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: 2010
Responsible: Faculty of Business Management and Economics
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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:

\( ASPO2007 \)

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

\( 17-Aug-2011 \ (2011-80) \)

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

(50 ECTS credits)
Compulsory Courses Business Sciences
(10 ECTS credits)
Module title  |  Abbreviation
---|---
Logistic Concepts and Processes | 12-LA-072-m01

**Module coordinator**  
Business Integration Prof. Thome

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

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**Contents**

This module discusses fundamental aspects and contemporary concepts of logistical tasks and processes.

**Intended learning outcomes**

Students will learn about the fundamental aspects and contemporary concepts of logistical tasks and processes especially in the field of Operations Management. Additionally students will be able to evaluate the business impacts of a better performance of logistical issues within a 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)

written examination (approx. 60 minutes)

**Allocation of places**

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**Additional information**

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

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<th>Module title</th>
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<td>Operations Research</td>
<td>12-LM-072-m01</td>
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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:
The module familiarises students with essential fundamentals, concepts and methods of logistics applications.

- Modelling
- Graph theory
- Network technology
- Flows in networks
- Touring / route planning
- From heuristics to optimisation
- Simulation

**Intended learning outcomes**
The students
(i) have significant knowledge of the fundamentals, concepts and methods of logistical applications and
(ii) can recognize their economic importance and consequences.

**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**

--

**Additional information**

--

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

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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)

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

**Allocation of places**

--

**Additional information**

--

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

--
**Module title**: Practical Training in Business Information Systems

**Abbreviation**: 12-WI-Prak-072-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**

By way of exception, additional prerequisites are listed in the section on assessments.

**Contents**

Content:
The students are divided into small project teams of 4 to 10 members, and will spend several months actively working on a specific and realistic problem with practical relevance. This project will progress through several stages: state-of-the-art analysis, design, 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**

This module has 2 components; information on courses listed separately for each component.
- 12-WI-Prak-1-072: P (no information on language and number of weekly contact hours available)
- 10-I-Prak-1-072: P (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-WI-Prak-1-072: Wirtschaftsinformatik Praktikum**
- 10 ECTS credits, method of grading: (not) successfully completed
- Term paper (approx. 20 pages) and presentation (20 minutes)

**Assessment component to module component 10-I-Prak-1-072: Fortgeschrittenenpraktikum**
- 10 ECTS credits, method of grading: (not) successfully completed
- Completion of project assignment including submission of logs, final talk; length/expenditure of time to be specified at the beginning of the course
- Other prerequisites: Registration for assessment: Yes, as specified.

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I**

(examination regulations for teaching-degree programmes)
Module title: Information Systems Analysis and Design
Abbreviation: 12-IS-072-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

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

Contents:
(This course was discontinued and replaced by the course "IT-Management")

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:
· Hofmann/Schmidt: Masterkurs IT-Management, Wiesbaden.
· 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:
V + Ü (no information on SWS (weekly contact hours) and course language available)

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

Allocation of places:
--

Additional information:
--

Referred to in LPO I (examination regulations for teaching-degree programmes)
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Master's with 1 major Business Information Systems
(2010)
### Information Processing within Organizations

**Module title**: Information Processing within Organizations  
**Abbreviation**: 12-IU-072-m01

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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

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

### 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

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### Method of assessment

**Type**: written examination  
**Scope**: approx. 60 minutes

**Allocation of places**: --

**Additional information**: --

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

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Module title | Abbreviation
--- | ---
Advanced Seminar: Business Information Systems | 12-WI-Sem-072-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

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

Allocation of places

--

Additional information

--

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

--
Compulsory Courses Computer Science
(10 ECTS credits)
### Module Catalogue for the Subject
Business Information Systems
Master’s with 1 major, 120 ECTS credits

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<td>Dean of Studies Informatik (Computer Science)</td>
<td>Institute of Computer Science</td>
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<td>undergraduate</td>
<td>By way of exception, additional prerequisites are listed in the section on assessments.</td>
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### Contents

This course teaches the foundations of intelligent systems.

### Intended learning outcomes

The students master the fundamentals of intelligent systems.

### Courses

This module has 4 components; information on courses listed separately for each component.

- 10-I-EL-1-092, 10-I-IR-1-092, 10-I-KIWI-1-102, and 10-I-KIWI-2-111: V + Ü (no information on language and number of weekly contact hours available)

### Method of assessment

This module has the following 4 assessment components. To pass the module as a whole students must pass two of the four assessment components.

