic experience with software development tools would be an asset for exercises.

### Intended learning outcomes

The module provides students with knowledge of:

(i) Mobile Infrastructure  
(ii) Mobile Business  
(iii) The Auto-ID technologies  
(iv) Smart Metering  
(v) Sensor networks and localization systems

### Courses

V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment

a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or d) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, 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>Aspects of Business Information Systems 1</td>
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**Contents**

This course is a dummy module, e.g. for courses in the area of business informatics taken abroad.

**Intended learning outcomes**

The competences depend on the individual module, which has been taken to transfer these credits to the University of Wuerzburg.

**Courses**

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

S (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) presentation (15 to 20 minutes) with written elaboration (approx. 20 pages), weighted 1:2 or d) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or e) entirely or partly computerised written examination (approx. 60 minutes)

Assessment offered: in the semester in which the course is offered and in the subsequent semester

Language of assessment: German, 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**

This course is a dummy module, e.g. for courses in the area of business informatics taken abroad.

**Intended learning outcomes**

The competences depend on the individual module, which has been taken to transfer these credits to the University of Wuerzburg.

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

S (no information on SWS (weekly contact hours) and course language available)

**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) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or c) presentation (15 to 20 minutes) with written elaboration (approx. 20 pages), weighted 1:2 or d) oral examination (one candidate each: approx. 10 to 15 minutes; groups of 2: approx. 20 minutes; groups of 3: approx. 30 minutes) or e) entirely or partly computerised written examination (approx. 60 minutes)

Language of assessment: German, 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: Adaptive Business Platforms 2
Abbreviation: 12-AGP2-141-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: graduate
Other prerequisites: --

Contents:
The next generation of business service platforms leads to a transformation of traditional industrial enterprises into service businesses that generate a large proportion of value in developed economies. New ICT technologies such as cloud computing, the Internet of Things and semantic technologies will contribute to the success of these businesses in a similar way as ERP contributed to the success of industrial enterprises. But we are still at the beginning of the evolution of business service platforms, which will have to become more adaptable to support special business models and allow differentiating customer service processes.

The course will discuss different case studies on services businesses. The digital transformation of the software industry into a service industry is the most prominent of these cases.

Intended learning outcomes:
Be aware of the growing economic importance of the service sector. Understand that services businesses in are facing a special productivity problem, which could not be adressed by the same processes applied in the manufacturing industries. Understand the new ICT technologies we have at hand today to deliver smart solutions for this problem. Be aware of the diversity of services business today where we have no evidence that a general standard can be found applicable to most subsectors similar to the standardization achieved for the manufacturing industries after twenty years of research.

Courses:
(V) (no information on SWS (weekly contact hours) and course language available)

Method of assessment:
(a) written examination (approx. 60 minutes) or (b) written examination consisting entirely or partly of multiple/single choice questions (approx. 60 minutes) or (c) entirely or partly computerised written examination (approx. 60 minutes)
Language of assessment: German, English

Allocation of places:
Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated in a standardised procedure among all applicants irrespective of their subjects according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. In this procedure, applicants who already have successfully completed at least one module component of the respective module will be given preferential consideration. Places on all courses of the module component with a restricted number of places will be allocated in the same procedure. A waiting list will be maintained and places re-allocated as they become available.

Additional information:
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Referred to in LPO 1 (examination regulations for teaching-degree programmes)
--
Computer Science

(ECTS credits)
<table>
<thead>
<tr>
<th>Module title</th>
<th>Abbreviation</th>
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<tbody>
<tr>
<td>Databases 2</td>
<td>10-l=DB2-141-m01</td>
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<thead>
<tr>
<th>Module coordinator</th>
<th>Module offered by</th>
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<tr>
<td>Dean of Studies Informatik (Computer Science)</td>
<td>Institute of Computer Science</td>
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<th>Duration</th>
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<tr>
<td>1 semester</td>
<td>graduate</td>
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</table>

**Contents**

Data warehouses and data mining; web databases; introduction to Datalog.

**Intended learning outcomes**

The students have advanced knowledge about relational databases, XML and data mining.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**Allocation of places**

--

**Additional information**

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

--
**Module title** | **Abbreviation**
--- | ---
Program Design and Analysis | 10-I=PA-141-m01

**Module coordinator** | **Module offered by**
holder of the Chair of Computer Science II | Institute of Computer Science

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**Contents**
Program analysis, model creation in software engineering, program quality, test of programs, process models.

**Intended learning outcomes**
The students are able to analyse programs, to use testing frameworks and metrics as well as to judge program quality.

