Modulhandbuch

Business Informatics - Bachelor's Programme

im Sommersemester 2021

erstellt am 19/04/24

Basiscurriculum

inf030 - Programming, Algorithms and Data Structures

Module label	Programming, Algorithms and Data Structures
Modulkürzel	inf030
Credit points	9.0 KP
Workload	270 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Basiscurriculum • Bachelor's Programme Computing Science (Bachelor) > Basismodule • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Basismodule
Zuständige Personen	• Schönberg, Christian (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	Programming is one of the basic activities of computer scientists and a prerequisite for many other courses in computer science studies. The aim of the module "Programming, Data Structures and Algorithms" is to learn the basic concepts of imperative, procedural and object-oriented programming using the Java programming language and to present known, efficient algorithms and data structures for various, frequently occurring problems. After completing the module, the students should be able to independently develop imperative and simple object-oriented programmes based on Java for solving smaller problems and assess the efficiency of their programmes. They should also be able to apply important algorithms and select them based on their complexity. **Professional competence** The students: • describe basic concepts of imperative programming with Java • recognise imperative programming terminology and use the appropriate terms accurately in discussions • recognise basic terminology of object-oriented programming • describe what programs presented to them do • independently develop programs to solve small problems • systematically examine their own and other people's programmes for errors • use modern programme development environments to develop and test programmes • create algorithms with general design concepts (e.g. Greedy method, divide-and-conquer method) • name algorithms and data structures for solving common problems and evaluate their applicability • name problems of efficiency of algorithmic solutions of concrete problems and evaluate them • make a well-founded choice of an algorithm and a data structure for solving a concrete problem • apply the learned algorithms and data structures sensibly to given and concrete problems **Methodological competence** The students: • solve given problems from the point of view of imperative or object-oriented programming • transfer practical experience in programme development to new tasks **Social competence** The students:

- communicate the structure and mode of operation of self-developed programmes to others
- present solutions to small tasks in front of groups

Self-competence
The students:

- organise themselves in finding algorithmic solutions to small and medium-sized problems in computer science
- incorporate the concepts of general programme design in their actions

Module contents

In the first part, general basic concepts of programming are introduced:

- Algorithm, programming languages, computer
- development tools, development phases
- compilers
- grammars
- logic

The second part deals with basic programming concepts:

- data types
- variables
- Expressions, statements
- control structures
- Methods, parameters
- recursion
- Reference data types, arrays
- Classes, objects
- Documentation
- Testing

The third part contains an introduction to data structures and algorithms as well as a discussion of their efficiency, i.e. the computational effort or memory requirements depending on the amount of data to be processed. The module introduces known, efficient algorithms and data structures for various, frequently occurring problems. These include in particular:

- Methods for searching for keys, as well as insertion and deletion indynamic data sets, e.g. lists, trees, AVL trees or hash methods,
- Methods for searching for text patterns,
- Methods for sorting data by key values, e.g. QuickSort and HeapSort,
- Graph-based applications, e.g. for finding shortest paths in graphs.
- The lecture part is supplemented by a comprehensive exercise part, in which in particular the taught programming contents are implemented in practical examples.

Literaturempfehlungen

Essential:

- Lecture Notes (made available either in printed form or via Stud.IP during the course of the lecture)

Good secondary literature:

- Dietmar Ratz, Jens Scheffler, Detlev Seese, Jan Wiesenberger: Grundkurs Programmieren in Java, Carl Hanser Verlag.
- Joachim Goll, Cornelia Heinisch: Java als erste Programmiersprache, Springer Vieweg Verlag
- Ottmann, Widmayer: Algorithmen und Datenstrukturen. Spektrum Verlag, 5. Auflage, 2012
- Segdewick, Wayne: Algorithms. Addison Wesley, 4th ed., 2011
- Siege: Einführung in die Informatik. Shaker Verlag, 2013

Links

Language of instruction		German		
Duration (semesters)		1 Semester		
Module frequency		every winter term		
Module capacity		unlimited		
Teaching/Learning method		1V + 1Ü		
Previous knowledge		none		
Examination	Prüfungszeiten		Type of examination	
Final exam of module	At the End of the Semester		Portfolio or written exam or oral exam	

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		4	WiSe	56
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				84 h

inf031 - Object-oriented Modelling and Programming

Module label	Object-oriented Modelling and Programming
Modulkürzel	inf031
Credit points	9.0 KP
Workload	270 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Basiscurriculum • Bachelor's Programme Computing Science (Bachelor) > Basismodule • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Basismodule
Zuständige Personen	• Schönberg, Christian (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	useful previous knowledge: inf030 Programming, Algorithms and Data Structures
Skills to be acquired in this module	Object orientation represents the state of the art in software development today. Given problems are first transformed into an object-oriented model and then into an object-oriented program with the help of object-oriented analysis and design methods. Aim of the module "Object-Oriented Modelling and Programming" is to learn basic concepts of object-oriented modelling using UML as the modelling notation and object-oriented programming using the Java programming language. After completing the module, students should be able to independently develop object-oriented programs based on Java for solving medium-sized problems. **Professional competence:** The students: • know basic concepts of object-oriented modelling and UML as modelling notation • know basic concepts of object-oriented programming with Java • know the terminology of object-oriented modelling and programming and use the appropriate terms precisely in discussions • can describe what object-oriented programmes presented to them do • independently develop models and programmes for solving medium-sized problems • systematically examine their own and other people's models and programmes for errors • use modern development environments for modelling and developing programmes • know the differences between the imperative, object-oriented, functional, logical and rule-based programming paradigms **Methodological competence**: The students: • independently develop programmes for given problems by consistently applying the concepts of object-oriented modelling and programming • transfer practical experience in programme development to new tasks • independently develop programmes with concurrency • can independently apply known solution methods to complex problems **Social competence:** The students: • communicate the structure and mode of action of self-developed models and programmes to others • present independently developed solutions to groups **Self-competence:** The students: • organise themselves when developing programmes for small and medium-sized problems in computer science • incorporate the concepts of object-oriented programme design in their actions

Module contents

In the first part, basic concepts of object-oriented modelling and programming are taught:

- Models and modelling
- UML class diagrams
- Classes and objects
- data encapsulation
- inheritance
- Polymorphism and dynamic binding
- Exception handling
- Genericity

In the second part, important concepts and classes of the JDK class library are introduced and the classes are used in solving medium-sized problems:

- Java Collection API
- IO and Streams
- GUI applications with JavaFX
- Parallel programming with threads

In the third part, advanced solution strategies are presented and other programming paradigms are introduced and compared with the object-oriented paradigm:

- Backtracking, Branch and Bound, Greedy
- Local Search, Evolutionary Algorithms
- Functional programming (e.g. Java-Lamdas, Standard ML)
- Logical programming (e.g. Prolog)
- Rule-based programming (e.g. Drools)

The lecture part is supplemented by a comprehensive exercise part, in which in particular the taught contents are implemented in practical examples.

Literaturempfehlungen

Essential:

- Lecture Notes (made available either in printed form or via Stud.IP during the course of the lecture)

Good secondary literature:

- Heide Balzert: Lehrbuch der Objektmodellierung: Analyse und Entwurf mit der UML 2, Spektrum Akademischer Verlag
- Dietmar Ratz, Jens Scheffler, Detlev Seese, Jan Wiesenberger: Grundkurs Programmieren in Java, Carl Hanser Verlag.
- Christian Ullenboom: Java ist auch eine Insel: Programmieren lernen mit dem Standardwerk für Java- Entwickler, Rheinwerk Computing
- Christian Ullenboom: Java SE 8 Standard-Bibliothek: Das Handbuch für Entwickler, Rheinwerk Computing

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every summer term
Module capacity	unlimited
Teaching/Learning method	1V + 1Ü
Previous knowledge	useful previous knowledge: inf030 Programming, Algorithms and Data Structures

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the Semester.	Portfolio or written exam or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		4	SoSe	56

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				84 h

inf600 - Business Informatics I

Module label	Business Informatics I
Modulkürzel	inf600
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Basiscurriculum • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Pflichtbereich
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirements
Skills to be acquired in this module	Business informatics regards itself as an interdisciplinary subject. It connects business administration with computer science. Business informatics also includes information technologies as well as technical subjects and research topics. It is more than just an intersection of research fields and offers e.g. special methods to coordinate corporate strategies and information processing. The module introduces the entire scope of the field of business informatics. **Professional competence** The students: • describe the key aspects of business informatics • differentiate business informatics as an interdisciplinary subject from other subjects • characterise the functionality of essential application systems and management structures, from the strategical to the tactical and operative level. • consider and evaluate case studies and layout options for the conception, development, implementation, usage and maintenance of operational sociotechnical applications systems **Methodological competence** The students: • model technical and sociotechnical processes using suitable tools • analyse business processes and the demands on their modification and their technical assistance • abstract from complex systems in a suitable way to improve the manageability of models **Social competence** The students: • present their solutions in front of other groups • discuss their outcomes **Self-competence** The students: • develop solutions for case studies in groups • construct an argument based on aquired knowledge
Module contents	

The main topics of business informatics are the presentation and evaluation of configuration options to conceptualise, develop, implement, use and maintain operational sociotechnical application systems. The lecture focusses on information systems of the networked company. Technical, economic, organisational, and psychosocial aspects are considered. The understanding of these relations will be trained by means of case studies taken from Laudon et al. (cf. suggested reading).
The lecture gives an overview of the following business informatics fields:

- Information systems, (object of BI)
- Application systems
- E-Commerce and E-Business
- Ethical, social and political aspects
- Business process integration
- Knowledge management
- Support of decision making
- Reorganisation of companies
- Economic evaluation For a better understanding of each subject, it is recommended to take specific modules later in the course of studies.

Literaturempfehlungen

- Laudon, Laudon, Schoder (2006): Wirtschaftsinformatik. Eine Einführung. Pearson Verlag Krallmann,
- Frank, Gronau (2002), Systemanalyse im Unternehmen Oldenbourg (Gebundene Ausgabe - Juni 2002)

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Tasks and active partaking during the exercises / written exam or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir011 - Introduction to Business Administration

Module label	Introduction to Business Administration
Modulkürzel	wir011
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Basiscurriculum • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Grundlagen-/Basiscurriculum • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule
Zuständige Personen	• Hoppmann, Jörn (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	The goal of the course is that students are able to... - know and understand basic concepts and processes in the context of business administration - name important research streams and theoretical frameworks in the field - apply models and instruments of business administration to develop solutions for practical challenges in companies - critically question the application of common instruments and models and evaluate their advantages and disadvantages in specific decision making situation - put the newly acquired knowledge into a broader context, so it can be deepened in the further course of study and when working in a company
Module contents	The course offers an introduction to the most important concepts, instruments, and frameworks of business administration. Toward this end, the course first introduces the core concepts and provides an overview of the history, goals, structure, and research traditions of business administration. Subsequently, students will gain insights into 11 important areas of business administration: (1) Entrepreneurship, (2) Strategic Management, (3) Logistics and Supply Chain Management, (4) Production Management, (5) Marketing and Sales, (6) Accounting and Controlling, (7) Finance and Investment, (8) Technology and Innovation Management, (9) Human Resource Management, (10) Information Management, and (10) Sustainability Management. Students deepen and apply the knowledge acquired in the lecture in tutorials. In addition, the course includes guest lectures by practitioners to clarify the practical relevance of the content.
Literaturempfehlungen	Straub, T. (2014): Einführung in die Allgemeine Betriebswirtschaftslehre (2. Auflage), Pearson Deutschland, Hallbergmoos. Hutzschenreuter, T. (2015): Allgemeine Betriebswirtschaftslehre (6. Auflage), Springer Gabler, Wiesbaden
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the semester	1 Prüfungsleistung: 1 Klausur/Antwort-Wahl-Verfahren (Multiple Choice) (i. d. R. 60 – 90 Min.) oder 1 mündl. Prüfung (i. d. R. 20 Min.) oder 1 Hausarbeit (max. 15 Seiten) oder 1 Referat (max. 30 Min.) oder 1 Portfolio (max. 5 Leistungen)

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2		28
Präsenzzeit Modul insgesamt				56 h

Aufbaucurriculum - Pflichtbereich

inf005 - Software Engineering I

Module label	Software Engineering I
Modulkürzel	inf005
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Pflichtbereich • Master's Programme Environmental Modelling (Master) > Mastermodule
Zuständige Personen	• Winter, Andreas (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	• inf030 • inf031
Skills to be acquired in this module	The objective of the module is to convey the development and maintainance of large scale software systems. The complete software developing process including requirements collection, software architecture and quality control is observed. The basics of object oriented modelling and software development are enhanced. **Professional competence** The students: • comprehend the different developmental phases of software (especially requirements engineering, software design, software implementation and quality control) • name the tasks of each phase • select appropriate methodical utilities • select suitable methods and utilities for each project phase • understand the advantages of the modelling process with UML • model moderate tasks in UML • understand and develop solutions for given problems by means of development environments **Methodological competence** The students: • structure, document and evaluate problems and solutions with the tools of object oriented modelling • apply methods and techniques of object oriented modelling purposefully **Social competence** The students: • create, present and discuss solutions with modelling techniques - • present and solve modelling problems in teams **Self-competence** The students: reflect their problem-solving behaviour with regard to the capabilities of software technology
Module contents	The module introduces fundamental terms and concepts in software engineering. This includes: • need for software engineering • activities and process-models in software development • object-oriented modelling, meta modelling • Interdependencies between code and models • requirements elicitation

- definition of software architectures
- application of software patterns
- software quality management
- software maintenance, evolution and operation Software engineering tools are presented and applied in practical exercises.