**Assessment in module component 10-I-EL-1-092:** eLearning
- 5 ECTS credits, numerical grading
- written examination (50 minutes) or oral examination (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes)
- Only after successful completion of module components: Students must take two out of the four module components of this module.

**Assessment in module component 10-I-IR-1-092:** Information Retrieval
- 5 ECTS credits, numerical grading
- a) written examination (approx. 50 minutes) or b) oral examination (one candidate each: approx. 15 minutes, groups of 2: approx. 20 minutes, groups of 3: approx. 25 minutes)
- Only after successful completion of module components: Students must take two out of the four module components of this module.

**Assessment in module component 10-I-KIWI-1-102:** Künstliche Intelligenz 1 für Wirtschaftsinformatiker (Artificial Intelligence 1 for Business Informatics), and **in module component 10-I-KIWI-2-111:** Künstliche Intelligenz 2 für Wirtschaftsinformatiker (Artificial Intelligence 2 for Business Informatics):
- 5 ECTS credits, numerical grading
- a) written examination (approx. 45 to 50 minutes) or b) oral examination (one candidate each: approx. 15 minutes, groups of 2: approx. 20 minutes, groups of 3: approx. 25 minutes)
- Additional prerequisites: admission prerequisite to assessment: academic requirements to be met in exercises as specified at the beginning of the course.

### 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
(40 ECTS credits)
Compulsory Electives Business Sciences
(5 ECTS credits)
Module title | Abbreviation
--- | ---
Competition and Strategy 1 | 12-S&W1-F-082-m01

Module coordinator
holder of the Chair of Industrial Economics

Module offered by
Faculty of Business Management and Economics

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Duration
1 semester

Module level
undergraduate

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

Intended learning outcomes
Students which complete this course will be able to
(i) explain different equilibrium concepts (Nash equilibrium, subgame perfect equilibrium, bayesian equilibrium, perfect bayesian equilibrium);
(ii) explain for which kind of strategic situation each of these equilibrium concepts were developed;
(iii) apply these concepts to simple realistic strategic situations;
(iv) choose the appropriate equilibrium concept which fits best to a given strategic situation.

Courses (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
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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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Competition and Strategy 2 | 12-S&W2-F-082-m01

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

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</table>

Contents

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

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

Reading:
Schulz: Wettbewerbspolitik, Tübingen.

Intended learning outcomes

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

Courses (type, number of weekly contact hours, language — if other than German)
V + 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
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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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<tbody>
<tr>
<td>Financial Statement Analysis and Business Valuation</td>
<td>12-UBB-072-m01</td>
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<td>holder of the Chair of Business Management and Accounting</td>
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**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.

**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 (60 minutes)

**Allocation of places**
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**Additional information**
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<td>Aspects of Logistics 1</td>
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**Contents**

This course is a dummy module, e. g. for courses in the area of logistics 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)

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 (60 minutes)

**Allocation of places**

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**Additional information**

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<td>Microeconomics III: Welfare Economics - The Market and the State</td>
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### Contents

**Description:**
This lecture deals with the allocative tasks of the government in a market economy. In this context, the lecture will first develop the theory of market failure and will then describe the positive effects government activities have on such market allocations.

**Outline of syllabus:**
1. Allocative foundations of welfare economics
2. External effects
3. Public goods

**Intended learning outcomes**
After completing the course "Microeconomics 3" students know the concept of efficiency and when a market economy satisfies these conditions. They are able to discuss the central role of government in a market economy and to apply these arguments to specific public policies (i.e. environmental policy). Of course, students should also be aware of the limitations of government interventions.

### Courses

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### Method of assessment

- written examination (60 minutes)

### Allocation of places

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### Additional information

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**Contents**

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

**Intended learning outcomes**

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

**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 (60 minutes)

**Allocation of places**

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**Additional information**

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

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Description: Students will become familiar with the basic principles of stochastic models and stochastic analysis in risk management. The Six Sigma developed in industrial statistics is used for orientation within the topic of risk analysis: identify risks, measure risks, identify risk status on the basis of measurements, improve risk status through measures to monitor risk status. The required steps are presented and discussed with reference to the preceding course "RMZ 1 - Risikomanagement" ("RMZ 1 - Risk Management"). Operational exercises are carried out with the statistical analysis package Statistica.

