Information Systems and Management Bachelor
Informations Systems and Management - Bachelor

**General Description**

The Computer Science/Mathematics Department 07 offers programs of study in two different areas:
- Computer Science (Bachelor and Master)
- Information Systems and Management (Bachelor and Master, in cooperation with the Business Administration Department 10)

This brochure only describes the Information Systems and Management Bachelor program of study. There are separate brochures for the Master Degree Program, and for the programs of study in Computer Science.

There are approximately 800 students enrolled in Computer Science and 350 students enrolled in Information Systems and Management at the Department of Computer Science/Mathematics. Approximately 35 full-time professors teach students, as well as a changing number of guest lecturers from industry. (In the Information Systems and Management programs, these are supplemented by another 10 professors from the Business Administration Department.) Hence, the Department is able to offer a wide range of courses from a broad canon of current themes relevant to practice. Close relations with many companies in the greater Munich area make it possible to offer internships or case study projects in cooperation with the industry.

The following 15 laboratories with about 100 workstations are available to students:

- Laboratory for Chip Cards,
- Laboratory for Computer Anatomy,
- Laboratory for Computer Graphics and Image Processing,
- Laboratory for Autonomous Systems,
- Laboratory for Microcomputers,
- Laboratory for Computer Vision and Pattern Recognition,
- Laboratory for Computer Integrated Manufacturing,
- Laboratory for Computer Organisation,
- Laboratory for Software Development,
- Laboratory for Java,
- Laboratory for Knowledge-Based Systems, and
- Laboratory for Computer Systems and Information Management,
- Laboratory for Highly Reliable Systems, and
- Laboratory for Mathematics.

**Bachelor program**

After successful completion of the Bachelor program, students will gain the

**Academic degree:** Bachelor of Science (B.Sc.)

The Bachelor degree program was accredited by the ASIN.

Concurrently to the Bachelor program of study, students may enrol in the supplemental program „Privacy and Data Protection“ (21 ECTS credits). Successful graduates of this supplemental program will receive a state-approved university certificate.

**Admission requirements**

The general requirements for admission to a University of Applied Sciences (Fachhochschule) apply. This means that generally a high school degree or a degree from a polytechnic college is a prerequisite. In addition, there are minimum grade requirements (Numerus clausus).

**Recommendations for exchange students**

The study period at the Munich University of Applied Sciences (MUAS) can be one or more semesters in length. Most courses are one semester in length and conclude with an examination at the end of the semester. Only the course “Information Systems and Management” in the Bachelor degree program extends over the first and second semester. Note, however, that not all courses are offered in every semester. Some courses will only be offered in summer semester, others only in winter semester. In each semester, only a choice of the electives will be offered.

Exchange students are free to make a course selection that most complements the course requirements of their home university. When making their choice, it is irrelevant whether the chosen courses are required courses, or electives, or whether the courses are from different programs of study or take place in different semesters of study. It is, however, the student’s own responsibility to make sure that there are no scheduling conflicts in the student’s weekly lecture schedule. Such conflicts can generally be avoided by choosing courses that all are assigned the same semester of study.

Each semester, a small number of the courses will be offered in English language. However, in order to allow for a useful and flexible selection of courses, it is strongly recommended that exchange students be able to attend courses in German language.

Students interested in a practical study semester in industry should apply directly with the company. However, since the department has a list of companies which are hiring students for internships, and close relations with many of them, you might want to contact the department first.

**Diagram providing an overview of the Bachelor program of study:**

- 7. Semester (with Bachelor Thesis)
- 6. Semester
- 5. Semester (Project work)
- 4. Semester
- 3. Semester
- 2. Semester (WS 2005/06)
- 1. Semester
- Orientation Examination

Bachelor of Science
Examination regulations and grading procedures:

In most courses, students will have to pass a written exam at the end of the semester. Others require students to also hand in practicum assignments or research project reports, or to give presentations. Most of these assignments receive a grade. Some are marked on a „pass“ or „fail“ basis.

1.0 is the highest grade and 5.0 the lowest; a grade of 4.0 means you have just passed the exam.

1.0 or 1.3  very good  
1.7 or 2.0 or 2.3  good  
2.7 or 3.0 or 3.3  satisfactory  
3.7 or 4.0  adequate  
5.0  insufficient (failed)

Students may repeat any failed exam once. A limited number of exams may be repeated twice upon applying to do so.

You will find the binding rules for exams in the current course calendar (Studiенplan) as well as in the conditions of study and exam ordinance (Studien- und Prüfungsordnung).
### 6. Semester

<table>
<thead>
<tr>
<th>Course-Nr.</th>
<th>Title</th>
<th>Type</th>
<th>H/W</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-WI-B13</td>
<td>Data Communications</td>
<td>Mandatory</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B16</td>
<td>Computer Science Elective</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B27</td>
<td>Business Simulation</td>
<td>Mandatory</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B30</td>
<td>Elective: Formal Concepts in Information Systems and Management I</td>
<td>Mandatory</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B31</td>
<td>Elective: Formal Concepts in Information Systems and Management II</td>
<td>Mandatory</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B36</td>
<td>Seminar on Information Systems and Management II</td>
<td>Mandatory</td>
<td>4</td>
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### 7. Semester

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<thead>
<tr>
<th>Course-Nr.</th>
<th>Title</th>
<th>Type</th>
<th>H/W</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-WI-B22</td>
<td>Business Elective</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B32</td>
<td>Elective: Formal Concepts in Information Systems and Management III</td>
<td>Mandatory</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B34</td>
<td>Elective on Information Systems and Management II</td>
<td>DCE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B37</td>
<td>Bachelor Seminar, and Bachelor Thesis</td>
<td>Mandatory</td>
<td>4</td>
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</tbody>
</table>

**Courses in the Computer Science mandatory electives group are:**

<table>
<thead>
<tr>
<th>Course-Nr.</th>
<th>Title</th>
<th>Type</th>
<th>H/W</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-WI-B16</td>
<td>Data Structures and Algorithms</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B17</td>
<td>Data Management</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B18</td>
<td>IT Security</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Courses in the Business mandatory electives group are:**

<table>
<thead>
<tr>
<th>Course-Nr.</th>
<th>Title</th>
<th>Type</th>
<th>H/W</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-WI-B22</td>
<td>Privacy and Data Protection</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B23</td>
<td>Marketing</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>IF-WI-B24</td>
<td>Materials Management and Logistics</td>
<td>CE</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**"Privacy and Data Protection" Supplemental Program**

- Students who have successfully completed the preliminary exam may enrol in the "Privacy and Data Protection" supplemental program. The program includes the following courses. Some of the courses also are compulsory courses or electives in the Bachelor program of study.