**Courses** (type, number of weekly contact hours, language — if other than German)
V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)
Language of assessment: German, English if agreed upon with the examiner

**Allocation of places**
--

**Additional information**
--

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

### Abbreviation
10-I=IR-141-m01

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

### Module offered by
Institute of Computer Science

### ECTS
5

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

### Duration
1 semester

### Module level
graduate

### Other prerequisites
--

### Contents
IR models (e.g. Boolean and vector space model, evaluation), processing of text (tokenising, text properties), data structures (e.g. inverted index), query elements (e.g. query operations, relevance feedback, query languages and paradigms, structured queries), search engine (e.g. architecture, crawling, interfaces, link analysis), methods to support IR (e.g. recommendation systems, text clustering and classification, information extraction).

### Intended learning outcomes
The students possess theoretical and practical knowledge in the area of information retrieval and have acquired the technical know-how to create a search engine.

### Courses
V + Ü (no information on SWS (weekly contact hours) and course language available)

### Method of assessment
written examination (approx. 60 to 120 minutes); if announced by the lecturer at the beginning of the course, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

### 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>
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<tr>
<td>Artificial Intelligence 1 for Business Informatics</td>
<td>10-I=KI1-141-m01</td>
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</table>

**Contents**

Intelligent agents, uninformed and heuristic search, constraint problem solving, search with partial information, propositional and predicate logic and inference, knowledge representation.

**Intended learning outcomes**

The students possess theoretical and practical knowledge about artificial intelligence in the area of agents, search and logic and are able to assess possible applications.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**Allocation of places**

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**Additional information**

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<table>
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<td>10-I=KI2-141-m01</td>
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</table>

**Contents**

Planning, probabilistic closure and Bayesian networks, utility theory and decidability problems, learning from observations, knowledge while learning, neural networks and statistical learning methods, reinforcement learning, processing of natural language.

**Intended learning outcomes**

The students possess theoretical and practical knowledge about artificial intelligence in the area of probabilistic closure, learning and language processing and are able to assess possible applications.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

**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 can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes)

Language of assessment: German, English if agreed upon with the examiner

**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 Business Information Systems

<table>
<thead>
<tr>
<th>Module title</th>
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<tbody>
<tr>
<td>Computer Science in Media 1</td>
<td>06-MK-MedInf1-MCS-141-m01</td>
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## Module coordinator
holder of the Professorship of Media Informatics
Institute of Human Computer Media

### ECTS
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### Duration
- **1 semester**
- **undergraduate**

### Contents
The module Medieninformatik 2 (Computer Science for Media 2) provides deeper knowledge of digital media types and the fundamentals of digital media development and design.

### Intended learning outcomes
Students have gained a deeper insight into selected concepts of media computer science. In addition, they are able to develop digital media based on various processes. Thus, a basis is provided for academic work as well as for acquiring practically relevant media skills.

### Courses
- **(type, number of weekly contact hours, language — if other than German)**
  - V + Ü (no information on SWS (weekly contact hours) and course language available)

### 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. 30 minutes) or c) presentation (15 to 30 minutes) with written elaboration (10 to 15 pages) or d) term paper (15 to 20 pages) or e) portfolio (maximum 20 pages)
  - Language of assessment: German or English

### Allocation of places
- **--**

### Additional information
- **--**

### Referred to in LPO I
- **(examination regulations for teaching-degree programmes)**
- **--**
Master's Thesis
(30 ECTS credits)
Module title | Abbreviation
---|---
Master Thesis Business Information Systems | 12-WI-MA-132-m01

| Module coordinator | Module offered by |
---|---
Dean of the Faculty of Business Management and Economics | Faculty of Business Management and Economics |

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

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

**Contents**

Students will complete their degree with a Master’s thesis in which they will be required to independently research and write on a topic in the area of business management and economics, drawing on the subject-specific knowledge they have acquired and adhering to the principles of good scientific practice. This thesis may either take the form of an analysis and structured presentation of the existing literature on a certain topic or may, as is often the case, also include a presentation of the students’ own original achievements, e.g., new algorithms developed by students, surveys, the prototypical demonstration of a concept they developed or the application and (further) development of a theoretical model.

**Intended learning outcomes**

In the master thesis students prove that they can plan and carry out a science-based work to solve a particular problem within a specified period autonomously and to document the results in accordance with the professional scientific standards in writing. Students are able to understand relevant contributions to research and professional practice, critically analyze and assess the relevance to their own specific questions. They can assess and recognize major lines of development and dynamics of the subject and therefore also the need to retrain continuously.

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

No courses assigned

**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 thesis (usually 60 pages)
- Language of assessment: German, English

**Allocation of places**

--

**Additional information**

Additional information on module duration: 6 months.

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

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