Literaturempfehlungen

- Slide script for the lecture
- Ian Sommerville: Software Engineering, Addison-Wesley Longman, Amsterdam, 10. Ed. 2012
- Jochen Ludewig, Horst Lichter: Software Engineering, dpunkt.verlag, 3. Auflage 2013
- Helmut Balzert: Lehrbuch der Software-Technik, Spektrum Akademischer Verlag, 3. Auflage 2009
- Chris Rupp, Stefan Queins: UML 2 glasklar. Praxiswissen für die UML-Modellierung, Carl Hanser Verlag, 4. Auflage 2012

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	- inf030 - inf031

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period or during the lecture period (portfolio)	Written exam or oral exam or portfolio (? 3 services)

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3	WiSe	42
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				70 h

inf007 - Information Systems I

Module label	Information Systems I
Modulkürzel	inf007
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule (60 KP) • Master Applied Economics and Data Science (Master) > Specialization • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Pflichtbereich
Zuständige Personen	• Wingerath, Wolfram (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	This module introduces the core concepts, languages and architectures of databases. In software systems these concepts are important. **Professional competence** The students: • name the core concepts of the languages and architectures of databases (especially) • select data models • integrate structuring concepts of information systems in their designs **Methodological competence** The students: • design database systems appropriatelyanalyse problems from the field of database-supported • information systems and solve them appropriately **Social competence** The students: • enhance their ability to work in a team **Self-competence** The students: • reflect their problem-solving behaviour with regard to the information processing concepts
Module contents	• Relational data models • Relational algebra and its implementation in SQL (the standard of databases) • Database design on different abstractions (conceptual and logical design) • Normalisation - Data base architectures • Distributed and active databases • Object-oriented, object-related and XML-based database systems
Literaturempfehlungen	• Ramez Elmasri und Shamkant B. Navathe (2016), Fundamentals of Databases Systems, 7th Revised edition, Pearson/Addison Wesley.
Links	
Language of instruction	German

Duration (semesters)			1 Semester		
Module frequency			annual		
Module capacity			unlimited		
Teaching/Learning method			V+Ü		
Previous knowledge			none		
Examination		Prüfungszeiten		Type of examination	
Final exam of module		At the end of the lecture period		Written or oral exam	
Lehrveranstaltungsform	Comment	SWS		Frequency	Workload of compulsory attendance
Lecture		3		WiSe	42
Exercises		1		WiSe	14
Präsenzzeit Modul insgesamt					56 h

inf601 - Business Informatics II

Module label	Business Informatics II
Modulkürzel	inf601
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik)
Zuständige Personen	• Marx Gómez, Jorge (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirements
Skills to be acquired in this module	The module provides the fundamentals and tasks of information management to create an IT strategy. Tasks are especially considered from a strategic perspective and brought closer by methodological skills for each task. **Professional competence** The students: • name the strategic aspects of information management and identify their impact on technical and operational information management • examine the essential questions of enterprise reorganization in connection with an information system and recognize the influence of the Internet and its services on commercial processes and information systems by an exemplary system, e.g. SAP R/3 • identify different approaches to information management (Information Ressource Management, Management approach, management approach, personal information management) and understand why determining the value of information management is necessary and how it is done • specify the objectives of information management, differentiate and classify its tasks appropriately • recognize the methodological characteristics of information management • transfer the concept of architecture to the information infrastructure • assess the importance to plan features for strategic IT-design oriented on IT-architecture • schedule the procedures concerning the strategical situation analysis of the competition analysis, the information infrastructure and the environmental analysis with the objective to transfer them to simple problems • name the key contents of strategical IT objectives and are aware of difficulties in determining the measurement category • identify and learn the scope and central tasks of business process and environmental management (as excursion) and the signifiance for information management **Methodological competence** • The students: • perform information management tasks using methods of Information Engineering and thereby learn how to transfer and employ the methods to other fields, e.g economy • learn by practice advantages and disadvantages of different methods and can use them as part of the optimized IT strategy based on the axcquired knowledge. **Social competence** The students:

- construct solutions to case studies given in the group, i.e. the development of an IT strategy
- discuss the solutions on a technical level
- present the solutions to case studies as part of the exercises

Self-competences
The Students:

- accept criticism and unterstand it as a procpdition for the further development of one's own actions

Module contents

The proportion of information technology in the investment budget of companies is rising continuously. For instance, banks spend 25% of all investments for their information systems. Information is not just a production factor, it is also an element of competition. Information is increasingly important for business. The business informatics deals with these economic tasks of information technology. Information systems in businesses and organisations are of central concern. The interdisciplinary nature of business informatics raises questions about proceedings, problems of models (modelling in a narrow sense) and the application in specific problem domains.
Contents of this module are:

- Information management principles and tasks
- IT architectures
- Infrastructure of information and communication technology
- Strategic, administrative and operative information engineering

Literaturempfehlungen

- Heinrich, Stelzer (2011): Informationsmanagement
- Grundlagen, Aufgaben, Methoden. Oldenbourg Verlag
- Laudon, Laudon, Schoder (2010): Wirtschaftsinformatik
- Eine Einführung. Pearson Verlag
- Krcmar (2015): Informationsmanagement. Springer Verlag

Links

http://www.wi-ol.de

Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	Usually two weeks after lecture time	Written exam max. 120 minutes

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf608 - eBusiness

Module label	eBusiness
Modulkürzel	inf608
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Akzentsetzungsbereich
Zuständige Personen	• Marx Gómez, Jorge (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	The module provides an introduction to the "Electronic Business“ (e-business). The graduates know the fundamental and current technologies, advanced concepts, applications and competitive strategies of the "Electronic-Commerce" (e-commerce). The knowledge and abilities acquired in this module are directly applicable in study and business. They are deepening the basics from the module „Wirtschaftsinformatik II“. They provide a professional e-business consulting background and the skills to design software products for this area of business in practice. **Professional competence** The students: • name and discuss the eBusiness key challenges • discuss the chances of the added value and the changes of commercial models by the internet • define the concepts of e-business and e-commerce. • discuss the change of retail trade and the transactions between companiess in e-business • name current payment systems and communication technologies • discuss the possibilities of the internet in order to simplify the administration and the coordination of internal and external business processes • characterise the challenges for the management caused by e-business and e-commerce • differentiate the concepts and conceptualites of e-business • assess applications with regard to economic points of view • practically learn how to handle core technologies of e-business **Methodological competence** The students: • assess the core technologies of e-business and e-commerce • apply methods in case studies **Social competence** The students: • develop case studies on basis of given problems in groups • present their solutions **Self-competence** The students: • learn about their own limitations while planning and developing e-commerce applications

Module contents

The module provides the following contents:

- the definition of the core e-business concepts and the technical conditions for the implementation
- introduction of the variations of e-commerce, especially the Business-to-Consumer (B2C) and Business-2-Business (B2B) concepts and the current research in this field
- discussion on the economic aspects of e-business based on the theory of informational added value
- technological basics of the web and current development technologies for e-commerce web applications and security mechanisms with focus on online-shops and applications (hands-on exercise topics: HTTP, JSP and SQLInjection, PHP, XML, XML-Security, data modelling, Online-Shop development and Online-Shop administration)

Literaturempfehlungen

- Meier, Andreas; Management der digitalen Wertschöpfungskette. Springer, 2. Auflage, 2008.
- Wirtz, Bernd W.: Electronic Business. Springer Gabler, 4. Auflage, 2013.
- Kollmann, Tobias: E-Business: Grundlagen Elektronischer Geschäftsprozesse in der Net Economy. Gabler, 4. Auflage, 2010.

Links

http://www.wi-ol.de/

Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Written or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf800 - Proseminar in Computer Science

Module label	Proseminar in Computer Science
Modulkürzel	inf800
Credit points	3.0 KP
Workload	90 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Diethelm, Ira (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The specific participation requirements are described in the individual assigned courses.
Skills to be acquired in this module	Supported by a lecturer the students familiarise with a given topic by literature research. They understand and evaluate the relevance of the literature. After this evaluation the students present and discuss their solutions academically. **Professional competence** The students: • characterise and apply computer science basics (algorithms, data structures, programming, basics of practical, technical and theoretical computer science) • define und describe essential mathematical, logical and physical basics of computer science • define and illustrate the core disciplines of computer science (theoratical, practical and technical computer science) **Methodological competence** The students: • examine problems, use formal methods to phrase them and analyze them appropriately • evaluate problems by the use of technical and scientific literature • reflect on a scientific topic and write a scientific seminar paper under guidance and present their findings **Social competence** The students: • communicate considerately and appropriately with users and experts • use presentation methods **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts • collect and update their knowledge independently
Module contents	according to the assigned task
Literaturempfehlungen	
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	each semester
Module capacity	unlimited
Reference text	Students must attend one of the seminars offered.

		Passing the proseminar is a prerequisite for registering for the Bachelor's thesis.
Teaching/Learning method		S
Previous knowledge		none
Examination	Prüfungszeiten	Type of examination
Final exam of module	Am Ende des Semesters und nach Absprache	• Active participation in the seminar is expected • Paper and presentation
Lehrveranstaltungsform	Seminar	
SWS	2	
Frequency	SoSe oder WiSe	

mat950 - Discrete Mathematics

Module label	Discrete Mathematics
Modulkürzel	mat950
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Basismodule
Zuständige Personen	• Heß, Florian (module responsibility) • Stein, Andreas (module responsibility) • Stein, Sandra (module responsibility)
Prerequisites	
Skills to be acquired in this module	• Getting to know and to understand the axiomatic structure of mathematics and the importance of mathematical reasoning • Mastering basic mathematical proof techniques and their logical structure • Recognizing the relevance of premises in mathematical theorems: Localization of premises within proofs and possible consequences if premises are not met • Exemplary acquaintance with further mathematical areas and thus expansion of the student's mathematical knowledge • Getting to know applications • Integration and crosslinking of the student's mathematical knowledge by establishing relationships between different mathematical areas • Learning the essential ideas and methods for discrete structures in mathematics • Knowledge of the fundamental concepts and methods of graph theory • Knowledge of the fundamental concepts and methods of algebra and number theory, such as groups, rings, fields, residue class rings, Euclidean algorithm, Chinese remainder theorem, polynomials. • Knowledge of further concepts and methods for discrete structures, e.g. primality tests, RSA, graph-theoretical algorithms
Module contents	Elements of propositional logic, proof techniques, sets, relations and maps, combinatorics, graphs and applications, the ring of integers and residue class rings, groups and semi groups
Literaturempfehlungen	Kreußler, Pfister: Mathematik für Informatiker, Springer 2009. Knauer, Knauer: Diskrete und algebraische Strukturen - kurz gefasst, Springer 2015. Aigner: Diskrete Mathematik, Vieweg 2006. Beutelspacher, Zschiegner: Diskrete Mathematik für Einsteiger, Vieweg 2014. Epp: Discrete Mathematics with Applications, Brooks Cole 2011. Graham, Knuth, Patashnik: Concrete Mathematics, Addison-Wesley 1994. Hartmann: Mathematik für Informatiker, Vieweg 2014. Rosen: Discrete Mathematics and its applications, McGraw-Hill 2018. Steger: Diskrete Strukturen, Band 1, Springer 2007. Teschl, Teschl: Mathematik für Informatiker, Band 1, Springer 2013. Further reading will be announced in the lecture.
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Reference text	Im Zwei-Fächer Bachelor Informatik ist dieses Modul im Basiscurriculum zu studieren.

Examination	Prüfungszeiten	Type of examination
Final exam of module	after the end of the lecture period	Written exam or oral exam. Bonus points can be earned.

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3	WiSe	42
Exercises		1	WiSe	14

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Präsenzzeit Modul insgesamt				56 h

wir021 - Double Entry Bookkeeping & Financial Statements under German Law (HGB)

Module label	Double Entry Bookkeeping & Financial Statements under German Law (HGB)
Modulkürzel	wir021
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	none
Skills to be acquired in this module	Participants… 1. understand financial accounting as the basis of corporate data and bookkeeping 2. gain comprehensive knowledge of main accounting areas such as procurement, sales, HR, inventory, tax, provisions etc. 3. obtain basic knowledge about annual report process of single entities.
Module contents	The main objective of this module is to give the students an overview of the double entry bookkeeping as well as the link between financial accounting, balance sheet and income statement. The acquisition of basis knowledge of the corporate accountancy stands in the foreground, for example, how organizations manage the bookkeeping, legal basis of the annual accounts, creating an inventory, content of accounting and income statement.
Literaturempfehlungen	Coenenberg et al. (2014): Einführung in das Rechnungswesen (5. Aufl.), Schäffer-Poeschel, Stuttgart. Döring, U. & Buchholz, R. (2015): Buchhaltung und Jahresabschluss (14. Aufl.), Erich Schmidt, Berlin. An additional script is provided.
Links	http://www.uni-oldenburg.de/accounting/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	at the end of the semester	final exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir083 - Purchasing, Operations, and Logistics Management

Module label	Purchasing, Operations, and Logistics Management
Modulkürzel	wir083
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum - Pflichtbereich • Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Busse, Christian (module responsibility)
Prerequisites	
Skills to be acquired in this module	Students obtain an overview of the most important operational functions of an industrial or service company. These are procurement, production and logistics. Students will get to know typical operational challenges and familiarize themselves with established approaches and methods for analyzing and improving procurement, production and logistics operations.
Module contents	The module comprises a lecture (course number 2.02.231) and an accompanying tutorial (course numbers 2.02.231a to 2.02.231j). The lecture is based on the text book "Grundzüge der Beschaffung, Produktion und Logistik" by Kummer, Grün und Jammernegg in the third edition of 2013 and the associated workbook, as well as partly on the text book "Operations Management: Konzepte, Methoden und Anwendungen" by Thonemann in the third edition of 2015. The purpose of the lecture is to explain the fundamental problems and their solutions theoretically. The tutorials focus on application and practice and offer time for questions. There are no formal or content-related participation or entrance requirements.
Literaturempfehlungen	Kummer, S., Grün, O. und Jammernegg, W. (2013): Grundzüge der Beschaffung, Produktion und Logistik (3. Auflage), Pearson Thonemann, U. (2015): Operations Management (3. Auflage), Pearson.
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	The module takes place in the summer semester. Please refer to the syllabus available via Stud.IP for a more detailed description of content and procedure.