<table>
<thead>
<tr>
<th>Course-Nr.</th>
<th>Title</th>
<th>H/W</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>IF-Z-BD01</td>
<td>Privacy and Data Protection</td>
<td>4</td>
<td>IF-WI-B22</td>
</tr>
<tr>
<td>IF-Z-BD02</td>
<td>IT Security</td>
<td>4</td>
<td>IF-WI-B18</td>
</tr>
<tr>
<td>IF-Z-BD03</td>
<td>Business Law</td>
<td>4</td>
<td>IF-WI-B10</td>
</tr>
<tr>
<td>IF-Z-BD04</td>
<td>Practical Studies in Privacy and Data Protection</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>IF-Z-BD05</td>
<td>Current Issues in Data Protection</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

### 1. Mathematics for Economics-Analysis I

**Course no.: IF-WI-B01**

- **Type:** CE
- **H/W:** 4
- **Credits:** 5

**Contents**
- Principles of differential and integral calculus with univariates
- Principles of algebra and linear algebra, particularly systems of equations and matrices
- Significant numeric processes in the economy

**Prerequisites**
None

**Objectives**
Hands-on grasp of essential mathematical principles and modelling methods applicable in computer science and the economy.

**Recommended literature**

**Method of instruction**
- Seminars with exercises

**Examination**
- Written examination

**Language of instruction**
- German

**Instructor(s)**
- Schwenkert, Zielke

### 2. Mathematics for Economics-Analysis II

**Course no.: IF-WI-B02**

- **Type:** CE
- **H/W:** 4
- **Credits:** 5

**Contents**
- Finance mathematics
- Principles of differential calculus with multivariates
- Selected special topics in business mathematics

**Prerequisites**
- Business Mathematics I (IF-WI-B01)

**Objectives**
Hands-on grasp of essential mathematical principles and modelling methods applicable in computer science and the economy. Discussion of selected special topics in business mathematics.

**Recommended literature**
None

**Method of instruction**
- Seminars with exercises

**Examination**
- Written examination

**Language of instruction**
- German

**Instructor(s)**
- Schwenkert, Zielke
3. Statistics and Operations Research

Course no.: IF-WI-B03

Course: 4 H/W

Semester: 2.

ECTS-Credits: 5

**Contents**
- Probability calculus, descriptive and inductive statistics
- Operations research, particularly linear optimisation
- Selected special topics in applied statistical methods and operations research

**Prerequisites**
- Business Mathematics I (IF-WI-B01)

**Objectives**
- An understanding of the most significant principles in the fields of statistics and operations research. Ability to apply the acquired knowledge to practical problems (modelling and problem solving).

**Recommended Literature**

**Method of Instruction**
- Seminars with exercises

**Exam**
- Written exam

**Instructor(s)**
- Schwenkert, Zielke

4. Information Systems and Management

Course no.: IF-WI-B04

Course: 2 x 4 H/W

Semester: 1/2.

ECTS-Credits: 5

**Contents**
- Business applications: classification; selection and implementation of software; components and typology of company information processing application systems.
- Information and communication technology (ICT systems): networks; data transfer; teleprocessing and distributed information processing.
- IT-systems: systems programmes (e.g. operating systems, database-systems, user interfaces); operating modes.
- Information and communication technology (ICT systems): networks; data transfer; teleprocessing and distributed information processing.
- Hardware: hardware architecture of IT-systems. Structure, components and functioning of computers and peripherals.
- IT-systems: systems programmes (e.g. operating systems, database-systems, user interfaces); operating modes.
- Algorithms and data structures: simple data structures and algorithms.
- Basic principles of software engineering (e.g. phase models, object-oriented software development).
- Algorithms and data structures: complex data structures and algorithms.
- Basic principles of software engineering (e.g. phase models, object-oriented software development).

**Prerequisites**
- None

**Objectives**
- Students will gain an overview of the structure, components and operating methods of IT-systems and their implementation in a company setting as well as the theoretical foundations of computer science.

**Recommended Literature**
- Gummi H.-P.; Sommer M.: *Einführung in die Informatik*, Oldenbourg, München

**Method of Instruction**
- Seminars with exercises

**Exam**
- Written exam

**Instructor(s)**
- Schwenkert, Zielke

5. Software Development I

Course no.: IF-WI-B05

Course: 4 H/W


ECTS-Credits: 5

**Contents**
- Programming: programming fundamentals (logic, operating sequence, structuring). Acquisition of a high-level programming language.
- Algorithms and data structures: simple data structures and algorithms.

**Prerequisites**
- None

**Objectives**
- Understanding the logic of programme development and programming. Learning a suitable, expression-heavy programming language which the student can use during the practical semester, from a didactic perspective.

**Recommended Literature**

**Method of Instruction**
- Seminars with written exams

**Exam**
- Graded practical programming exercises; written examination at the end of part two

**Instructor(s)**
- Möncke, Zimmer

6. Software Development II

Course no.: IF-WI-B06

Course: 4 H/W

Semester: 2.

ECTS-Credits: 5

**Contents**
- Algorithms and data structures: complex data structures and algorithms.
- Basic principles of software engineering (e.g. phase models, object-oriented software development).

**Prerequisites**
- *Basic knowledge of information systems
- Programming skills on the level of Software Development I (IF-WI-B05)*

**Objectives**
- Enrichment of programme development and programming skills.

**Recommended Literature**

**Method of Instruction**
- Seminars with exercises

**Exam**
- Graded practical programming exercises; written examination covering parts one and two

**Instructor(s)**
- Möncke, Zimmer
### 7. Business Administration

**Course no.: IF-WI-B07**

- **4 H/W**
- **1 Semester**
- **5 ECTS-Credits**

<table>
<thead>
<tr>
<th>Contents</th>
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<tbody>
<tr>
<td>Introduction to:</td>
</tr>
<tr>
<td>- Introduction to business economics and its place within science</td>
</tr>
<tr>
<td>- Company setup: incorporation laws (legal forms and co-determination)</td>
</tr>
<tr>
<td>- Organisation: (start up and operating processes)</td>
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<tr>
<td>- Location choice</td>
</tr>
<tr>
<td>- Business processes: production; marketing</td>
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<tr>
<td>- Investment and financing</td>
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<tr>
<td>- Controlling</td>
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<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>None</td>
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<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td>The objective is to provide an understanding the setup and functions of a company and the basics of management taking IT implementation possibilities into account. Students will learn the legalities as well as the organisation and business processes of a company.</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Recommended literature</th>
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<tbody>
<tr>
<td>Wöhe, Günter: Einführung in die Allgemeine Betriebswirtschaftslehre, neueste Auflage, Vahlen, München.</td>
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<tr>
<th>Method of instruction</th>
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<tbody>
<tr>
<td>Seminars</td>
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<tr>
<th>Examination</th>
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<tbody>
<tr>
<td>Written examination</td>
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<tr>
<th>Language of instruction</th>
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<tr>
<td>German</td>
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<tr>
<th>Instructor(s)</th>
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<tbody>
<tr>
<td>Stützle, Greiner, Petsl</td>
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### 8. Managerial Accounting