Outline of syllabus:
1. The Six Sigma Scheme for risk analysis
2. Risk measurement
3. Risk analysis, determination of risk status
4. Stochastic aid for measures to improve risk status
5. Monitoring of risk status

Intended learning outcomes

The course has three goals:
1. Participants will receive a structured overview of the stochastic methods of risk management.
2. Participants will be able to adequately assess the potential and the obviousness of stochastic methods in the context of Risk Management.
3. Participants have the basics of operationalization stochastic methods.

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-MM-1-072: V (no information on SWS (weekly contact hours) and course language available)
- 12-RM-MM-2-072: 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-MM-1-072: Stochastic Models for Risk Analysis
- 2 ECTS, Method of grading: numerical grade
- written examination (60 minutes)

Assessment in module component 12-RM-MM-2-072: Financial Reporting and Risk Management
- 3 ECTS, Method of grading: numerical grade
-
Module Catalogue for the Subject
Business Information Systems
Master's with 1 major, 120 ECTS credits

- written examination (60 minutes)

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<tr>
<td>Advanced Seminar: Logistics</td>
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<tr>
<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**

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

**Intended learning outcomes**

After the seminar, students

(i) recognize complex problems of logistics and understand mathematical model formulation to solve practical problems;

(ii) understand, evaluate and scrutinize critically the results of such models;

(iii) recognize, describe and assess the limitations of formal models in a practical context.

**Courses**

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

**Method of assessment**

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

**Allocation of places**

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**Additional information**

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

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## Module title
Management Methods

## Abbreviation
12-MM-092-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

**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 "Managementmethods", 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

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### Allocation of places

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Master's with 1 major Business Information Systems (2010)

JMU Würzburg • generated 23-Aug-2021 • exam. reg. data record Master (120 ECTS) Wirtschaftsinformatik - 2010

page 29 / 50
Compulsory Electives Information Management
(ECTS credits)
### 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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<tbody>
<tr>
<td>Mobile and Ubiquitous Systems</td>
<td>12-MUS-101-m01</td>
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**Module coordinator**

holder of the Chair of Information Systems Engineering

**Module offered by**

Faculty of Business Management and Economics

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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:

1. Mobile Infrastructure
2. Mobile Business
3. The Auto-ID technologies
4. Smart Metering
5. 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) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:2 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) completion of programming exercises (as specified)

### Allocation of places

Number of places: 40. Should the number of applications exceed the number of available places, places will be allocated as follows: Master's students of Wirtschaftsinformatik (Business Information Systems) (120 ECTS credits) will be given preferential consideration when it comes to admission to the courses and assessment in the module component. a) Should, however, the number of applications from Master's students of Wirtschaftsinformatik already exceed the number of available places, places will be allocated according to the total number of ECTS credits achieved so far in the degree subject Wirtschaftsinformatik Master's; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. b) Should the number of available places exceed the number of applications from Master's students of Wirtschaftsinformatik, the remaining places will be allocated by lot to Master's students of Business Management (120 ECTS credits) and Master's students of Economics (120 ECTS credits).

### 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>IT and Labor Market</td>
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<tbody>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

### 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

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

### Method of assessment

written examination (approx. 60 minutes)

### Allocation of places

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### Additional information

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**Intended learning outcomes**

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**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 (60 minutes)

**Allocation of places**

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**Additional information**

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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)

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 (60 minutes)

**Allocation of places**

--

**Additional information**

--

**Referred to in LPO I**

(examination regulations for teaching-degree programmes)

--
Module title: Process and System Modelling

Abbreviation: 12-PSM-092-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 course familiarises students with relevant principles, concepts and methods of process and system modelling. 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 inscriptions 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 (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 (60 minutes)

Allocation of places

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Additional information

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

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<table>
<thead>
<tr>
<th>Module title</th>
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<tbody>
<tr>
<td>Business Intelligence</td>
<td>12-BI-092-m01</td>
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<th>Module coordinator</th>
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<tbody>
<tr>
<td>holder of the Chair of Information Systems Engineering</td>
<td>Faculty of Business Management and Economics</td>
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<th>Duration</th>
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<td>1 semester</td>
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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 (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 (60 minutes)

### Allocation of places

--

### Additional information

--

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

--
Adaption and Continuous System Engineering

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<th>Module title</th>
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<td>Adaption and Continuous System Engineering</td>
<td>12-ACSE-092-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

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

**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**

<table>
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<tr>
<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**

<table>
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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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<tr>
<td>written examination (approx. 60 minutes)</td>
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**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) 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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</table>
Module title: Introduction to Logistical Process Design