Examination	Prüfungszeiten	Type of examination
Final exam of module		KL

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe und WiSe	28
Tutorial		2	SoSe und WiSe	28
Präsenzzeit Modul insgesamt				56 h

Aufbaucurriculum-Wahlbereich Praktische Informatik

inf008 - Information Systems II

Module label	Information Systems II
Modulkürzel	inf008
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Praktische Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik • Master Applied Economics and Data Science (Master) > Specialization • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master's Programme Business Informatics (Master) > Akzentsetzungsmodule der Informatik
Zuständige Personen	• Grawunder, Marco (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	The Module Information Systems II enhances the knowledge and the concepts of Information Systems I. **Professional competence** The students: • know further concepts, languages and architectures of databases • analyse advanced information processing tasks • analyse complex requirements of information systems appropriately • realize information requirements and gather relevant information **Methodological competence** The students: • propose concrete processing principles for special application classes • reflect specific technologies' consequences and proceedings **Social competence** The students: • improve their ability to work in a team **Self-competence** The students: • reflect their problem-solving behaviour with regard to extended information processing concepts
Module contents	• Implementation of databases (architecture, index structures, query processing and optimization) • Data integration and data analysis (data integration, data warehouses, data mining) • Information retrieval • Parallel databases
Literaturempfehlungen	Suggested reading: • Härder, T.,Rahm, E.:Datenbanksysteme -Konzepte und Techniken der Implementierung, Morgan Kaufmann • Raghu Ramakrishnan, Johannes Gehrke: Database Management Systems, McGraw-Hill • U. Leser, F. Naumann. Informationsintegration: Architekturen und Methoden zur Integration verteilter und heterogener Datenquellen. dpunkt

- Bauer/Günzel. Data-Warehouse-Systeme, dpunkt
- Han/Kamber/Pei. Data Mining: Concepts and Techniques, Morgan Kaufmann

Links				
Language of instruction		German		
Duration (semesters)		1 Semester		
Module frequency		annual		
Module capacity		unlimited		
Teaching/Learning method		V+Ü		
Previous knowledge		none		
Examination		Prüfungszeiten	Type of examination	
Final exam of module		At the end of the lecture period	written or oral Exam	
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3	SoSe	42
Exercises		1	SoSe	14
Präsenzzeit Modul insgesamt				56 h

inf010 - Computer Networks

Module label	Computer Networks
Modulkürzel	inf010
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Praktische Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlpflichtbereich Praktische Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Akzentsetzungsbereich
Zuständige Personen	• Kramer, Oliver (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	**Professional competence** The students: • identify the layers of the ISO/OSI model • recognise the main concepts and algorithms of each IOS/OSI layer • assign technical processes to the layers • classify new technologies to the main concepts of the ISO/OSI model - Compare different methods and approaches of a layer (i.e. TCP and UDP) • characterise safety-critical aspects of each layer **Methodological competence** The students: • administer small networks • characterise safety-critical aspects of networks **Social competence** The students: • work on exercises in small teams **Self-competence** The students: • accept criticism • reflect on their proposed solutions, taking into account the methods taught
Module contents	Contents of this lecture (cf. suggested reading Tanenbaum and Wetherall): • Introduction to networks and the internet • Physical Layer • Data Link Layer • MAC Sub-Layer • Network Layer • Transport Layer • Session Layer • Presentation Layer • Application Layer • Technologies (Cable and Co) • Nyquist Shannon and Transmissions - CDMA • Hamming & CRC • Stop & wait, go back n, selective repeat • Aloha & CSMA • Ethernet technologies • Wifi • Paket switchen & Dijsktra • IP Adressing & Header • TCP • UDP • Buckets & TCP-Reno

- DNS
- Flask
- RSA & PGP
- Firewalls

Literaturempfehlungen	

- lecture notes
- A. Tanenbaum & D. Wetherall: Computernetzwerke, Pearson Studiu, 5. Aufl. 2012

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Written or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3	SoSe	42
Exercises		1	SoSe	14
Präsenzzeit Modul insgesamt				56 h

inf012 - Operating Systems I

Module label	Operating Systems I
Modulkürzel	inf012
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Praktische Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlpflichtbereich Praktische Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik)
Zuständige Personen	• Theel, Oliver (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Useful prior knowledge: Study contents of the first year of the subject Bachelor of Computer Science or Business Informatics.
Skills to be acquired in this module	To gain knowledge of and capabilities in the design, the implementation, and the evaluation of operating systems. **Professional competence** The students: • develop an understanding of operating systems regarding terminology, structure, functionality, conception, central challenges and solutions • evaluate the performance of operating systems • are aware of the implementation problems of operating systems • realise and evaluate solutions of subproblems • comprehend and evaluate the functional connections between application systems and hardware • understand operating systems as a link between technical and applied computer science **Methodological competence** The students: • transfer concepts of implementations to other contexts • question different solutions wrt. properties **Social competence** The students: • solve problems in small teams • present their solutions to the members of the tutorial • discuss their different solutions with members of the tutorial **Self-competence** The students: • accept criticism • question their initial solutions in the light of newly learned methods
Module contents	**The contents of this module are:** 1. “Operating systems" definition and structure 2. Requirements of operation systems 3. Technical characteristics of related hardware 4. The need and implementation options of parallel processes 5. Cooperation of processes: communication and synchronisation (semaphores) 6. Memory management: virtual und non-virtual memory management 7. File management
Literaturempfehlungen	• A. Tanenbaum (2009). Modern Operating Systems. 3rd edition, Prentice Hall • W. Stallings (2012).Operating Systems. 7th edition, Prentice Hall
Links	
Language of instruction	German

Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Reference text	Linked to the modules: • Operating Systems II (as a possible follow-up course) • Distributed Operating Systems (as a possible specialization) • Operating Systems Practicum
Teaching/Learning method	V+Ü
Previous knowledge	Useful prior knowledge: Study contents of the first year of the subject Bachelor of Computer Science or Business Informatics.

Examination	Prüfungszeiten	Type of examination
Final exam of module	End of the lecture period	Written or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf016 - Internet Technologies

Module label	Internet Technologies
Modulkürzel	inf016
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Praktische Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlpflichtbereich Praktische Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Akzentsetzungsbereich
Zuständige Personen	• Boles, Dietrich (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Useful previous knowloedge: object-oriented programming
Skills to be acquired in this module	The graduates of the module know the basic concepts and technologies of Internet and web applications. They can evaluate the capability of the concepts and technologies to design Internet-based applications. The students will apply these concepts and techniques in a project. **Professional competence** The students: • Know basic concepts and technologies of the Internet and the web **Methodological competence** The students: • Are able to use the techniques in projects **Social competence** The students: • Implement web-based projects in a team **Self-competence** The students: • Reflect their own capabilities to develop Internet-based applications
Module contents	The module deals with the basic development concepts of Internet-based applications. It covers relevant client technologies of web applications (HTML, CSS, JavaScript), server technologies (forms, servlets, PHP, databases) and technologies for client server communication (AJAX, WebSockets, Web services, Social-Media-APIs)). Additional topics are web design, Internet law, security and web search. The practical exercises of this module consist of the design, implementation and presentation of a comprehensive web application. The topics of the lecture will be applied and deepened in practice.
Literaturempfehlungen	list of links in the learning management system
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every summer term
Module capacity	unlimited
Reference text	
Teaching/Learning method	V+Ü
Previous knowledge	Useful previous knowloedge: object-oriented programming

Examination	Prüfungszeiten	Type of examination
Final exam of module	The presentation of partial results of the practical project takes place weekly during the exercises.	project and written exam or project and oral exam

Examination	Prüfungszeiten	Type of examination
	Final delivery of the final project is one week after the end of the lecture period. The written exam or oral exam take place in the last week of the lecture period or the first week after the end of the lecture period. Any re-examinations take place at the end of the semester break. The exact timetable can be found in the learning management system.	

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

Aufbaucurriculum-Wahlbereich Mathematik

mat955 - Mathematics of Computer Science (Linear Algebra)

Module label	Mathematics of Computer Science (Linear Algebra)
Modulkürzel	mat955
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule
Zuständige Personen	• Frühbis-Krüger, Anne (module responsibility) • Heß, Florian (module responsibility) • Stein, Andreas (module responsibility) • Stein, Sandra (module responsibility)
Prerequisites	
Skills to be acquired in this module	• Getting to know and to understand the axiomatic structure of mathematics and the importance of mathematical reasoning • Mastering basic mathematical proof techniques and their logical structure • Recognizing the relevance of premises in mathematical theorems: Localization of premises within proofs and possible consequences if premises are not met • Learning the significant ideas and methods of linear algebra • Mastering the fundamental concepts of algebra, such as groups, rings, fields • Mastering the fundamental concepts and significant methods of linear algebra, such as systems of linear equations, Gaussian algorithm, vector spaces, dimension, linear maps, matrices, determinants • Mastering of further notions and methods of linear algebra, e.g. eigenvectors, eigenvalues, diagonalization
Module contents	Significant techniques and structures, systems of linear equations, vector spaces, dimension, linear maps, determinants, eigenvalues, diagonalization
Literaturempfehlungen	S. Bosch: Lineare Algebra, Springer 2008 (4. Aufl.) G. Fischer: Lineare Algebra, Vieweg 2010 (17. Aufl.) B. Huppert, W. Willems: Lineare Algebra, Teubner 2010 (2. Aufl.) M. Koecher: Lineare Algebra und analytische Geometrie, Springer 2003 (4. Aufl.) H.-J. Kowalsky, G. Michler: Lineare Algebra, de Gruyter 2003 (12. Aufl.) F. Lorenz: Lineare Algebra Spektrum 2008 (4. Aufl.)
Links	S. Bosch: Lineare Algebra, Springer 2014 G. Fischer: Lineare Algebra, Springer 2014 G. Fischer: Lernbuch Lineare Algebra und Analytische Geometrie, Springer 2017 B. Huppert, W. Willems: Lineare Algebra, Springer 2010 M. Koecher: Lineare Algebra und analytische Geometrie, Springer 2003 H.-J. Kowalsky, G. Michler: Lineare Algebra, de Gruyter 2003 F. Lorenz: Lineare Algebra, Spektrum 2008
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module		written exam or oral exam. Bonus points can be earned.

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Exercises		2		28
Präsenzzeit Modul insgesamt				56 h

mat960 - Mathematics of Computer Science (Analysis)

Module label	Mathematics of Computer Science (Analysis)
Modulkürzel	mat960
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule
Zuständige Personen	• Chernov, Alexey (module responsibility) • Grieser, Daniel (module responsibility) • Pankrashkin, Konstantin (module responsibility) • Schöpfer, Frank (module responsibility) • Shestakov, Ivan (module responsibility) • Uecker, Hannes (module responsibility) • Vertman, Boris (module responsibility)
Prerequisites	
Skills to be acquired in this module	The students learn and apply basic notions and techniques of mathematical analysis. Professional competence The students: · use rigorous mathematical proofs · compute limit values and analyse the convergence behaviour of iterative methods · apply differential and integral calculus to compute extreme values, to analyse the behaviour of functions and to develop numerical solution methods Methodological competence The students: · analyse formal relations · structure and justify solution methods Social competence The students: · develop solutions to given problems in groups · accept constructive criticism Personal competence The students: · reflect their solution strategies · deepen their understanding of the presented mathematical concepts with exercises and adopt the solution methods
Module contents	· Convergence of sequences, series and iterative methods · Continuity, differential and integral calculus of functions of one variable · Characterization and computation of extreme values · Separable and linear ordinary differential equations
Literaturempfehlungen	Peter Hartmann: Mathematik für Informatiker - ein praxisbezogenes Lehrbuch Dirk Hachenberger: Mathematik für Informatiker Otto Forster: Analysis I Harro Heuser: Lehrbuch der Analysis, Teil 1 Konrad Königsberger: Analysis
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every year
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period written exam	Final exam of module

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3	SoSe	42
Exercises		1	SoSe	14
Präsenzzeit Modul insgesamt				56 h

mat990 - Mathematics for Economists

Module label	Mathematics for Economists
Modulkürzel	mat990
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Sustainability Economics (Bachelor) > Grundlagen-/Basiscurriculum • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Modulverantwortlichen, Die (Prüfungsberechtigt) • May, Angelika (module responsibility)
Prerequisites	
Skills to be acquired in this module	Students internalize basic mathematical concepts and methods from analysis and matrix calculation and their applications in economics. Professional competence The students: • are proficient in the mathematical fundamentals relevant to economics • master methods for solving equations and inequalities • master differential calculus for one and two variables and can integrate • are able to reliably determine local and global extreme points for functions of one and two variables. Methodological competence The students: • analyse formal contexts • understand the formal mathematical language • structure problems from the economic sciences and justify their solutions. Social competence The students: • construct solutions to given problems in groups • accept criticism and see it as an aid. Self-competence The students: • reflect their actions in establishing solutions • deepen the presented mathematical concepts in exercises and add them to their actions.
Module contents	Basics in real Arithmetic, Rules for Matrix Arithmetic Linear equations, linear inequalities and systems of those, quadratic equations, financial mathematics (interest rates and present values, pension calculation) Calculus for functions of one variable: derivation rules for power functions, exp and ln, indefinite integral, applications of integral calculus (density function, ordinary differential equations), single-variable optimization (stationary points, extreme-value theorem, local and global extreme points), Approximation methods (linear approximation, Taylor series with Lagrange remainder) Functions of two variables (partial derivatives, total differential), Tools for comparative statics : (elasticity of substitution, homogeneous and homothetic functions), multivariable optimization tasks (local and global extremes,

	extremes under constraints)
Literaturempfehlungen	Kursbuch: Sydsaeter, K.; Hammond, P. & Böker, F. (2010): Mathematik für Wirtschaftswissenschaftler. München: Pearson. Begleitend: Karmann, A. (2008): Mathematik für Wirtschaftswissenschaftler (6. Aufl.). München: Oldenbourg. Unger, T. & Demps, S. (2010): Lineare Optimierung. Wiesbaden: Vieweg. Dempe, S. & Schreier, H. (2006): Operations Research. Wiesbaden: Vieweg.
Links	www.uni-oldenburg.de/wire
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Reference text	