**Course no.: IF-WI-B08**

- **4 H/W**
- **1 Semester**
- **5 ECTS-Credits**

<table>
<thead>
<tr>
<th>Contents</th>
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<tbody>
<tr>
<td>Introduction to:</td>
</tr>
<tr>
<td>- Double-entry bookkeeping</td>
</tr>
<tr>
<td>- The accounting system: entry of special business cases; balancing and valuation methods; tax regulations.</td>
</tr>
<tr>
<td>- Annual accounts.</td>
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<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>None</td>
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</table>

<table>
<thead>
<tr>
<th>Objectives</th>
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</thead>
<tbody>
<tr>
<td>An overview of business accounting. Competency in bookkeeping and rendering of accounts. Ability to compile and analyse annual accounts and provide a position report.</td>
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<table>
<thead>
<tr>
<th>Recommended literature</th>
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<tr>
<th>Method of instruction</th>
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<tbody>
<tr>
<td>Seminars with exercises</td>
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<table>
<thead>
<tr>
<th>Examination</th>
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<tbody>
<tr>
<td>Written examination</td>
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<tr>
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<tbody>
<tr>
<td>Stützle, Greiner, Körbs</td>
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### 9. Economics

**Course no.: IF-WI-B09**

- **4 H/W**
- **1 Semester**
- **5 ECTS-Credits**

<table>
<thead>
<tr>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Basic terminology</td>
</tr>
<tr>
<td>- Economic and social systems</td>
</tr>
<tr>
<td>- Micro-economics: demand, production and choice, pricing in different market forms</td>
</tr>
<tr>
<td>- Macro-economics: economic cycle, finances in political economy, production and distribution, growth</td>
</tr>
<tr>
<td>- Economic policy</td>
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<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>None</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td>An overview of the basic terminology in the field of political economy, behaviour patterns and interrelations.</td>
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<table>
<thead>
<tr>
<th>Recommended literature</th>
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<table>
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<tr>
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<tbody>
<tr>
<td>Seminars</td>
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<table>
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<tr>
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<td>Written examination</td>
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<thead>
<tr>
<th>Instructor(s)</th>
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<tbody>
<tr>
<td>Lankes, Lenk, Stützle</td>
</tr>
</tbody>
</table>
10. Business Law

Course no.: IF-WI-B10

4 H/W

2. Semester

5 ECTS-Credits

Contents
• The legal system
• Legal regulations of business law (particularly from sections of the German Civil Code pertaining to general parts, law of obligations and contract, law of tort, and law of property)
• Introduction to selected case studies
• Particular problem statements in the area of telecommunications and internet as well as software production and licensing

Prerequisites
None

Objectives
Knowledge of the legal principles of business law and methods to assess the facts of a case and systematically solve simple cases.

Recommended literature
• Textbooks: Lorenz/Riehm, Lehrbuch zum neuen Schuldrecht, Beck, München, 2002
Medicus, Schuldrecht I Allgemeiner Teil, Beck, München, 2002

Method of instruction
Seminars

Examination
Written examination

Language of instruction
German

Instructor(s)
Möncke

11. General Studies Courses

Course no.: IF-WI-B11

4 H/W

2. Semester

5 ECTS-Credits

Contents
General Studies compulsory electives may be chosen from the selection offered by the university under the auspices of the university’s general guidelines in as far as they are not compulsory courses or departmental compulsory electives from the Information System programme of study or on the programme’s exclusion list. General Studies courses taken during the Bachelor basic phase of studies are also excluded.

The total number of hours per week must be in accord with the number of hours per week listed in the lecture schedule.

Prerequisites
None

Objectives
The acquisition of character-building general knowledge based on constitutional and basic legal ethical norms.

Recommended literature
Depending on the course

Method of instruction
Seminars

Examination
Determined by the General Studies Department

Language of instruction
German or English

Instructor(s)
Lenk

12. Database Systems

Course no.: IF-WI-B12

4 H/W

3. Semester

5 ECTS-Credits

Contents
Seminars will cover:
• Foundations of database systems and architecture
• Database management systems, focussing on relational databases
• Database languages, particularly SQL
• Physical database setup
• Transaction and concurrency concepts, recovery methods
• Administration of database systems, error control aspects
• Database special topics

Prerequisites
None

Objectives
Overview of architectures, processes and applications of database systems, knowledge of the most significant methods, techniques, processes and tools used with persistent data.

Recommended literature
Pernul, G.; Unland, R.: Datenbanken im Unternehmen, Oldenbourg, 2001
Vossen, G.: Datenbankmodelle, Datenbanksprachen und Datenbankmanagement-Systeme, Oldenbourg, 3.Auflage, 1999

Method of instruction
Seminars with a practicum

Examination
Written exam

Language of instruction
German or English

Instructor(s)
Schwenkert, Staudt

13. Data Communications

Course no.: IF-WI-B13

4 H/W

6. Semester

5 ECTS-Credits

Contents
• Basic communication architecture terminology and fields of application (e.g. layered model, protocols, network types and technologies).
• Development of communication applications on the basis of transport protocols such as TCP and UDP.
• Use of transport access ports such as sockets
• Study of selected issues evident in real, particularly TCP/IP-based, data communication systems.
• Particular aspects of data communications such as connection-based and connectionless communication, secure data transfer, routing, segmentation and fragmentation as well as special aspects of network design.

Prerequisites
None

Objectives
Overview of architectures, processes and applications of database systems, knowledge of the most significant methods, techniques, processes and tools used with persistent data.