Abbreviation: 12-GLP-092-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:

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:

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 (60 minutes)

Allocation of places:

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Additional information:

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

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### Module 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>Risk Management - Concepts and Systems</td>
<td>12-RM-KS-092-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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<tr>
<th>ECTS Method of grading</th>
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**Duration**: 1 semester  
**Module level**: graduate  
**Other prerequisites**: --

### 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-1-092: V (no information on SWS (weekly contact hours) and course language available)
- 12-RM-KS-2-092: 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-1-092**: Risk Management - Concepts  
  - 2 ECTS, Method of grading: numerical grade  
  - written examination (60 minutes)

- **Assessment in module component 12-RM-KS-2-092**: Risk Management - Systems  
  - 3 ECTS, Method of grading: numerical grade  
  - written examination (60 minutes)

### Allocation of places

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### Additional information

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

--
Module title | Abbreviation
---|---
Business Service Architecture | 12-BSA-092-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
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 limitations 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 (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)
written examination (60 minutes) and management report (approx. 6 pages), weighted 2:1

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
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Module title | Abbreviation
---|---
Decision Support Systems | 12-M-DSS-102-m01

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

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<td>1 semester</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

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

Method of assessment

The method of assessment will be specified at the beginning of each exercise. a) written examination (approx. 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:2 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 c) completion of programming exercises (as specified)

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>
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<th>Module title</th>
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<tr>
<td>Internet-Based Systems</td>
<td>12-M-IBS-102-m01</td>
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<tr>
<td>holder of the Chair of Information Systems Engineering</td>
<td>Faculty of Business Management and Economics</td>
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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

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### Method of assessment

The method of assessment will be specified at the beginning of each exercise. a) written examination (approx. 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:2 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 c) completion of programming exercises (as specified)

### 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
---|---
Information Systems Research | 12-M-ISR-102-m01

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

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

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

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 (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)

The method of assessment will be specified at the beginning of each exercise. a) written examination (approx. 60 minutes) or b) presentation (approx. 20 minutes) with written elaboration (approx. 15 to 20 pages), weighted 1:2 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 c) completion of programming exercises (as specified)

Allocation of places
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Additional information
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Referred to in LPO I (examination regulations for teaching-degree programmes)
--
Compulsory Electives Computer Science

(ECTS credits)
**Module title**  
program analysis

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<th>Abbreviation</th>
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**Module coordinator**  
holder of the Chair of Computer Science II

**Module offered by**  
Institute of Computer Science

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<td>1 semester</td>
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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 (50 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 25 minutes, groups of 3: 25 minutes)

**Allocation of places**

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**Additional information**

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

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<tr>
<td>Data bases 2</td>
<td>10-I-DB2-072-m01</td>
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**Module coordinator**
Dean of Studies Informatik (Computer Science)

**Module offered by**
Institute of Computer Science

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

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

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

**Intended learning outcomes**
The students possess an advanced knowledge of databases, XML and data mining.

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

**Method of assessment**
written examination (50 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 25 minutes, groups of 3: 25 minutes)

**Allocation of places**
--

**Additional information**
--

**Referred to in LPO I**
(examination regulations for teaching-degree programmes)
--
Thesis
(30 ECTS credits)
Module title | Abbreviation
---|---
Master Thesis Business Information Systems | 12-WI-MA-072-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 | By way of exception, additional prerequisites are listed in the section on assessments.

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)
This module comprises 2 module components. Information on courses will be listed separately for each module component.
- 12-WI-MA-1-072: no courses assigned
- 10-I-MA-1-072: 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)
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-WI-MA-1-072: Master Thesis Business Information Systems
- 30 ECTS, Method of grading: numerical grade
- written thesis
- Language of assessment: German or English
- Other prerequisites: Registration for assessment on a continuous basis as agreed upon with supervisor. Topic to be selected in consultation with supervisor. Topic to be assigned by examination committee (Section 21 Subsection 3 ASPO (general academic and examination regulations)).

Assessment in module component 10-I-MA-1-072: master thesis
- 30 ECTS, Method of grading: numerical grade
- written thesis
- Language of assessment: German or English
- Other prerequisites: Registration for assessment on a continuous basis as agreed upon with supervisor. Topic to be selected in consultation with supervisor. Topic to be assigned by examination committee (Section 21 Subsection 3 ASPO (general academic and examination regulations)).
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