Examination	Prüfungszeiten	Type of examination
Final exam of module	zum Ende der Vorlesungszeit	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

mat991 - Mathematics for Economists II

Module label	Mathematics for Economists II
Modulkürzel	mat991
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Economics and Business Administration (Bachelor) > Vertiefungsbereich • Bachelor's Programme Sustainability Economics (Bachelor) > Aufbaumodule
Zuständige Personen	• May, Angelika (module responsibility) • May, Angelika (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	The students internalize advanced mathematical methods, know applications in economics and can provide solutions. Professional competence The students: • are proficient in the quantitative methods relevant to economics • know vector spaces and die rings • master the differential calculus for n variables • can determine extreme points with general constraints • can solve special homogeneous and inhomogeneous differential equations. Methodological competence The students: • analyse complex interrelationships • understand the formal mathematical language • structure problems from the economic sciences and find independent solutions. Social competence The students: • construct solutions to given problems in groups • accept criticism and see it as an aid. Self-competence The students: • reflect their actions in establishing solutions • deepen the presented mathematical concepts in exercises and add them to their actions.
Module contents	n-dimensional vector spaces, linear maps, matrix and vector algebra (determinant, inverse matrix, eigenvalues and eigenvectors), linear systems of equations and their economic application. Functions of n variables), tools for comparative static (chain rules, implicit differentiation along a level curve, elasticity of substitution), multivariate optimization with and without constraints (necessary and sufficient conditions), general constraints, Kuhn-Tucker conditions. Integration, Differential and ordinary differential equations with solution methods for special types.
Literaturempfehlungen	Sydsaeter, Knut und P. Hammond mit A. Ström: Mathematik für Wirtschaftswissenschaftler, Pearson Education, 4. akt. Auflage 2013. Sydsaeter, K., P. Hammond, A. Seierstad, A. Ström: Further Mathematics for Economic Analysis, Prentice Hall / Pearson Education, 2nd ed. 2008. Karmann, Alexander: Mathematik für Wirtschaftswissenschaftler, Oldenbourg Verlag, 6. Aufl. 2008.

			Simon, C. and L. Blume: Mathematics for Economists, International Student Edition 2010.	
Links				
Language of instruction			German	
Duration (semesters)			1 Semester	
Module frequency			annual	
Module capacity			unlimited	
Examination		Prüfungszeiten		Type of examination
Final exam of module				written exam (90-120 minutes) Bonus points can be earned.

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

mat996 - Introduction to Numerical Analysis

Module label	Introduction to Numerical Analysis
Modulkürzel	mat996
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Computing Science (Bachelor) > Wahlpflichtbereich Mathematik • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Chernov, Alexey (module responsibility) • Schöpfer, Frank (module responsibility)
Prerequisites	Analysis I, Lineare Algebra
Skills to be acquired in this module	The students learn and analyze the basic numerical methods. The students learn to implement the basic numerical methods in a computer program. Professional competence The students: · learn basic numerical methods and algorithms · analyze properties of the numerical methods using rigorous mathematical tools · implement the basic numerical methods in a computer program · interpret results of computer simulations Methodological competence The students: · analyze algorithms with mathematical tools · implement numerical algorithms for concrete problems Social competence The students: · develop solutions to given problems in groups · accept constructive criticism Personal competence The students: · reflect their solution strategies · deepen their understanding of the presented mathematical and algorithmical concepts with exercises and adopt the solution methods
Module contents	· Numerical methods for linear systems: LU-, Cholesky decompositions, iterative methods · Numerical methods for nonlinear equations: fix-point iterations, Netwon's Method · Polynomials, spline and trigonometric interpolation · Numerical integration: Newton-Cotes, Gauss quadrature rules, adaptive quadrature and extrapolation methods · Stability and conditioning of algorithms and problems
Literaturempfehlungen	R. Plato: Numerische Mathematik kompakt, Vieweg + Teubner, 2010. Stoer, Bulirsch: Numerische Mathematik 1 und 2, Springer, 2007, 2005. P. Deuflhard, A. Hohmann: Numerische Mathematik 1, de Gruyter, 2008. H.R. Schwarz, N. Köckler: Numerische Mathematik, Vieweg+Teubner, 2008. M. Hanke-Bourgeois: Grundlagen der Numerischen Mathematik und des Wissenschaftlichen Rechnens, Vieweg+Teubner, 2008.
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every year
Module capacity	unlimited
Reference text	Als 6 KP Modul werden Vorlesung und Übungen nur in den ersten 2/3 des Semesters besucht.

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period written exam	Final exam of module

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2.7	WiSe	37
Exercises		1.3	WiSe	19
Präsenzzeit Modul insgesamt				56 h

wir150 - Statistics I for Economists

Module label	Statistics I for Economists
Modulkürzel	wir150
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Aufbaucurriculum-Wahlbereich Mathematik • Bachelor's Programme Economics and Business Administration (Bachelor) > Akzentsetzungsmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Berufliche Bildung • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Stecking, Ralf Werner (module responsibility)
Prerequisites	
Skills to be acquired in this module	Students • will understand the fundamental terms of descriptive and inductive statistics. • will be able to choose and calculate appropriate measures and methods in order to describe empirical data properly. • are familiar with concepts of probability theory and will be able to transfer statistical results from sample to population.
Module contents	Measuring and tabular / graphic representation of the data, summary statistics (arithmetic mean, statistical dispersion), two-dimensional distributions (graphic / tabular depiction, statistical independence, contingency, simple linear regression, and correlation), fundaments of probability theory and probability distribution, sampling distributions, estimation and test methods.
Literaturempfehlungen	Litz, H.-P. (2003): Statistische Methoden in den Wirtschafts- und Sozialwissenschaften (3. Aufl.), München Mittag, H.J. (2015): Statistik: Eine interaktive Einführung, (4. Aufl.), Berlin Schira, J. (2016): Statistische Methoden der VWL und BWL (5. Aufl.), München Wewel, M. (2014): Statistik im Bachelor-Studium der BWL und VWL (3. Aufl.), München
Links	https://www.uni-oldenburg.de/wire/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2		28
Exercises (optional)			WiSe	0
Präsenzzeit Modul insgesamt				56 h

Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik

inf006 - Software Engineering II

Module label	Software Engineering II
Modulkürzel	inf006
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master's Programme Business Informatics (Master) > Akzentsetzungsmodule der Informatik • Master's Programme Computing Science (Master) > Praktische Informatik • Master's Programme Environmental Modelling (Master) > Mastermodule
Zuständige Personen	• Winter, Andreas (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Softwaretechnik I
Skills to be acquired in this module	The objective of the module inf006 Software Engineering II is to deepen the subjects and skills of the module Software Engineering I. Special software engineering topics will be presented, deepened and discussed. The lecture deals with different software engineering methods and technology which will be discussed in the seminar. The discussions are contextualised by scientific research projects, practical projects and latest research findings. **Professional competence** The students: • deepen software engineering methods and techniques • use specific software engineering methods and techniques • differentiate developmental techniques of software systems • discuss software engineering topics • design software systems by using appropriate methods • solve software engineering problems independently • reflect self-designed software engineering solutions critically and present them appropriately **Methodological competence** The Students: • structure problems with modelling techniques • develop actual methods of software engineering • present software engineering solutions • write scientific papers independently **Social competence** The Students: • explain and discuss software development solutions in their practical use • accept criticism and see it as an asset **Self-competence** The Students: • reflect their problem-solving behaviour with regard to the possibilities of software technology • internalize the presented developmental methods and integrate them in their own actions
Module contents	**The following subjects are provided**: • Concept of systems • Iterative and agile process models of software development

- System development and cost estimation
- Methods, techniques and tools to collect requirements
- Techniques to develop and describe software architecture
- Measurement and evaluation of software systems
- Extended techniques of modelling, meta-modelling, domain specific languages - Model based development
- Methods and techniques of software evolution

Literaturempfehlungen

- Ian Sommerville: Software Engineering, Addison-Wesley Longman, Amsterdam, 10. Ed. 2012
- Jochen Ludewig, Horst Lichter: Software Engineering, dpunkt.verlag, 3. Auflage 2013
- Helmut Balzert: Lehrbuch der Software-Technik, Spektrum Akademischer Verlag, 3. Auflage 2009
- Chris Rupp, Stefan Queins: UML 2 glasklar. Praxiswissen für die UML-Modellierung, Carl Hanser Verlag, 4. Auflage 2012
- and actual papers from IEEE Software, IEEE Transactions on Software-Engineering, Informatik-Spektrum and conferences (z.B. ICSE, ICSM, WCRE, CSMR, ICPC, SLE, u.a.)

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every summer term
Module capacity	unlimited
Teaching/Learning method	V+S
Previous knowledge	Software engineering I

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Portfolio (30-minute presentation, 1 paper (4 pages, IEEE) and oral exam)

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Seminar		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf009 - Database Practical

Module label	Database Practical
Modulkürzel	inf009
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Grawunder, Marco (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	• Information Systems I • Operating system knowledge
Skills to be acquired in this module	The objective of this module is to gather practical experience on databases and information systems. The students get an overview of the technical realisation, implementation and optimisation of a professional database management system. **Professional competence** The students: • Realise, implement and program data base systems • Program and implement database-oriented system routines • Implement optimisation goals in the modelling phase • Administer professional database systems (installation, maintenance and adjustment) • Recognise database systems' performance problems and are able to fix them with according methods • Organise and control processes of database systems **Methodological competence** The students: • propose concrete processing principles for special application classes • reflect on specific technologies and procedures with regard to their consequences **Social competence** The students: • Solve database system problems in a team **Self-competence** The students: • Acknowledge the limits of their ability to cope with pressure during the implementation and are aware of failures • Reflect their self-perception
Module contents	The module “Practical Course Databases” is a related practical course of the module “Information Systems I”. The objectives of this module are special technical concepts of a database system and practical solutions in database programming and optimisation. **Contents of this module are:** • System-oriented database management programming, • Implementation of catalogue systems,

- Optimisation strategies based on parallelisation and partitioning requirements

Literaturempfehlungen

- Ramez Elmasri und Shamkant B. Navathe (2007). Fundamentals of Databases Systems. Fifth Edition, Pearson/Addison Wesley
- Held Andrea (2005), Oracle 10g Hochverfügbarkeit Addison-Wesley -
- Held Andrea (2015), Oracle 12c New Features Addison Wesley
- Feuerstein Steven, Pribyl Bill, Dawes Chip (2007).Oracle PL/SQL. 4. Auflage, O'Reillys Taschenbibliothek

Links	http://www-is.informatik.uni-oldenburg.de/227/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	unlimited
Teaching/Learning method	P
Previous knowledge	Information Systems I Operating system knowledge

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Oral exam

Lehrveranstaltungsform	Exercises
SWS	4
Frequency	WiSe

inf017 - Interactive Systems

Module label	Interactive Systems
Modulkürzel	inf017
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	

- Bachelor's Programme Biology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Business Administration and Law (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik
- Bachelor's Programme Business Informatics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Chemistry (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" more...
- Bachelor's Programme Comparative and European Law (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
- Bachelor's Programme Computing Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Economics and Business Administration (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Engineering Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Environmental Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Intercultural Education and Counselling (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Physics, Engineering and Medicine (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Social Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Sustainability Economics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Art and Media (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Biology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Chemistry (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Computing Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Dutch Linguistics and Literary Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Economic Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Elementary Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme English Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Gender Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"

	• Dual-Subject Bachelor's Programme General Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme German Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme History (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-subject bachelor's programme Low German (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Material Culture: Textiles (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Music (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Philosophy / Values and Norms (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Politics-Economics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Protestant Theology and Religious Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Slavic Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Social Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Special Needs Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Sport Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Technology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Fach-Bachelor Pädagogisches Handeln in der Migrationsgesellschaft (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik)
Zuständige Personen	• Boll-Westermann, Susanne (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	**Professional competence** The students: • can describe and explain an iterative process to develop interactive systems. • can classify a method known from the lecture into that process • name the basic concepts and characteristics of usable user interfaces • name and explain established guidelines and heuristics of the user-centered design of interactive systems **Methodological competence:** The students: • can name and explain methods for context of use and/or user requirements analysis. • can name methods for the design and prototypical implementation of interactive systems and discuss their advantages and disadvantage. • can explain established methods for usability testing. • can evaluate a given user interface with regard to potential usability problems. **Social competence** The students: • can present solutions to usability problems or results of an usability evaluation in the plenum. **Self competence** The students: • can accept criticisms by their peer group as valuable contributions to

their solutions.