Recommended literature
Pernul, G.; Unland, R.: Datenbanken im Unternehmen, Oldenbourg, 2001
Vossen, G.: Datenbankmodelle, Datenbanksprachen und Datenbankmanagement-Systeme, Oldenbourg, 3.Auflage, 1999

Method of instruction
Seminars

Examination
Written examination

Language of instruction
German

Instructor(s)
Schwenkert, Staudt
13. Data Communications (ff.)

Course no.: IF-WI-B14

Prerequisites
- basic knowledge of the principles of computer communications from basic phase of studies (information systems module)
- programming skills in an object-oriented programming language such as Java, C++, or C# from the basic phase of studies (software development module)

Objectives
- Knowledge of the principles, work processes and application options in data communications.

Recommended literature

Method of instruction
- seminars with exercises

Examination
- graded practical programming exercises; written examination covering parts one and two.

Language of instruction
- German

Instructor(s)
- Mandl, Peter, Böttcher

14. Software Engineering I

Course no.: IF-WI-B14

4 H/W

3. Semester

5 ECTS-Credits

Contents
- Software engineering models within the software life-cycle
- Phase-specific methods and tools of software engineering
- Object-oriented analysis and design

Prerequisites
- Basic knowledge of information systems
- Programming skills

Objectives
- Knowledge of the objectives, theory and practice of software engineering. Familiarity with the methods, techniques, processes and tools used in analysis, design, implementation, maintenance and project planning of software.

Recommended literature

Method of instruction
- seminars with exercises

Examination
- graded practical project work; written examination covering parts one and two.

Language of instruction
- German

Instructor(s)
- Heigert, Zimmer

15. Software Engineering II

Course no.: IF-WI-B15

4 H/W

4. Semester

5 ECTS-Credits

Contents
- Software engineering models within the software life-cycle
- Project management, quality assurance, and configuration management while developing software
- Computer-assisted software engineering
- Economic aspects of software development
- Selected topics in software engineering (e.g., software ergonomics, software maintenance, re-engineering, modelling of companies)

Prerequisites
- Basic knowledge of information systems
- Programming skills
- Principles of software engineering (cf. part I)

Objectives
- Knowledge of the objectives, theory and practice of software engineering. Familiarity with the methods, techniques, processes and tools used in analysis, design, implementation, maintenance and project planning of software.

Recommended literature

Method of instruction
- seminars with exercises

Examination
- graded practical project work; written examination covering parts one and two.

Language of instruction
- German

Instructor(s)
- Heigert, Zimmer

16. Data Structures and Algorithms

Course no.: IF-WI-B16

4 H/W

4. or 6. Semester

5 ECTS-Credits

Contents
- Analysis of algorithms
- Elementary data structures
- Recursion
- Abstract data types (e.g., stacks, queues, trees)
- Search, merge, and sort algorithms

Prerequisites
- Basic knowledge of information systems and management
- Programming skills

Objectives
- Knowledge of the most significant algorithmic concepts and data structures used in the economy today and familiarity with their particular characteristics.

Recommended literature
- Sedgewick, R.: Algorithmen in C++, Pearson Studium, München
- Breutmann, B.: Data and Algorithms, Hanser, München

Method of instruction
- seminars with exercises

Examination
- course work and written examination

Language of instruction
- German

Instructor(s)
- N. N.
### 17. Data Management

**Course no.: IF-WI-B17**

4 H/W

4. or 6. semester

5 ECTS-Credits

<table>
<thead>
<tr>
<th>Contents</th>
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</thead>
<tbody>
<tr>
<td>• Principles and concepts of information analysis, strategic information planning: models and architectures</td>
</tr>
<tr>
<td>• Semantic and logical data modelling, techniques of forward- and reverse-engineering</td>
</tr>
<tr>
<td>• Data management in companies</td>
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<tr>
<td>• Selected topics in data management, such as modelling verification, metadata management, data warehouse architectures, migration techniques, etc.</td>
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<table>
<thead>
<tr>
<th>Prerequisites</th>
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<td>none</td>
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<table>
<thead>
<tr>
<th>Objectives</th>
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<tbody>
<tr>
<td>Knowledge of the most significant processes, planning, acquisition, administration and use of data as company resources, insight into the tasks, methods, and utilities of data management and strategic information planning.</td>
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<table>
<thead>
<tr>
<th>Recommended literature</th>
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<tbody>
<tr>
<td>Voß, G.: Datenbankmodelle, Datenbanksprachen und Datenbankmanagement-Systeme, Oldenbourg, 3.Auflage, 1999</td>
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<thead>
<tr>
<th>Method of instruction</th>
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<tbody>
<tr>
<td>seminars with a practicum</td>
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<tr>
<th>Examination</th>
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<tr>
<td>written exam</td>
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<th>Language of instruction</th>
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<td>German</td>
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<tr>
<th>Instructor(s)</th>
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<tbody>
<tr>
<td>Schwenkert, Staudt</td>
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</table>

### 18. IT Security

**Course no.: IF-WI-B18**

4 H/W

4. or 6. Semester

5 ECTS-Credits

<table>
<thead>
<tr>
<th>Contents</th>
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<tbody>
<tr>
<td>• Principles, need for, and objectives of IT security</td>
</tr>
<tr>
<td>• Dangers and typical attack scenarios</td>
</tr>
<tr>
<td>• Concepts and methods of security management</td>
</tr>
<tr>
<td>• Principles, mechanisms, systems used for authentication, authorisation, administration and auditing</td>
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<tr>
<td>• Selected examples and practical application areas</td>
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<table>
<thead>
<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>principles of IT systems (networks, hardware, operating systems, applications)</td>
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<tr>
<th>Objectives</th>
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<tr>
<td>An understanding of problem statements, principles, concepts and mechanisms to ensure IT security.</td>
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<tr>
<th>Recommended literature</th>
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<tbody>
<tr>
<td>Freidank, Carl-Christian: Kostenrechnung, 2001</td>
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<th>Method of instruction</th>
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<tr>
<th>Instructor(s)</th>
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<tbody>
<tr>
<td>Stützle, D. Fischer, Körbs</td>
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### 19. Controlling