Module contents	The field of interactive systems deals with the tasks, concepts and technologies of human-computer interaction and its user-friendly and suitable design. The lecture is based on the so-called Human Centred Design Process and includes models of interaction between humans and their environment, iterative design, prototyping techniques, study and evaluation processes. Basic design principles, methods and tools are presented. Practical tasks complete the lecture.
Literaturempfehlungen	• Alan Dix, Janet Finlay, Gregory Abowd, Russell Beale: Human Computer Interaction. • Bernhard Preim, Raimund Dachselt: Interaktive Systeme • Weitere Fachartikel, die in der Vorlesung vorgestellt werden
Links	https://uol.de/en/media-informatics/teaching/courses
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	40
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	Individually, at the end of the lecture period	Project and oral Exam or project and written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Project		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf018 - Media Processing

Module label	Media Processing
Modulkürzel	inf018
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	

- Bachelor's Programme Biology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Business Administration and Law (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik
- Bachelor's Programme Business Informatics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Chemistry (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" more...
- Bachelor's Programme Comparative and European Law (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
- Bachelor's Programme Computing Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Economics and Business Administration (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Engineering Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Environmental Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Intercultural Education and Counselling (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Physics, Engineering and Medicine (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Social Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Bachelor's Programme Sustainability Economics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Art and Media (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Biology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Chemistry (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Computing Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP)
- Dual-Subject Bachelor's Programme Dutch Linguistics and Literary Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Economic Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme Elementary Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"
- Dual-Subject Bachelor's Programme English Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer"

	• Dual-Subject Bachelor's Programme Gender Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme General Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme German Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme History (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-subject bachelor's programme Low German (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Material Culture: Textiles (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Mathematics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Music (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Philosophy / Values and Norms (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Physics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Politics-Economics (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Protestant Theology and Religious Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Slavic Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Social Studies (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Special Needs Education (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Sport Science (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Dual-Subject Bachelor's Programme Technology (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Fach-Bachelor Pädagogisches Handeln in der Migrationsgesellschaft (Bachelor) > PP "Medieninformatik für Studierende musisch-künstlerischer Fächer" • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Praktische Informatik) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik • Master's Programme Business Informatics (Master) > Akzentsetzungsmodule der Informatik
Zuständige Personen	• Boll-Westermann, Susanne (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Solid programming skills in Java and/or C++, practical informatics. Interest in media processing
Skills to be acquired in this module	The students can explain the basics of image processing and know which algorithms exist for the basic tasks in image processing and how these are applied. The students can apply basic methods of image processing they learned in the lecture to solve simple problems. **Professional compentence:** The students • can name basic characteristics of digital media • can explain the most common methods for encoding and compressing images, video and audio • can describe basic procedures for image enhancement, feature extraction, feature description, image analysis and image comprehension **Methodological competence:** The students • can recognize and evaluate image properties and decide for suitable image processing methods • can select existing software packages for simple image processing problems, as well as use and customize them for their specific task • can implement simple image and media processing functions in a higher programming language (e.g., C ++)

Social competence
The students:

- can plan, implement, and document a software project in team work
- can present the results of their work to an audience and adequately respond to criticism and questions

Self competence
The students:

- can accept and learn from mistakes made during the process of implementation

Module contents	The lecture covers the technologies of media processing. In particular, the lecture focuses on image processing chain from digital imaging, through image pre-/and postprocessing, and image storage to image analysis. In addition to compression techniques and color space theory (RGB, HSV, YUV, CIEXYZ, ...), the topics of the lecture include image enhancement, feature extraction, feature description, image analysis and image comprehension. The lecture furthermore discusses the encoding and analysis of video and audio.
Literaturempfehlungen	- Wilhelm Burger und Mark James Burge. Digitale Bildverarbeitung: Eine Einführung mit Java und Image, J. Springer, 2006. - Literatur im Handapparat der Abteilung in der Bibliothek. - Linkliste im Lernmanagementsystem zu den einzelnen Themen der Vorlesung.
Links	https://uol.de/en/media-informatics/teaching/courses
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	12
Reference text	
Teaching/Learning method	V+Ü
Previous knowledge	Solid programming skills in Java and/or C++, practical informatics. Interest in media processing

Examination	Prüfungszeiten	Type of examination
Final exam of module	The presentation of the practical project on a project day of all small groups takes place directly after the lecture period. The oral examination takes place in the first two weeks after the end of the lecture period. Any post-examinations will take place at the end of the lecture period. The exact schedule can be found on the department's web pages as well as the information in the learning management system Stud.IP.	Project and oral Exam or project and written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf021 - Advanced Java Technologies

Module label	Advanced Java Technologies
Modulkürzel	inf021
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Boles, Dietrich (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	useful knowledge: Object-oriented programming
Skills to be acquired in this module	The objective of this module is to introduce advanced concepts and technologies of the Java Standard Edition. The students will be able to use the technologies to implement large applications. **Professional competence:** The students: • name the essential packages of the JDK class library • structure large programs properly and implement them extensively • set up own Java class libraries • look up required classes in the JDK-Library and solve problems with these classes • structure their programs properly • understand and interpret large programs of other students • evaluate the quality of large programs related to their maintainability, reuseability and expandability **Methodological competence:** The students: • search for solutions to specific problems in the internet independently **Social competence:** The students: • discuss own and solutions of other students **Self-competence:** The students: • reflect their problem-solving behaviour and take up new solutions, e.g. from the internet
Module contents	A selection of the following subjects is presented during the lectures: • GUI (AWT, Swing, JavaFX) • Java-Basics and Collection-API • Graphics and multimedia • Events • Model-View-Control (MVC) • Threads • Internationalization, localization • Reflection • IO, Files • Tools (compiler, classloader, printer, ...) • Storage technologies (XML and serialization) • Distributed programming (sockets and RMI) • Databases (JDBC) • Compression • Security concepts

Alternatively, a single topic is explored in depth.
As part of the exercises, individual programming tasks or a larger programming task will be worked on. The tasks are related to the topic of the individual lecture contents.

Literaturempfehlungen	list of links in the learning management system
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every semester
Module capacity	12
Reference text	
Teaching/Learning method	V+Ü
Previous knowledge	Object-oriented programming

Examination	Prüfungszeiten	Type of examination
Final exam of module	throughout the semester	practical exercises

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe oder WiSe	56
Exercises		2	SoSe oder WiSe	28
Präsenzzeit Modul insgesamt				84 h

inf517 - Introduction to Energy Informatics

Module label	Introduction to Energy Informatics
Modulkürzel	inf517
Credit points	3.0 KP
Workload	90 h ()
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Vogel-Sonnenschein, Ute (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Die Studierenden lernen an Beispielen, die Grenzen der eigenen Fachdisziplin in der Anwendung zu erkennen sowie Forschungsfragestellungen zu identifizieren und einzuordnen. ACHTUNG: Dies Modul wird nicht mehr angeboten! Die Inhalte wurden in Modul inf518 integriert.
Skills to be acquired in this module	The students learn to identify the borders of their disciplinary background when going to the field. Additionally, they learn to identify research questions and how to approach them. **Professional competence** The students • learn to identify the borders of their disciplinary background when going to the field. Additionally, they learn to identify research questions and how to approach them. **Methodological competence** The students • will know how computer science methods can be applied to energy systems and energy research. **Social competence** The Students • discuss in an interdisciplinary context in an appreciative manner.
Module contents	This module gives an overview about different topics in the field of energy informatics. In the lecture, the role of computer science in the energy domain is presented on the base of different topics to illustrate the links between energy technology and management and computer science. Some examples are: • Energy markets • Network planning & operations management • Virtual power plants • Demand side management and flexibility
Literaturempfehlungen	
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	irregular
Module capacity	unlimited
Teaching/Learning method	V

Previous knowledge	Basic knowledge in the field of power engineering or computer science can be brought in, but is not a prerequisite.

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture time	Exam

Lehrveranstaltungsform	Lecture
SWS	2
Frequency	siehe Angebotsrhythmus Modul

inf521 - Medical Informatics

Module label	Medical Informatics
Modulkürzel	inf521
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule
Zuständige Personen	• Wulff, Antje (module responsibility) • Kaspar, Mathias (Module counselling) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirement
Skills to be acquired in this module	This module provides an introduction to the medical informatics and medical technology. **Professional competence** The students: • know the medical and healthcare computer science applications • know typical IT solutions and infrastructures • know the legal framework to process care data • know medical classifications and nomenclatures and the DRG-System and are able to apply them **Methodological competence** The students: • know bio-medical research requirements and patient data privacy methods • know communication standards and apply them in small-scale scenarios • know and apply patient safety and risk management methods • know and apply biosignal and image processing methods **Social competence** The students: • realise the importance of communication during the software development process between developer, customer and user of a successful and secure system. Feedback, request, respectful cooperation and the empathy of other disciplines' working processes are of great importance. **Self-competence** The students: • realise their responsibility as a medical informatic and reflect their impact on patients, medical employers and hospitals (corporates)
Module contents	• Medical informatics introduction / medical documentation • Medical documentation / progression of disease • Healthcare information systems • Terminology and classification / Medical controling • Image processing / interoperability and communication standards • Medical data privacy • Medical research • Analyses of information system data • Decision making support and process management • MI/MT patient safetiness (Regulatory Affairs) • Telemedicine / Customer Health informatics • Medical technology introduction, biomedical technology • Biosignal processing, sensor technology • Robotics, prosthetics

Literaturempfehlungen

- Jan van Bemmel , M.A. Musen , Mark A. Musen (Hrsg.): Handbook of Medical Informatics. Springer, Heidelberg 1997
- Christian Johner und Peter Haas (Hrsg.): Praxishandbuch IT im Gesundheitswesen
- Carl Hanser Verlag München 2009
- Dugas, Schmidt: Medizinische Informatik und Bioinformatik. Springer Verlag, Berlin, 2003

Links				
Language of instruction		German		
Duration (semesters)		1 Semester		
Module frequency		annual		
Module capacity		unlimited		
Teaching/Learning method		1VL + 1Ü		
Previous knowledge		none		
Examination	Prüfungszeiten		Type of examination	
Final exam of module	At the end of the lecture period		Written or oral exam	
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf530 - Artificial Intelligence

Module label	Artificial Intelligence
Modulkürzel	inf530
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik) • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Akzentsetzungsbereich
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	• Basic knowledge of computer science/business informatics
Skills to be acquired in this module	The students are familiar with the basic concepts of artificial intelligence (AI). They know the concept of rational agents and their behavior. They know how to implement expert systems.They also know basic search and problem solving techniques as well as techniques of knowledge representation. The students can compare different problem solving techniques and use them within other problem contexts. **Professional competence** The students: • describe the concept of rational agents and their behavior in an agent environemt • name and describe the basic search and problem solving techniques of Artificial Intelligence • describe and implement expert systems • describe basic techniques of knowledge representation **Methodological competence** The students: • acknowledge the basic methods of AI • transfer AI methods to other application areas • evaluate AI methods regarding their appropriateness for destinct problem areas • modify and adapt AI methods for specific application areas **Social competence** The students: • work in teams • present results to groups **Self-competence** The students: • reflect their results with regard to the methods of AI
Module contents	• Overview of AI • Rational agents and agent based systems • Search and other problem solving techniques • Knowledge representation • Planning
Literaturempfehlungen	

- Russel, S. J.: Norvig, Peter (2012): Artificial Intelligence: A modern Aproach, 3rd Ed.
- Winston, P.H. (1994): Artificial Intelligence, 3rd Edition

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	Basic knowledge of computer science/business informatics

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	At the end of the lecture period	Written or oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf540 - Applications in Artificial Intelligence

Module label	Applications in Artificial Intelligence
Modulkürzel	inf540
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	None

Skills to be acquired in this module

Upon successful completion of the course students should have acquired the ability to master the presented methods safely in theory and practice. The students solve practical problems in the area of ??AI by themselves in a goal-oriented manner.

Professional competence
The students know about

- construction and handling of robotics systems
- 3D orientation (SLAM – self orientation and mapping)
- route Planning
- route optimization and general optimization procedures
- handling and testing of autonomous systems
- handling of hardware
- application of known libraries of machine perception
- openCV
- tensorFlow

Methodological competence The students

- discuss critical solution approaches and method selection
- deepen programming skills
- learn how to handle hardware systems

Social competence
The students

- develop the solutions independently in small groups
- evaluate their own solutions and compare them with those of your fellow students

Self-competence
The students

- develop your own solution approaches
- reflect other approaches
- create your own project and timetables
- recognize your own limits

Module contents

In the module "Applications of Artificial Intelligence" the students should gain practical experience in the field of artificial intelligence. The learning objectives should be developed by the students in working groups of 4-5 participants. Simple Robotics systems e.g. in the area of autonomous driving or software simulating AI methods will be developed

Literaturempfehlungen

Scientific publications with the tags:
Autonomous drone, robotics, ai, deep drone racing.

See: https://scholar.google.de/scholar?hl=de&as_sdt=0%2C5&q=deep+drone+racing&btnG=

Links	https://www.iros2019.org/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	unlimited
Teaching/Learning method	V with independent practical part
Previous knowledge	Introduction to Artificial Intelligence (inf530)

Examination	Prüfungszeiten	Type of examination
Final exam of module	Am Ende der Vorlesungszeit	Portfolio

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf603 - Planning and Simulation in Logistics

Module label	Planning and Simulation in Logistics
Modulkürzel	inf603
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Wahlpflichtmodule (Angewandte Informatik)
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirements
Skills to be acquired in this module	Introduction to the problems/challenges of simulation and planning of applications in production and logistics. The students will learn the simulation with a tool in hands-on exercises. **Learning objectives:** The Students • have knowledge of basic problems/challenges of simulating and planning in the field of production and logistic • know approaches and algorithms to solve simulation and planning problems/challenges • are able to model solutions for simple production problems/challenges with a simulation tool and • are able to solve given tasks with it • are able to identify, classify and associate solutions to problems/challenges • are abel to model and implement a production plan with the simulation tool **Professional competence** The students: • Characterise basic problems/challenges of the production planning and logistic simulation • Name approaches/concepts and algorithms to solve simulation and planning problems/challenges • Identify, classify and assign solutions to planning problems/challenges • Model and implement a given production process with a simulation tool **Methodological competence** The students: • Model small production problems with a simulation tool and solve given tasks with the tool **Social competence** The students: • Develop solutions to given simulation problems in small groups • Present the solutions to other groups **Self-competence** The students: • Reflect their own solutions in conjunction with other solutions
Module contents	This module provides the basic production and logistic planning and simulation approaches/concepts. Supply chain planning problems are introduced and

simple algorithmic solutions are introduced and implemented. The hands-on simulation with a tool is provided by a case study from the production.

Literaturempfehlungen	• selected material on the simulation tool • others will be announced in the lecture
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	At the end of the lecture period	Portfolio consisting of: Active involvement, presentation and documentation of results, hands-on achievements

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf609 - Business Process Management

Module label	Business Process Management
Modulkürzel	inf609
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Business Informatics I
Skills to be acquired in this module	Teaching of the basics of process management. They understand the importance of models for the analysis and design of business processes. **Professional competence** The students: • will be able to model and classify business processes and to optimize them for given goals. **Methodological competence** The students: • can map and evaluate processes in structure models, process chains, and costing models. **Social competence** The students: • recognize the importance of employee empowerment for simple, flexible management of processes • design processes on case studies interactively with the intended process participants. **Self competence** The students: • are able to independently acquire knowledge and skills within the framework of an eLearning module.
Module contents	• The basics of process management • Strategic Process Management / Strategic Process Planning • Process design (procedure, actual and target modeling) • Process implementation (process types, process integration using the example SAP ERP) • Quality and Change Management (ISO 9000, Total Quality Management) • Process Controlling • Process management in service companies
Literaturempfehlungen	• Schmelzer, H./Sesselmann, W. (2010): Geschäftsprozessmanagement in der Praxis, 7. Aufl., München/Wien • Gaitanides, M./Scholz, R./Vrohlings, A./Raster, M. (1994): Prozessmanagement, München • Gadatsch, A. (2010), Grundkurs Geschäftsprozess-Management, &. Aufl, Wiesbaden • Hammer, M./Champy, J. (2003): Business Reengineering, 7. Aufl.,

Frankfurt.

- Stöger, R. (2009):Prozessmanagement, 2 Aufl., Stuttgart -
- Schulte-Zurhausen, M.: Organisation, 3. Aufl., München 2002, S. 45-127Göppel, R. (2010): Praxiswissen Prozessmanagement
- Allweyer, T. (2010): Geschäftsprozessmanagement, 4. Aufl., Herdecke, Bochum
- Fischermanns, G. (2010): Praxishandbuch Prozessmanagement, 9. Aufl., Gießen

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Reference text	This is an e-learning module offered by the University of Osnabrück as a teaching import (ATLANTIS project).
Teaching/Learning method	V+Ü
Previous knowledge	Business Informatics I

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period	Written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe oder WiSe	28
Exercises		2	SoSe oder WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf610 - Enterprise Architecture Management

Module label	Enterprise Architecture Management
Modulkürzel	inf610
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Business Informatics I

Skills to be acquired in this module

This module adresses basic elements of enterprise architectures and their management as well as concepts and methodologies used to describe and develop enterprise architectures.

Professional competences
The students

- have knowledge of components of enterprise architectures and used enterprise architecture frameworks
- choose Enterprise Architecture Frameworks based on requirements and needs

Methodological competences
The students:

- identify business goals and describe the resulting business processes
- design fitting IT-architectures
- analyze and harmonize different architectures into an enterprise architecture

Social competences
The students:

- extend their ability to work as a team
- create, present and discuss exercises using EAM methods
- identify and solve problems and challenges in the harmonization of enterprise architectures using EAM methods

Self-competences
The students:

- reflect their actions in identifying possible solutions using EAM methods
- learn methodical and scientific procedures in the processing of accompanying exercises
- develop the ability to look at different aspects of systems in a superordinate and common (company) context, including the methods of EAM.

Module contents

Enterprise Architecture Management (EAM) is an interdisciplinary approach for the integration of information systems in enterprises and enterprise-like structures to support their business objectives and business processes. EAM addresses the harmonization of these aspects on the basis of the respective IT-architecture and business architectures to a holistic enterprise architecture. The description and development of such architectures is structured by Enterprise Architecture Frameworks like TOGAF and ZACHMAN.
In general, the following architectural perspectives are taken into account:

- business architecture

	• information and data architecture • application architecture • technology architecture
Literaturempfehlungen	
	• Enterprise Architecture Frameworks Kompendium – Dirk Matthes – ISBN: 978-3-642-12954-4 • Strategisches Management der IT-Landschaft Ein praktischer Leitfaden für das Enterprise Architecture Management – Inge Hanschke - 978-3-446-43509-4
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every summer term
Module capacity	unlimited
Reference text	
	Teaching language: German, the lecture slides are in English
Teaching/Learning method	V+Ü
Previous knowledge	Business Informatics I

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	Oral examination or written examination at the end of the semester	With an appropriate number of participants (<12 students), an oral examination will be held. In case of a high number of participants (>12 students), an exam will be held instead. It counts the number of participants in the Stud.IP at the beginning of the first course. Exercises are issued during the semester, the successful completion of them is credited to the examination with a maximum total of 10% bonus.

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe oder WiSe	28
Exercises		2	SoSe oder WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf611 - Practice Business Informatics

Module label	Practice Business Informatics
Modulkürzel	inf611
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik
Zuständige Personen	• Marx Gómez, Jorge (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirements
Skills to be acquired in this module	After finishing this course, students will be able to address and discuss current challenges of the Business Informatics community. In addition, students will be enabled to solve real world problems from the Business Informatics domain with up to date means of ICT. **Professional Competences** The Student • gain comprehensive knowledge regarding the project life cycle • will get in touch with current research and challenges regarding project management and implementation • are aware of stakeholder communication **Methological Competences** The Student • provide their own approach to solving a problem or apply already existing approaches to new and unsolved challenges of the domain • will be enabled to apply different research methods when compiling a product **Social Competences** The Student • are supposed to work in teams and therefore must identify working packages and must take on responsibility for the jobs assigned to them. • present and discuss their own results with the team and the other members of the course. **Self-Competences** The Student learn about their own limitations and learn to accept criticism in order to strengthen their own abilities.
Module contents	The rapidly increasing economic and time-related requirements are forcing organizations to question their previous approaches and establish new, faster methods in the development of products. While in the past the waterfall model defined projects over the entire project period, today short-cycle iterations are used. One of the most important skills is communication with stakeholders and focusing on key problems. However, it is no longer enough for project progress to be shown as a slide presentation; instead, new interactive forms of presentation are becoming popular in companies. The course focusses on: • Target group-oriented stakeholder communication • Using time efficient approaches to solving problems as well as focusing

on key requirements
- How to deal with resource restrictions.

Literaturempfehlungen	

- Jonathan Arnowitz, Michael Arent, and Nevin Berger (2006): Effective Prototyping for Software Makers. Morgan Kaufmann Publishers Inc., San Francisco, CA, USA.
- Jake Knapp, John Zeratsky, Brand Kowitz (2016): Sprint: How to Solve Big Problems and Test New Ideas in Just 5 Days.
- Christian Rupp (2014): Requirements-Engineering und -Management: Aus der Praxis von klassisch bis agil
- Jeff Patton (2014): User Story Mapping: Discover the Whole Story, Build the Right Product

Links	http://vlba.wi-ol.de
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	25 (max. 25)
Teaching/Learning method	4 PR
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	during the free-time period, as a rule 2 weeks after the end of the free-time period	Portfolio or oral exam

Lehrveranstaltungsform	Practical training
SWS	4
Frequency	WiSe

inf612 - Re-engineering of business processes

Module label	Re-engineering of business processes
Modulkürzel	inf612
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Marx Gómez, Jorge (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Business Informatics II

Skills to be acquired in this module

Professional Competence
The students:

- are able to classify, explain and model business processes.
- are able to explain business process management and re-engineering of business processes as well as their differences.
- have practical knowledge in the field of business process modeling, partly based on scenarios from the topics industry 4.0, sustainability and data science

Methological Competence
The students:

- learn the pros and cons of different methods by applying them to model business processes.

Social Competence
The students:

- are supposed to work in teams and therefore have to identify working packages and have to take on responsibility for the jobs assigned to them.
- present and discuss their own results with the team and the other members of the course

Self-competence

The students:

- learn about their own limitations and learn to accept criticism in order to strengthen their own abilities.

Module contents

This course starts with an introduction to business process modeling with a focus on event-driven process chains and BPMN. Second, business process management will be discussed, focusing on discovering, modeling, documenting, implementing, managing and optimizing business processes. Third, business process reengineering will be elaborated, with a focus on driving forces such as industry 4.0, sustainability and data science.

The course will implement different research oriented aspects, e.g. the students will elaborate a number of real world examples and present their results within the course.

Literaturempfehlungen

- Koch, S. (2015). Einführung in das Management von Geschäftsprozessen: Six Sigma, Kaizen und TQM. Springer-Verlag.
- Feldbrügge, R., & Brecht-Hadraschek, B. (2008). Prozessmanagement

	leicht gemacht: Geschäftsprozesse analysieren und gestalten. Redline Wirtschaft.

Links	
	https://uol.de/vlba/

Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	every winter term
Module capacity	30
Teaching/Learning method	V+Ü
Previous knowledge	Business Informatics II

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	At the end of the lecture term.	written exam and practical exercises

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

inf801 - Research Seminar in Computer Science

Module label	Research Seminar in Computer Science
Modulkürzel	inf801
Credit points	3.0 KP
Workload	90 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	No participant requirements
Skills to be acquired in this module	Supported by a lecturer the students get familiar with literature of a topic. They understand and evaluate the relevance of the literature. After this evaluation the students present and discuss their solutions academically. **Professional competence** The students: • characterise and apply computer science basics (algorithms, data structures, programming, basics of practical, technical and theoretical computer science) • reflect a scientific topic and present their solutions **Methodological competence** The students: • examine problems, use formal methods to phrase them and analyze them appropriately • evaluate problems by the use of technical and scientific literature • reflect on a scientific topic and write a scientific seminar paper under guidance and present their findings • work scientifically **Social competence** The students: • communicate considerately and appropriately with users and experts • use presentation methods **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts • collect and update their knowledge independently
Module contents	according to the assigned task
Literaturempfehlungen	according to the assigned task
Links	
Language of instruction	German

Duration (semesters)		1 Semester	
Module frequency		semi-annual	
Module capacity		unlimited	
Teaching/Learning method		S	
Previous knowledge		none	
Examination	Prüfungszeiten		Type of examination
Final exam of module			Presentation
Lehrveranstaltungsform	Seminar		
SWS	2		
Frequency			

inf803 - Special Topics in Computer Science I

Module label	Special Topics in Computer Science I
Modulkürzel	inf803
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Diethelm, Ira (module responsibility) • Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The expected previous knowledge is specified in the details of the assigned course.
Skills to be acquired in this module	This module integrates current computer science developments within appropriate study courses. **Professional competence** The students: • know recent technological or scientific computer science developments • transfer computer science methods and development models to IT application area requirements • evaluate the possibilities and limitations of computer science methods and tools and apply them appropriately **Methodological competence** The students: • review problems, formulate them with formal models and explore them appropriately • identify and present (one or more) computer science problem solutions • select and evaluate appropriate tools and methods • examine problems with technical and scientific literature **Social competence** The students: • work in a team **Self-competence** The students: • plan their informatical actions independently
Module contents	According to the assigned course
Literaturempfehlungen	According to the assigned course
Links	
Languages of instruction	German, English

Duration (semesters)	1 Semester
Module frequency	semi-annual
Module capacity	unlimited
Reference text	Falls mehr dem Modul mehr als eine Veranstaltung zugeordnet ist, wählen Sie in der Regel Veranstaltungen im Gesamtumfang von 4 SWS aus, bspw. eine Vorlesung mit zugehöriger Übung. Weitere Informationen finden Sie in der Beschreibung (Details) der zugeordneten Veranstaltungen.
Teaching/Learning method	2 VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf804 - Special Topics in Computer Science II

Module label	Special Topics in Computer Science II
Modulkürzel	inf804
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Diethelm, Ira (module responsibility) • Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The expected previous knowledge is specified in the details of the assigned course.
Skills to be acquired in this module	This module integrates current computer science developments within appropriate study courses. **Professional competence** The students: • know recent technological or scientific computer science developments • transfer computer science methods and development models to IT application area requirements • evaluate the possibilities and limitations of computer science methods and tools and apply them appropriately **Methodological competence** The students: • review problems, formulate them with formal models and explore them appropriately • identify and present (one or more) computer science problem solutions • select and evaluate appropriate tools and methods • examine problems with technical and scientific literature **Social competence** The students: • work in a team **Self-competence** The students: • plan their informatical actions independently
Module contents	According to the assigned course
Literaturempfehlungen	According to the assigned course
Links	
Languages of instruction	German, English

Duration (semesters)	1 Semester
Module frequency	irregularly
Module capacity	unlimited
Reference text	Falls mehr dem Modul mehr als eine Veranstaltung zugeordnet ist, wählen Sie in der Regel Veranstaltungen im Gesamtumfang von 4 SWS aus, bspw. eine Vorlesung mit zugehöriger Übung. Weitere Informationen finden Sie in der Beschreibung (Details) der zugeordneten Veranstaltungen.
Teaching/Learning method	2VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf808 - Current Topics in Computer Science

Module label	Current Topics in Computer Science
Modulkürzel	inf808
Credit points	3.0 KP
Workload	90 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Praktische Vertiefung (60 KP) • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Praktische Vertiefung der Informatik
Zuständige Personen	• Diethelm, Ira (module responsibility) • Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Keine
Skills to be acquired in this module	This module integrates current computer science developments within appropriate study courses. **Professional competence** The students: • Know recent technological or scientific computer science developments • Transfer computer science methods and development models to IT application area requirements • Evaluate the possibilities and limits of computer science methods and tools and apply them appropriately **Methodological competence** The students: • Review problems, formulate them with formal models and explore them appropriately • Identify and present (one or more) computer science problem solutions • Select and evaluate appropriate tools and methods • Reflect on a scientific topic and write a scientific seminar paper under guidance and present their findings **Social competence** The students: • Use presentation methods purposefully **Self-competence** The students: • Plan their informatical actions independently • Reflect their contributions critically and discuss them with users and experts • Collect and update their knowledge independently
Module contents	According to the assigned task
Literaturempfehlungen	According to the assigned task

Links			
Language of instruction		German	
Duration (semesters)		1 Semester	
Module frequency		unregelmäßig	
Module capacity		unlimited	
Teaching/Learning method		1 VA aus V, Ü, S, P, PR	
Examination	Prüfungszeiten		Type of examination
Final exam of module			Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	2
Frequency	siehe Angebotsrhythmus Modul

inf809 - Current Topics in Computer Science II

Module label	Current Topics in Computer Science II
Modulkürzel	inf809
Credit points	3.0 KP
Workload	90 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • der Informatik, Lehrende (Prüfungsberechtigt)
Prerequisites	None
Skills to be acquired in this module	This module integrates current computer science developments within appropriate study courses. **Professional competence** The students • know recent technological or scientific computer science developments • transfer computer science methods and development models to IT applicaion area requirements • evaluate the possibilities and limits of computer science methods and tools and apply them appropriately **Methological competence** The students • review problems, formulate them with fomral moedls and explore them appropriately • identify and present (one or more) computer science problem solutions • select and evaluate approbriate tools and methods • reflect on a scientific topic and write a scientific seminar paper under guidance and present their findings **Social competence** The students use presentation methods purposefully **Self competence** The students • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts • collect and update their knowledge independently
Module contents	According to the assigned task
Literaturempfehlungen	According to the assigned task
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	irregulary