**Course no.: IF-WI-B19**

4 H/W

3. Semester

5 ECTS-Credits

<table>
<thead>
<tr>
<th>Contents</th>
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<tbody>
<tr>
<td>Introduction to:</td>
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<tr>
<td>• Basic principles</td>
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<tr>
<td>• Cost-type accounting</td>
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<tr>
<td>• Cost-centre accounting</td>
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<tr>
<td>• Cost-unit accounting</td>
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<tr>
<td>• Short-term profit and loss account</td>
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<tr>
<td>• Accounting systems: standard product costing, full- and direct costing, relative itemised costing, activity-based costing. New processes and directions</td>
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<tr>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>Business Economics</td>
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<tr>
<th>Objectives</th>
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<tr>
<td>Familiarity with cost and activity accounting as a part of the company information and controlling system; mastering the fundamental instruments of cost and activity accounting.</td>
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<tr>
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<th>Instructor(s)</th>
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<tbody>
<tr>
<td>Stützle, D. Fischer, Körbs</td>
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</table>
### 20. Accounting and Tax

**Course no.: IF-WI-B20**

**4 H/W**

**4. Semester**

**5 ECTS-Credits**

**Contents**
- Introduction to:
  - Accounting and valuation methods, tax regulations
  - Annual accounts
  - Overview of taxation types
  - Taxation effects: business cases, financial statements (accounting law), regulation types

**Objectives**
- Ability to process and analyse annual accounts and position reports. Overview of the German tax system with a view toward income tax, substance and taxation taxes and their relevance for companies.

**Recommended literature**
- Coenenberg, Adolf Gerhard: *Jahresabschluß und Jahresabschlußanalyse* (1), 2003
- Coenenberg, Adolf Gerhard: *Jahresabschlußanalyse* (2), 2003
- Rose, Gerd: *Betriebswirtschaftliche Steuerlehre*, 1992
- Wöhe, Günter: *Grundzüge der betriebswirtschaftlichen Steuerlehre*, 1995

**Method of instruction**
- seminars

**Examination**
- written exam

**Language of instruction**
- German

**Instructor(s)**
- Stützle, D. Fischer, Huber-Jahn

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### 21. Human Resource Management

**Course no.: IF-WI-B21**

**4 H/W**

**3. Semester**

**5 ECTS-Credits**

**Contents**
- Introduction to Organisational Behaviour
- Human Resources Management

**Prerequisites**
- Business Administration principles

**Objectives**
- An understanding of the organisational structure of companies. Principles of HR Management

**Recommended literature**

**Method of instruction**
- seminars with exercises

**Examination**
- written examination

**Language of instruction**
- German

**Instructor(s)**
- Greiner, Peters

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### 22. Privacy and Data Protection

**Course no.: IF-WI-B22**

**4 H/W**

**3 or 7. Semester**

**5 ECTS-Credits**

**Contents**
- The significance of the basic right to information self-determination in an open society
- Threats in the areas of information exchange and communication
- Foundations in constitutional and European law
- Basic Terminology: Legal and technical language use
- Legal regulations in the public and private sectors as well as professional confidentiality
- Balancing the mandates of privacy and law enforcement, threat prevention, and counterterrorism
- Organisational and technical aspects of privacy

**Prerequisites**
- none

**Objectives**
- A sensitivity toward privacy needs
- Insights into the dangers and risks of data manipulation and forgery
- Knowledge of the legal systems, surrounding privacy and the ability to judge situations based on the complex legal regulations involved

**Recommended literature**
- Journals: Datenschutz und Datensicherheit, Vieweg, Wiesbaden
- Computer und Recht, Dr. Otto Schmidt, Köln
- Commentary: Simitis, *Kommentar zum BDSG*, Nomos, Baden-Baden

**Method of instruction**
- seminars

**Examination**
- written exam

**Language of instruction**
- German

**Instructor(s)**
- Müncke, Petri, Schuster
23. Marketing
Course no.: IF-WI-B23
3. or 7. Semester
5 ECTS-Credits

Contents
• Basic terminology of marketing
• Market research methods
• Product policy: product strategies, product planning and development, programme and assortment policies.
• Pricing policy: pricing strategies, pricing research and development
• Distribution policy: direct and indirect turnover, distribution concepts
• Communication policy: corporate identity, advertising, public relations, promotions.
• Marketing designs.

Prerequisites
Business Economics

Objectives
Familiarity with the essential elements of market research; ability to synthesise and apply the individual marketing tools to a marketing mix. Ability to think in a market-oriented manner.

Recommended literature
Böcker, Franz: Marketing, 1987
Meffert, Herbert: Marketing, 2000
Meffert, Herbert: Marketing- Arbeitsbuch, 2003
Müller-Hagedorn, Lothar: Einführung in das Marketing, 1990
Nieschlag, Robert; Dichtl, Erwin; Hörschgen, Hans: Marketing, 2002

Method of instruction
seminars
Examination
written examination
Language of instruction
German
Instructor(s)
Stütze, Greiner

24. Material Management and Logistics
Course no.: IF-WI-B24
3. or 7. Semester
5 ECTS-Credits

Contents
• Material and manufacturing processes
• Economic planning of materials
• Decision-making and optimisation processes and methods. ABC and XYZ analysis, warehousing strategies, operating figures, demand prognoses.
• Production planning and control
• Logistics

Prerequisites
Business Economics

Objectives
An understanding of the place of material and manufacturing economics in industrial firms. Knowledge of the most significant methods and decision-making tools for economic solutions to logistics problems, as well as an understanding of the process chain in material and manufacturing economics.

Recommended literature
Corsten, Hans: Produktionswirtschaft, 2000
Dychhoff, Harald: Grundzüge der Produktionswirtschaft, 1998
Hoitsch, Hans-Jörg: Produktionswirtschaft, 1993
Jehle, Egon: Produktionswirtschaft, 1986
Schneeweiß, Christoph: Einführung in die Produktionswirtschaft, 1993
Tyeik, Wolfgang: Einführung in die Fertigungswirtschaft, 2000

Method of instruction
seminars
Examination
written exam
Language of instruction
German
Instructor(s)
Stütze, Klug

25. Information Systems I
Course no.: IF-WI-B25
3. Semester
5 ECTS-Credits

Contents
• Foundations of information systems
• Introduction to major ERP systems
• Selected case studies
• Basic principles of software customizing

Prerequisites
principles of business administration and organisation, particularly the following courses:
• Business Administration
• Organisation and Personnel
• Business Process Management

Objectives
Knowledge of the composition and functions of standard software used in companies.

Recommended literature
Färber, G.; Kirchner, J.: mySAP Technology, Einführung in die neue Technologie-Plattform der SAP, Galileo Press, Bonn, 2002

Method of instruction
seminars with exercises
Examination
written exam
Language of instruction
German
Name der Dozenten
Petres, Regier

26. Information Systems II
Course no.: IF-WI-B26
4. Semester
5 ECTS-Credits

Contents
• Same as Information Systems I
• Particular focus on B2B and B2C scenarios (E-commerce, CRM, supply chain management)

Prerequisites
• Principles of business administration
• Principles of information systems
• Information Systems I

Objectives
Knowledge of the composition and functions of standard software used in companies.

Recommended literature
Chris Todman: Designing a Data Warehouse supporting Customer Relationship Management, Prentice Hall, 2001
Wolfgang Schwebel: Customer Relationship Management, Gabler, 2001
Knolmeyer, Metten, Zeter: Supply Chain Management, Springer, 2002

Method of instruction
seminars with exercises
Examination
written exam
Language of instruction
German
Instructor(s)
Heigert
## 27. Business Simulation
### Course no.: IF-WI-B27
- **4 H/W**
- **6. Semester**
- **5 ECTS-Credits**

### Contents
- Foundations of the process-oriented enterprise
- Methods and tools for process analysis, design, and management
- Workflow management

### Prerequisites
- Principles of business administration and organisation, particularly the contents of the following courses:
  - Business Administration
  - Organisation and Personnel

### Objectives
- Ability to design and assess process-oriented business processes, particularly from an information technology point of view.

### Recommended literature

### Method of instruction
- Seminars with exercises

### Examination
- Written exam

### Language of instruction
- German

### Instructor(s)
- Peters

## 28. Practical Study
### Course no.: IF-WI-B28
- **24 weeks internship with a company**
- **5. Semester**
- **24 ECTS-Credits**

### Contents
- Participation in selected information systems fields: software development (e.g. system analysis, design, programming, testing)
- Project management or implementation
- IT systems conception, realisation, administration or maintenance
- Organisation; marketing, corporate disposition.

### Prerequisites
- Knowledge of business administration, computer science and mathematics according to the basic studies phase courses

### Objectives
- Objectives: Students will learn how a company functions and train their roles as information systems specialist (software developer, project co-worker, etc.).
- Competencies: Students will gain practical experience in a company as a future information manager.

### Method of instruction
- Practical experience in a company

### Examination
- A internship report and certification must be presented.

### Language of instruction
- German

### Instructor(s)
- Lindermeier, Peters

## 29. Course Accompanying the Practical Study Semester
### Course no.: IF-WI-B29
- **12 H/W**
- **5. Semester**
- **6 ECTS-Credits**

### Contents
- Market analysis: market formats, corporate sources of income, behaviour and reaction mechanisms.
- Planning of production, costs, investments, financing and distribution within a company.
- Decision-making and control processes and their implications for the bottom line and balance sheet based on a realistic model, e.g. using a business game.
- Illustration of practical corporate interrelations (e.g. interpretation of the market, aspects of corporate organisation) and/or fostering of practically-oriented key qualifications that go beyond mere technical knowledge (e.g. corporate work methods, resource management, team skills).
- Project management, presentation training, producing project reports, employee leadership, resource management.

### Prerequisites
- De facto but not formal, solid business administration and economic knowledge

### Objectives
- Objectives: This module aims at providing skills in company market analysis, planning, decision-making and control processes in a realistic market model.
- Competencies: Students will be able to apply a company market analysis as well as planning, decision-making and control processes in a company. Students will also work toward an objective working on a time-limited project in an independent, compressed, and exemplary manner.

### Recommended literature
- Context-specific literature

### Method of instruction
- Seminars

### Examination
- Students will be assessed on the basis of a research project, presentation or verbal colloquium.

### Language of instruction
- German

### Instructor(s)
- Cichon, Fischer, Lenk, Lindermeier, Mandl, Peters, Regier, Stütze
### 30. Formal concepts in Information Systems and Management I

**Course no.: IF-WI-B30**

4 H/W  
6. Semester  
5 ECTS-Credits

<table>
<thead>
<tr>
<th>Contents</th>
<th>Possible topics include the application of logic languages for the representation of knowledge and application of logic and lattice theory in order to gain statements on programs or systems.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prerequisites</strong></td>
<td>computer science principles such as from the Information Systems module from the basic studies phase. Economics such as from the Business Administration module from the basic studies phase. Mathematics such as from the Business Mathematics modules I and II from the basic studies phase.</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>Objectives: This module provides knowledge of formal concepts which can be applied in computer science or economic sciences.</td>
</tr>
<tr>
<td><strong>Competencies</strong></td>
<td>Students will acquire advanced knowledge of the application of formal concepts (logic, computability and decidability, formal description of discrete structures, formal language and theory of automata, complexity theory) through concrete issues.</td>
</tr>
</tbody>
</table>
| **Recommended literature** | Context-specific literature, e.g. Asteroth, Alexander; Baier, Christel: Theoretische Informatik. Eine Einführung in Berechenbarkeit, Komplexität und formale Sprachen mit 101 Beispielen, Pearson Studium, 2004  
Haggarty: Diskrete Mathematik für Informatiker, Pearson-Studium, 2004  
Hopcroft J. E.; Ullmann J. D.: Einführung in Automatentheorie, Formale Sprachen und Komplexitätstheorie, Addison-Wesley, 2004  
Hromkovic, Juraj: Algorithmen und Komplexitätstheorie, Springer, 2005  
Kozen, D.C.: Automata and Computability, Springer-Verlag, 2004 |
| **Method of instruction** | Amount of work in class: app. 42 hours, independent study: app. 108 hours |
| **Examination** | Students will be assessed on the basis of a graded research project, test or written examination. This will be determined in the course calendar. |
| **Language of instruction** | German |
| **Instructor(s)** | Möncke, Schwenkert |