Module capacity	unlimited	
Teaching/Learning method	1 VA aus V, Ü, S, P, PR	
Examination	Prüfungszeiten	Type of examination
Final exam of module		Portfolio or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	2
Frequency	siehe Angebotsrhythmus Modul

inf853 - Application Fields of Computer Science I

Module label	Application Fields of Computer Science I
Modulkürzel	inf853
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The required prerequisites are specified in the details of the assigned course.
Skills to be acquired in this module	The students are introduced into a different subject area and its methods. **Professional competence** The students: • know a computer science application area • transfer computer science methods and development models to/with IT application area requirements **Methodological competence** The students: • know and name ways of thinking and methods of other subject areas **Social competence** The students: • communicate considerately and appropriately with users and experts **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts
Module contents	According to the assigned task
Literaturempfehlungen	According to the assigned task
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	irregular
Module capacity	unlimited
Teaching/Learning method	2 VA aus VL, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf854 - Application Fields of Computer Science II

Module label	Application Fields of Computer Science II
Modulkürzel	inf854
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The required prerequisites are specified in the details of the assigned course.
Skills to be acquired in this module	The students are introduced into a different subject area and its methods. **Professional competence** The students: • know a computer science application area • transfer computer science methods and development models to/with IT application area requirements **Methodological competence** The students: • know and name ways of thinking and methods of other subject areas **Social competence** The students: • communicate considerately and appropriately with users and experts **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts
Module contents	According to the assigned task
Literaturempfehlungen	According to the assigned task
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	irregular
Module capacity	unlimited
Teaching/Learning method	2 VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		

Examination	Prüfungszeiten	Type of examination
		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf855 - Application Fields of Computer Science III

Module label	Application Fields of Computer Science III
Modulkürzel	inf855
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The required prerequisites are specified in the details of the assigned course.
Skills to be acquired in this module	The students are introduced into a different subject area and its methods. **Professional competence** The students: • know a computer science application area • transfer computer science methods and development models to/with IT application area requirements **Methodological competence** The students: • know and name ways of thinking and methods of other subject areas **Social competence** The students: • communicate considerately and appropriately with users and experts **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts
Module contents	According to the assigned course
Literaturempfehlungen	According to the assigned course
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	semi-annual
Module capacity	unlimited
Teaching/Learning method	2 VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		

Examination	Prüfungszeiten	Type of examination
		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf856 - Application Fields of Computer Science IV

Module label	Application Fields of Computer Science IV
Modulkürzel	inf856
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The required prerequisites are specified in the details of the assigned course.
Skills to be acquired in this module	The students are introduced into a different subject area and its methods. **Professional competence** The students: • know a computer science application area • transfer computer science methods and development models to/with IT application area requirements **Methodological competence** The students: • know and name ways of thinking and methods of other subject areas **Social competence** The students: • communicate considerately and appropriately with users and experts **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts
Module contents	According to the assigned course
Literaturempfehlungen	According to the assigned course
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	semi-annual
Module capacity	unlimited
Teaching/Learning method	2 VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		

Examination	Prüfungszeiten	Type of examination
		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf857 - Application Fields of Computer Science V

Module label	Application Fields of Computer Science V
Modulkürzel	inf857
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik
Zuständige Personen	• Nieße, Astrid (module responsibility) • Sauer, Jürgen (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	The required prerequisites are specified in the details of the assigned course.
Skills to be acquired in this module	The students are introduced into a different subject area and its methods. **Professional competence** The students: • know a computer science application area • transfer computer science methods and development models to/with IT application area requirements **Methodological competence** The students: • know and name ways of thinking and methods of other subject areas **Social competence** The students: • communicate considerately and appropriately with users and experts **Self-competence** The students: • plan their informatical actions independently • reflect their contributions critically and discuss them with users and experts
Module contents	According to the assigned course
Literaturempfehlungen	According to the assigned course
Links	
Languages of instruction	German, English
Duration (semesters)	1 Semester
Module frequency	semi-annual
Module capacity	unlimited
Teaching/Learning method	2 VA aus V, Ü, S, P, PR

Examination	Prüfungszeiten	Type of examination
Final exam of module		

Examination	Prüfungszeiten	Type of examination
		Exercises or presentation or oral exam or written exam

Lehrveranstaltungsform	VA-Auswahl
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf860 - Study Abroad I

Module label	Study Abroad I
Modulkürzel	inf860
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft
Zuständige Personen	• Marx Gómez, Jorge (Module counselling) • Fränzle, Martin Georg (Module counselling) • Vogel-Sonnenschein, Ute (module responsibility) • Sauer, Jürgen (module responsibility)
Further responsible persons	Studiengangsverantwortliche der Bachelor-Studiengänge des Departments für Informatik
Prerequisites	According to the requirements of the selected courses at the international host university
Skills to be acquired in this module	**Professional competence** • depending on the chosen course at the host university **Methodological competence** • depending on the chosen course at the host university The students • organize themselves independently in the culture of the host country • use time and other resources efficiently and in a goal-oriented manner **Social competence** The students • have intercultural competence: they interact successfully and appropriately with individuals and groups from other cultures, • communicate with people from other cultures in a targeted and respectful manner, • have in-depth empathic skills. They empathize with other people on a cognitive and emotional level, listen carefully and attentively, and understand the opinions of others. **Self-competence** The students • have generally deepened their skills in a foreign language for subject-related discourse, • express themselves fluently in the language of their host country, • adapt to changing living and learning environments, • deal tolerantly with ambiguities, • approach other people openly, • assess their own strengths and weaknesses appropriately, • make appropriate decisions even in difficult situations, • work on challenges in a solution- and goal-oriented manner, • face up to new tasks, challenges and experiences.

Module contents	The ongoing process of globalization requires preparation for professional for professional activities that are increasingly internationally oriented. This requires not only foreign language skills, but also intercultural skills in particular. These skills are intensively promoted during a semester abroad. As courses at the host university can also relate to areas of knowledge that are not included in the Computer Science curriculum or are outside of Computer Science, such coursework completed in the host country can be credited via this module. The choice of courses at the host university is agreed in advance of the stay as part of a learning agreement with the student advisor or, depending on the requirements of the place of study and the study financing, with the international representatives of the Department of Computer Science.
Literaturempfehlungen	Specification of the foreign university
Links	• International Student Office of CvO Universität • Web-Site of the Computer Science Department (in German)
Languages of instruction	English , French, German
Duration (semesters)	1 Semester
Module frequency	individual
Module capacity	unlimited
Teaching/Learning method	VA selection (requirement of the foreign university)
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	Vorgabe der ausländischen Hochschule	Specification of the foreign university Recognition must be applied for at the Academic Examinations Office. Transcripts of records from courses attended at the foreign university must be submitted in German or English translation.

Lehrveranstaltungsform	VA-Auswahl (Vorgabe der ausländischen Hochschule)
SWS	4
Frequency	siehe Angebotsrhythmus Modul

inf861 - Study Abroad II

Module label	Study Abroad II
Modulkürzel	inf861
Credit points	9.0 KP
Workload	270 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Praktische Informatik und Angewandte Informatik • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft
Zuständige Personen	• Sauer, Jürgen (module responsibility) • Vogel-Sonnenschein, Ute (module responsibility) • Marx Gómez, Jorge (Module counselling) • Fränzle, Martin Georg (Module counselling)
Further responsible persons	Studiengangsverantwortliche der Bachelor-Studiengänge des Departments für Informatik
Prerequisites	According to the requirements of the selected courses at the international host university
Skills to be acquired in this module	**Professional competence** • depending on the chosen course at the host university **Methodological competence** • depending on the chosen course at the host university The students • organize themselves independently in the culture of the host country • use time and other resources efficiently and in a goal-oriented manner **Social competence** The students • have intercultural competence: they interact successfully and appropriately with individuals and groups from other cultures, • communicate with people from other cultures in a targeted and respectful manner, • have in-depth empathic skills. They empathize with other people on a cognitive and emotional level, listen carefully and attentively, and understand the opinions of others. **Self-competence** The students • have generally deepened their skills in a foreign language for subject-related discourse, • express themselves fluently in the language of their host country, • adapt to changing living and learning environments, • deal tolerantly with ambiguities, • approach other people openly, • assess their own strengths and weaknesses appropriately, • make appropriate decisions even in difficult situations, • work on challenges in a solution- and goal-oriented manner, • face up to new tasks, challenges and experiences.
Module contents	The ongoing process of globalization requires preparation for professional

for professional activities that are increasingly internationally oriented.
This requires not only foreign language skills, but also intercultural skills in particular.
These skills are intensively promoted during a semester abroad.
As courses at the host university can also relate to areas of knowledge that are not included in the Computer Science curriculum or are outside of Computer Science, such coursework completed in the host country can be credited via this module.
The choice of courses at the host university is agreed in advance of the stay as part of a learning agreement with the student advisor or, depending on the requirements of the place of study and the study financing, with the international representatives of the Department of Computer Science.

Literaturempfehlungen	Specification of the foreign university
Links	• International Student Office of CvO Universität • Web-Site of the Computer Science Department (in German)
Languages of instruction	English , French, German
Duration (semesters)	1 Semester
Module frequency	individual
Module capacity	unlimited
Teaching/Learning method	VA selection (requirement of the foreign university)
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	Vorgabe der ausländischen Hochschule	Specification of the foreign university Recognition must be applied for at the Academic Examinations Office. Transcripts of records from courses attended at the foreign university must be submitted in German or English translation.

Lehrveranstaltungsform	VA-Auswahl (Vorgabe der ausländischen Hochschule)
SWS	6
Frequency	siehe Angebotsrhythmus Modul

Akzentsetzungsbereich Wirtschaftswissenschaften

wir032 - Managerial Accounting

Module label	Managerial Accounting
Modulkürzel	wir032
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	This course is an introduction to the use of accounting information by managers for decision-making, planning and control. It is designed to equip students with the concepts and techniques of management accounting for identifying and resolving strategic issues faced by managers in various business contexts.
Module contents	See leading textbook
Literaturempfehlungen	Seal et al., Management Accounting, Mcgraw-Hill Education Ltd, 5. Edition
Links	http://www.uni-oldenburg.de/accounting/
Language of instruction	English
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	Vorlesung auf Englisch

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of term	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2		28
Präsenzzeit Modul insgesamt				56 h

wir041 - Introduction to economics

Module label	Introduction to economics
Modulkürzel	wir041
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Grundlagen-/Basiscurriculum • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Rahmeier Seyffarth, Anelise (Module counselling) • Böhringer, Christoph (module responsibility)
Prerequisites	none
Skills to be acquired in this module	Students: acquire a basic understanding of economics - know elementary economic terms and theories - learn to analyze economic problems graphically and/or mathematically - are able to grasp both micro- and macroeconomic relationships based on theory - understand basic economic models and are able to apply them to current economic problems - place current economic and political events and debates in economic contexts - understand under which conditions market interventions by policy makers are justified from an economic perspective - are able to assess possible effects of economic policy instruments (for example: taxes, subsidies, minimum and maximum prices, etc.).
Module contents	The course introduces students to economic thinking and gives an elementary overview of the fundamental themes in economics. Key causal relationships will be verbally, analytically and graphically elucidated and underpinned with real-world examples. Main contents: - Introduction to economic thinking; - Explanation of basic concepts of economic theory; - Economic cycle and national product; - Interdependence and trade; - Functioning and efficiency of markets; - Market failures and government activity; - Firms behavior in markets with diverse structures; - Foundations of game theory.
Literaturempfehlungen	- Mankiw, N. Gregory & Taylor, Mark P.: Grundzüge der Volkswirtschaftslehre, 7. Aufl., Stuttgart: Schäffer-Poeschel, 2018; 1162 S. - Samuelson, Paul A. & Nordhaus, William D.: Volkswirtschaftslehre –Das internationale Standardwerk der Makro- und Mikroökonomie, 5. Aufl., München: FinanzBuch Verlag, 2016; 1056 S. - The CORE Team: The Economy (free, open access text for introductory undergraduate courses; continuous updates), URL: https://www.core-econ.org - Weimann, Joachim: *Wirtschaftspolitik - Allokation und kollektive Entscheidung*, 5.Aufl. 2009, Berlin, Heidelberg: Springer Verlag; 458 S. - Kurz, Heinz D.: Geschichte des ökonomischen Denkens, München: C.H. Beck, 2017; 128 S.

Links	http://www.vwl.uni-oldenburg.de/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	The module consists of lectures and tutorials. The contents of the course will be taught in the lecture. The tutorial sessions are aimed at solving problem sets or exercises to deepen students understanding. Lecture notes and other relevant materials will be uploaded to the learning management system (Stud IP).

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of semester	written exam; voluntary contributions that improve grades may undertaken as 'portfolio-presentations' during tutorials

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3		42
Tutorial		1		14
Präsenzzeit Modul insgesamt				56 h

wir060 - Financial Accounting

Module label	Financial Accounting
Modulkürzel	wir060
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	none
Skills to be acquired in this module	The students • obtain knowledge on IFRS accounting in general and specific topics such as financial instruments, intangible assets and provisions; • understand the framework of IFRS; • understand the international focus and necessity of IFRS; • obtain knowledge on IFRS from both a legal and economic perspective.
Module contents	This module is based on accounting and annual financial statement, while focusing exclusively on the international financial reporting standards (IFRS). In terms of content, the course covers subjects such as the most important concepts, tangible and intangible assets as well as liability items on the basis of the fundamental standards and case studies.
Literaturempfehlungen	Picker et al. (2012): Applying International Financial Reporting Standards, 3rd edition. Palepu et al. (2016): Business Analysis and Valuation – IFRS Edition, 4th edition. International Financial Reporting Standards (IFRS) Lecture notes with additional references will be provided via the e-learning platform Stud.IP.
Links	http://www.uni-oldenburg.de/accounting/
Language of instruction	English
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	Lectures are held in English; tutorials are held in English or German.