### 31. Formal concepts in Information Systems and Management II

**Course no.: IF-WI-B31**

4 H/W  
6. Semester  
5 ECTS-Credits

<table>
<thead>
<tr>
<th>Contents</th>
<th>Possible topics include the application of logic languages for the representation of knowledge and application of logic and lattice theory in order to gain statements on programs or systems.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prerequisites</strong></td>
<td>computer science principles such as from the Information Systems module from the basic studies phase. Economics such as from the Business Administration module from the basic studies phase. Mathematics such as from the Business Mathematics modules I and II from the basic studies phase.</td>
</tr>
<tr>
<td><strong>Objectives</strong></td>
<td>Objectives: This module provides knowledge of formal concepts which can be applied in computer science or economic sciences.</td>
</tr>
<tr>
<td><strong>Competencies</strong></td>
<td>Students will acquire advanced knowledge of the application of formal concepts (logic, computability and decidability, formal description of discrete structures, formal language and theory of automata, complexity theory) through concrete issues.</td>
</tr>
</tbody>
</table>
| **Recommended literature** | Context-specific literature, e.g. Asteroth, Alexander; Baier, Christel: Theoretische Informatik. Eine Einführung in Berechenbarkeit, Komplexität und formale Sprachen mit 101 Beispielen, Pearson Studium, 2004  
Haggarty: Diskrete Mathematik für Informatiker, Pearson-Studium, 2004  
Hopcroft J. E.; Ullmann J. D.: Einführung in Automatentheorie, Formale Sprachen und Komplexitätstheorie, Addison-Wesley, 2004  
Hromkovic, Juraj: Algorithmen und Komplexitätstheorie, Springer, 2005  
Kozen, D.C.: Automata and Computability, Springer-Verlag, 2004 |
| **Method of instruction** | Amount of work in class: app. 42 hours, independent study: app. 108 hours |
| **Examination** | Students will be assessed on the basis of a graded research project, test or written examination. This will be determined in the course calendar. |
| **Language of instruction** | German |
| **Instructor(s)** | Möncke, Schwenkert |
32. Formal concepts in Information Systems and Management III

Course no.: IF-WI-B32
4H/W
7. Semester
5 ECTS-Credits

Contents
Possible topics include the application of logic languages for the representation of knowledge and application of logic and lattice theory in order to gain statements on programs or systems.

Prerequisites
- computer science principles such as from the Information Systems module from the basic studies phase.
- Economics such as from the Business Administration module from the basic studies phase.
- Mathematics such as from the Business Mathematics modules 1 and 2 from the basic studies phase.

Recommended literature
- Haggarty: Diskrete Mathematik für Informatiker, Pearson-Studium, 2004
- Hopcroft J.E.; Ullmann J.D.: Einführung in Automatentheorie, Formale Sprachen und Komplexitätstheorie, Addison-Wesley, 2004

Objectives
- This module provides knowledge of formal concepts which can be applied in computer science or economic sciences.
- Students will acquire advanced knowledge of the application of formal concepts (logic, computability and decidability, formal description of discrete structures, formal language and theory of automata, complexity theory) through concrete issues.

Method of instruction
- app. 42 hours, independent study: app. 108 hours

Examination
- Practical report and certificate

Language of instruction
- German

Instructor(s)
- Prof. Dr. Ulrich Möncke, Prof. Dr. Rainer Schwenkert

33. Elective on Information Systems and Management I

Course no.: IF-WI-B33
4 H/W
4. Semester
5 ECTS-Credits

Contents
- Special topics in information systems and business administration. Independent work on a demanding topic. The departmental electives range from scientific to applied topics in relevant fields and enable students to expand there knowledge in information systems and management. Presentation and defence: presentation of results through the adequate use of multimedia tools. Competent technical discussion.

Prerequisites
- completed preliminary programme but other than that no special prerequisites

Objectives
- Objectives: This module specializes in in selected topics of information systems, economics and computer science.
- Students will gain advanced knowledge of the selected topics in the fields of information systems, economics, and computer science.

Recommended literature
- Topic-specific

Method of instruction
- Amount of work in class: app. 42 hours, independent study: app. 108 hours

Examination
- Students will be assessed on the basis of a graded research project and a test or written examination. This will be determined in the course calendar.

Language of instruction
- German

Instructor(s)
- various lecturers, particularly representatives from business and administration
## 34. Elective on Information Systems and Management II

**Course no.: IF-WI-B34**

| 4 H/W | 7. Semester | 5 ECTS-Credits |

**Contents**
Special topics in information systems and business administration. Independent work on a demanding topic. The departmental electives range from scientific to applied topics in relevant fields and enable students to expand their knowledge in information systems and management.

Presentation and defence: presentation of results through the adequate use of multimedia tools. Competent technical discussion.

**Prerequisites**
completed preliminary programme but other than that no special prerequisites

**Objectives**
Objectives: This module specializes in selected topics of information systems, economics, and computer science. Competencies: Students will gain advanced knowledge of the selected topics in the fields of information systems, economics, and computer science.

**Recommended literature**
Topic-specific

**Method of instruction**
app. 42 hours, independent study: app. 108 hours

**Examination**
Students will be assessed on the basis of a graded research project and a test or written examination. This will be determined in the course calendar.

**Language of instruction**
German, English

**Instructor(s)**
Various lecturers, particularly representatives from business and administration

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## 35. Seminar on Information Systems and Management I

**Course no.: IF-WI-B35**

| 4 H/W | 4. Semester | 5 ECTS-Credits |

**Contents**
Immersion in information system special topics. Independent work on a thematic. Scientific work on a topic. Presentation and defence: presentation of results through the adequate use of multimedia tools.

**Prerequisites**
basic knowledge of information systems

**Objectives**
Objectives: This module serves the independent study, representation and defence of selected information systems topics. Competencies: Students will be able to immerse themselves in an information systems topic, work on it scientifically and present the results.

**Recommended literature**
Disterer, Georg: Studienarbeiten schreiben, Springer Verlag, 1998

Selection of literature according to individual lecture topics

**Method of instruction**
app. 42 hours, independent study: app. 108 hours

**Examination**
Students must work on a project with a component clearly attributable to them. Student knowledge will be tested in a colloquium.

**Language of instruction**
German

**Instructor(s)**
Mandl, Heigert, Möncke, Greiner and others

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## 36. Seminar on Information Systems and Management II

**Course no.: IF-WI-B36**

| 4 H/W | 6. Semester | 5 ECTS-Credits |

**Contents**
Immersion in information system special topics: independent work on a thematic. Scientific work on a topic. Presentation and defence: presentation of results through the adequate use of multimedia tools. Proof of achievement: Students must work on a project with a component clearly attributable to them. Student knowledge will be tested in a colloquium.

**Prerequisites**
basic knowledge of information systems

**Objectives**
Objectives: This module serves the independent study, representation and defence of selected information systems topics. Competencies: Students will be able to immerse themselves in an information systems topic, work on it scientifically and present the results.

**Recommended literature**
Disterer, Georg: Studienarbeiten schreiben, Springer Verlag, 1998

Selection of literature according to individual lecture topics

**Method of instruction**
seminars

**Examination**
Students must work on a project with a component clearly attributable to them. Student knowledge will be tested in a colloquium.

**Language of instruction**
German

**Instructor(s)**
Mandl, Heigert, Möncke, Greiner and others

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## 37. Bachelor Seminar and Bachelor Thesis

**Course no.: IF-WI-B37**

| 6 H/W | 7. Semester | 15 ECTS-Credits |

(thesis: 12, colloquium: 3)

**Contents**
Bachelor seminar: the seminar will support the independent, methodical work. Presentation and defence of thesis. Bachelor thesis: Independent work on a practical interdisciplinary problem statement based on scientific and methodical approaches. The ability to work through problems in industry is encouraged.

**Prerequisites**
knowledge of information systems on par with the 6. technical semester

**Objectives**
The objective of this module is to write a scientific thesis. Competencies: Students will be able to write a scientific thesis.

**Recommended literature**
Books introducing scientific work methods

**Method of instruction**
app. 450 hours

**Examination**
Bachelor thesis and colloquium for the defence of the thesis including presentation of results.

**Language of instruction**
German

**Instructor(s)**
all Information Systems colleagues
Contents

The length and extent of the field trip depends on the situation at hand. The maximum investment generally should not exceed a weeks effort. Students do not have to make up the hours in other courses lost due to the field trips. Therefore, the total amount of hours remains the same.

38. Field Trip
Course no.: IF-WI-B38
1 - 7 Semester

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objectives</td>
<td>Knowledge of operational processes and the ability to integrate the knowledge gained in class in real-world business settings. Study of current situations considering particularly national and international factors.</td>
</tr>
<tr>
<td>Method of instruction</td>
<td>field trip</td>
</tr>
<tr>
<td>Examination</td>
<td>none</td>
</tr>
</tbody>
</table>

Supplemental program „Privacy an Data Protection“

1. Privacy and Data Protection
Course: IF-Z-BD01
4 H/W
5 ECTS-Credits

| Objectives | • Societal and legal principles of privacy and data protection
|            | • the line between data security and privacy
|            | • balancing the mandates of privacy and data security
|            | • Threats in the areas of communication and information
|            | • Current issues in administration and the economy
|            | • Legal regulations in the public and private sectors as well as professional secrecy
|            | • Organisational and technical aspects of privacy |
| Prerequisites | none |
| Course objective | Sensitivity toward privacy needs, insight into the dangers and risks of data manipulation and forgery, knowledge of the legal systems surrounding privacy and the ability to judge situations based on the complex legal systems involved. |
| Recommended literature | Tinnefeld/Ehmann/Gerling, Einführung in das Datenschutzrecht, Oldenbourg, München. Magazines: Datenschutz und Datensicherheit, Vieweg, Wiesbaden; Computer und Recht, Dr. Otto Schmidt, Köln; Smittis, Kommentar zum BDSG, Nomos, Baden-Baden |
| Method of instruction | seminars |
| Examination | written exam |
| Language of Instruction | german |
| Name of lecturer | Beier, Ehmann, Möncke, Petri, Schuster |

2. IT-Security
Course: IF-Z-BD02
4 H/W
5 ECTS-Credits

| Objectives | • Principles, motivation for, and objectives of IT-security
|            | • Threats and typical attack scenarios
|            | • Concepts and methods of security management
|            | • Principles, mechanisms, systems used for authentication, authorisation, administration and auditing
|            | • Selected examples and practical application areas |
| Prerequisites | Principles of IT systems (networks, hardware, operating systems, applications)
| Course objective | An understanding of problems, principles, concepts and mechanisms ensuring IT security.
| Recommended literature | The most current literature covering IT-security; articles from journals and conferences will be used. Claudia Eckert: IT-Sicherheit, Konzepte, Verfahren, Protokolle, Oldenbourg, München |
| Method of instruction | lectures with discussions and exercises |
| Examination | written exam |
| Language of Instruction | german |
| Name of lecturer | Gerling, Pleier |
### 3. Business Law

**Course:** IF-Z-BD03  
**Credits:** 4 H/W  
**ECTS-Credits:** 5

**Objectives**  
- The legal system  
- Legal regulations of commercial law (particularly from sections of the German Civil Code pertaining to general parts, laws of obligations, and property laws)  
- Introduction to selected case studies  
- Particular problem statements in the area of telecommunications as well as software production and licensing

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>none</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course objective</strong></td>
<td>Knowledge of the legal principles of commercial law as well as the acquisition of methods to assess the facts of a case and systematically solve simple cases.</td>
</tr>
</tbody>
</table>
| **Recommended literature** | Textbook: Lorenz/Riehm, Lehrbuch zum neuen Schuldrecht, Beck, München, 2002  
Medicus: Schuldrecht I Allgemeiner Teil, Beck, München, 2002  
| **Method of instruction** | lectures with discussion |
| **Examination** | written exam |
| **Language of instruction** | german |
| **Name of lecturer** | Möncke |

### 4. Practical Studies in Privacy and Data Protection

**Course:** IF-Z-BD04  
**Credits:** 2 H/W  
**ECTS-Credits:** 3

**Objectives**  
Selected legal, organisational and technical case studies from real-world business setting of a data protection official.

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Privacy and Data Protection (IF-Z-BD01)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course objective</strong></td>
<td>Ability to make legal, organisational and technical assessments of data protection problems.</td>
</tr>
<tr>
<td><strong>Method of instruction</strong></td>
<td>practicum</td>
</tr>
<tr>
<td><strong>Examination</strong></td>
<td>term work and presentation</td>
</tr>
<tr>
<td><strong>Language of instruction</strong></td>
<td>german</td>
</tr>
<tr>
<td><strong>Name of lecturer</strong></td>
<td>Gerling, Schuster</td>
</tr>
</tbody>
</table>

### 5. Current Issues in Data Protection

**Course:** IF-Z-BD05  
**Credits:** 2 H/W  
**ECTS-Credits:** 3

**Objectives**  
Concrete threats to privacy and the media, current protection mechanisms

<table>
<thead>
<tr>
<th>Prerequisites</th>
<th>Privacy and Data Protection (IF-Z-BD01)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Course objective</strong></td>
<td>Knowledge of the current European data protection laws, applicability to real-world business situations</td>
</tr>
<tr>
<td><strong>Recommended literature</strong></td>
<td>Announced at lecture time.</td>
</tr>
<tr>
<td><strong>Method of instruction</strong></td>
<td>seminars</td>
</tr>
<tr>
<td><strong>Examination</strong></td>
<td>term work</td>
</tr>
<tr>
<td><strong>Language of instruction</strong></td>
<td>german</td>
</tr>
<tr>
<td><strong>Name of lecturer</strong></td>
<td>Petri, Tinnefeld</td>
</tr>
</tbody>
</table>