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the semester; a midterm exam might be held during the semester.	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Exercise or tutorial		2	--	28
Präsenzzeit Modul insgesamt				56 h

wir070 - Principles of Marketing

Module label	Principles of Marketing
Modulkürzel	wir070
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Alavi, Sascha (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	keine
Skills to be acquired in this module	Upon completion of the module, students will be able to: • recognize and provide solutions to challenges in market-oriented business management • reflect on market-oriented business management with regard to practise, as well as related societal and ethical implications • actively participate in scholarly marketing discourse • build their own capacities to acquire knowledge and skills within the discipline
Module contents	The module focuses on the fundaments of marketing in the sense of market-orientated management by linking philosophy and theoretical connections, as well as the necessary analytical and methodical knowledge with concrete case studies.
Literaturempfehlungen	Bruhn, M. (2010), Marketing. Grundlagen für Studium und Praxis, Gabler, Wiesbaden. Hansen, U. & Bode, M. (1999), Marketing & Konsum. Vahlen, München. (in excerpts)
Links	www.uni-oldenburg.de/marketing
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of term	written exam; voluntary contributions that improve grades may undertaken as 'portfolio-presentations' during tutorials

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar und Tutorium		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir082 - Corporate Finance

Module label	Corporate Finance
Modulkürzel	wir082
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Akzentsetzungsmodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich more... • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Prokop, Jörg (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	Students • understand the role corporate finance plays in today’s business environment, • are able to make consistent investment decisions based on established financial models both under certainty and under uncertainty, • are able to place these models in within the broader context of economic theory, including both neoclassical theory and principal-agent theory, • are able to assess the limitations of these models, • analyze firm’s main sources of (long-term) financing.
Module contents	Course outline: 1. Introduction 2. Valuation and Capital Budgeting 3. Risk and Return 4. Long-Term Financing This course is an introduction to corporate finance. It covers typical tools and techniques used in making investment and financing decisions, and it provides insights into their theoretical foundations. The concept of time value of money and net present value is discussed in detail, first under certainty, and then in the presence of uncertainty. We will examine the relationship between an investment’s risk and its return, and discuss ways to derive risk-adjusted cost of equity capital. In addition, the course provides insights into firms' main sources of (long-term) financing. The topics covered in this course are relevant for financial decision-making in various areas of business management, including operations management, marketing, and in particular corporate strategy.
Literaturempfehlungen	Main textbook: Hillier, Ross, Westerfield, Jaffe & Jordan, Corporate Finance, current edition, McGraw-Hill (especially chapters 1, 2, 4-10, 14). Supplementary readings: Berk & DeMarzo, Corporate Finance, current edition, Boston (Mass.). Brealey, Myers & Allen, Principles of Corporate Finance, current edition, Boston (Mass.). Schmidt und Terberger, Grundzüge der Investitions- und Finanzierungstheorie (4. Aufl.), 1997, Wiesbaden.
Links	http://www.uni-oldenburg.de/fiwi_bbl/
Language of instruction	English
Duration (semesters)	1 Semester

Module frequency		jährlich		
Module capacity		unlimited		
Examination		Prüfungszeiten	Type of examination	
Final exam of module		within three weeks after the last lecture	written exam	
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2		28
Präsenzzeit Modul insgesamt				56 h

wir090 - Human Resource Management

Module label	Human Resource Management
Modulkürzel	wir090
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Akzentsetzungsmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Junker-Michel, Mareike (Module counselling) • Breisig, Thomas (Module counselling) • Lehrenden, Die im Modul (Prüfungsberechtigt) • Breisig, Thomas (module responsibility)
Prerequisites	keine
Skills to be acquired in this module	Upon completion of the module (two complementary lectures), students will be able to: • understand the complex issues, challenges and fields of action in organisational Human Resource (HR) Management; • analyse, interpret and manage HR issues within heterogeneous fields of stakeholders and environments; • effectively analyse and apply HR instruments according to the specific practical context; • develop skills to self-reflection by dealing with theoretical as well as practical issues in HR Management and are able to press their point within the scientific discussion; • are able to locate a specific research question within the scientific discussion in the field of Human Resource Management and to interlink, reflect and evaluate it accordingly. By attending the non-compulsory tutorials and participating in lecture discussions, students can develop their own position on the inter-linkages between theoretical approaches and practical courses of action. Students will thus be able to identify problems, analyse them critically, and develop solutions. As they have the opportunity to work in small groups within the tutorials and to participate during lecture discussions, students may also learn to handle different points of view and discuss constructively. Overall they will be prepared for the specific requirements faced in the field of HR Management.
Module contents	Students develop theoretical as well as practical insights into the backgrounds and specific characteristics of “Human Resource” Management, in particular the following: - origins and theoretical basis - development and framework requirements - workforce planning - recruitment and selection - work organisation - working time organisation - leadership - performance reviews

	- training and development - compensation - staff reduction
Literaturempfehlungen	Berthel, J. / Becker, F. D. (2013), Personal-Management. Grundzüge für Konzeptionen betriebli¬cher Personalarbeit, 10thedition, Schäffer-Pöschel, Stuttgart. Breisig, T. / Michel, M. (2016): Personal: Grundlagen und Handlungsfelder aus arbeitspolitischer Perspektive, 2nd edition, NWB, Herne. Oechsler, W.A. / Paul, C. (2015), Personal und Arbeit. Einführung in das Personalmanagement, 10thedition, de Gruyter, Berlin et al. Scholz, C. (2014), Personalmanagement. Informationsorientierte und verhaltenstheoretische Grundlagen, 6thedition, Vahlen, München. Further literature will be announced during the semester according to the particular lecture/seminar content.
Links	www.uol.de/orgpers
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period and at the end of the semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		4		56
Exercises	freiwillig	2	WiSe	28
Präsenzzeit Modul insgesamt				84 h

wir100 - Corporate Strategy

Module label	Corporate Strategy
Modulkürzel	wir100
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Hoppmann, Jörn (module responsibility)
Prerequisites	
Skills to be acquired in this module	The goal of the course is that students are able to - know and understand basic concepts, instruments, and theories of strategic management - analyze company strategies by applying conceptual frameworks - understand the advantages and disadvantages of common instruments and models and critically evaluate their applicability - independently develop strategic options and derive recommendations for their implementation in real-life settings
Module contents	The course offers a comprehensive overview of the models and instruments of strategic management. The first part of the course introduces important concept and models of strategic management and discusses their application using examples from corporate practice. Central topics that are being discussed in this context are the relation between firm strategies and competitive advantage, strategy analysis, strategy formulation, strategy implementation, and strategies in the context of internationalization and innovation. In the second part of the course, students apply and deepen their knowledge by writing a thesis that analyzes the strategy of a specific company.
Literaturempfehlungen	Rothaermel, F.T. (2012): Strategic Management (1. Auflage), McGraw-Hill Education, New York. Wunder, T. (2016): Essentials of Strategic Management: Effective Formulation and Execution of Strategy (1. Auflage), Schäffer Poeschel, Stuttgart.
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	Thesis to be handed in at the end of semester	Thesis

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Exercise or tutorial		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir130 - Civil Law and Commercial Law

Module label	Civil Law and Commercial Law
Modulkürzel	wir130
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Akzentsetzungsmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Berufliche Bildung • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Rott, Peter (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	The students: - are familiar with the legal working methods, basic concepts of law in general and of civil law and commercial law in particular, - are familiar with the law of obligation and law of property, in particular with contract law, as well as with commercial law, which are the main fields of interest in the future professional practice, - are able to solve legal cases in a goal-oriented way, - are able to find approaches for legal problems as well as recognize liability risks and how to deal with them, - are in case of contract negotiations able to recognize the requirements for regulations and to evaluate consequences of regulation.
Module contents	In this module students will learn the basic concepts of civil law, commercial law and company law. The mail focus are the first two books and to some extent the third book of the BGB. After an introduction to the legal system and the legal sources of private law, the course will deal with the persons and objects of legal relations (legal subjects and objects). An introduction into general contract law (among others: transaction doctrine, representation, termination of obligations, arrears, defaults) follows then. Subsequently, the lecture will handle the main types of contracts of civil law, commitment and performance of transactions and ownership and possession. The focus of the commercial law will be the determination of traits of merchandiser, the company law, the commercial register and legal liability issues as well as cross-border trade. This is followed by an introduction into company law. Subjects of the module: Introduction into legal studies, basic principles of law, private law / public law, legal sources, general part of the civil code, law of obligations (without law of torts): contracts, type of contracts, defaults / breaches, law of terms and conditions; parts of property law. Traits of merchandiser, company; commercial register; Representation in commercial law (procuration, action and charging power of attorney); commercial transactions; forms and consequences of the change of the owner; commercial agents and brokers; customary law / trade terms; CISG; partnership / corporate law. The module will enable students to evaluate complex legal relationships in the economy discretely.
Literaturempfehlungen	Führich, E., Wirtschaftsprivatrecht, 13. Aufl., 2017. Meyer, Wirtschaftsprivatrecht, 8. Aufl., 2016. Taeger, J., Wirtschaftsprivatrecht, 5. Aufl., 2013.
Links	http://www.privatrecht.uni-oldenburg.de/
Language of instruction	German
Duration (semesters)	2 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		4		56
Exercises		2	WiSe	28
Präsenzzeit Modul insgesamt				84 h

wir160 - Entrepreneurship

Module label	Entrepreneurship
Modulkürzel	wir160
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Nicolai, Alexander (module responsibility)
Prerequisites	none
Skills to be acquired in this module	The module introduces to the basics of Entrepreneurship Upon completion of the module, students will be able to: - understand the challenges of launching an enterprise, - strategically analyse the structure of market - understand how employees are able to behave like an entrepreneur in established enterprises - develop innovative business ideas - shape the key factors for realizing a business idea - demonstrate a knowledge of the entrepreneurial process - demonstrate a knowledge of cost accounting (especially break-even analysis, etc.) and will be able to calculate costs by themselves - analyse and evaluate business models
Module contents	The module combines the lecture “Strategie und Entrepreneurship” with a tutorial. It investigates the challenges of launching enterprises and entrepreneurial behaviour in large companies as well. The content of the module follows the process of an entrepreneur. It starts with business ideas, their perception, and evaluation. In addition, it deals with the most important questions of development and management of new business models. The contents of the courses include the following topics: - historical, institutional, and theoretical context - development, evaluation, and pitching ideas - business models - building entrepreneurial teams - entrepreneurship in large enterprises - resources and finance - management of growth
Literaturempfehlungen	Corsten, H. (Hrsg.) (2002): Dimensionen der Unternehmensgründung. Berlin: Schmidt. Klandt, H. (2005): Gründungsmanagement (2. Aufl.), Oldenbourg, München. Fueglistaller, Urs/Müller, Chrsitoph/Müller, Susan/Volery, Thierry (2016): Entrepreneurship. Modelle – Umsetzung – Perspektiven. Mit Fallbeispielen aus Deutschland, Österreich und der Schweiz (4. Auflage), Gabler Verlag/Springer Fachmedien, Wiesbaden. Grichnik, Dietmar/Brettel, Malte/Koropp, Christian/Mauer, René (2010): Entrepreneurship. Unternehmerisches Denken, Entscheiden und Handeln in innovativen und technologieorientierten Unternehmungen. Schäffer-Pöschel Verlag, Stuttgart. Grant, R. M., Nippa, M. (2006): Strategisches Management: Analyse, Entwicklung und Implementierung von Unternehmensstrategien (5. Aufl.), Pearson Studium, München.

Links	http://www.uni-oldenburg.de/wire/entrepreneurship/lehrangebot/veranstaltungen/lehrangebot-wise-20162017/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	The lecture “Strategie und Entrepreneurship” must be attended in combination with the “Tutorium”.

Examination	Prüfungszeiten	Type of examination
Final exam of module	at the end of the semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Course or seminar		2	WiSe	28
Tutorial		2		28
Präsenzzeit Modul insgesamt				56 h

wir200 - Principles of Organisation

Module label	Principles of Organisation
Modulkürzel	wir200
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Bartel, Teodora (Module counselling) • Breisig, Thomas (Module counselling) • Prokop, Jörg (module responsibility) • Breisig, Thomas (module responsibility)
Prerequisites	Keine
Skills to be acquired in this module	Upon completion of the module, students will be able to: - explain and apply the approaches and instruments of organisational sciences; - demonstrate a familiarity with the basic assumptions, strategies, and core themes of organisational theories and are able to compare and reflect upon them; - know different forms of organisational design and are able to differentiate them; - know how to identify and predict issues and developments within operational and organisational structures and processes; - demonstrate an awareness of the relevance of organisational culture, can describe its characteristics and discuss different analytical techniques; - describe and analyse processes of organizational change, can point out their influences on strategy, organisational culture, operational and organisational structure, and estimate the relevance of change process initiation; - work cooperatively and self-dependant within teams and to present complex professional contents precisely and with profound arguments (if chosen to present a topic within the seminar). Furthermore, the students are able: • to locate a specific research question within the scientific discussion in this research area and to interlink, reflect and evaluate it accordingly • to press their point within the scientific discussion in this research area.
Module contents	The module contents are arranged in the following way: - Basic concepts and conceptual demarcation - Objectives of an organisation - Dimensions in formal organisation - Organisational culture - Organisational structure - Operational structure and processes These basic principles of organisation are presented and discussed within the lectures. Current economic and business developments are included. Seminars and tutorials are offered to deepen the lecture presentations and to relate them to examples and cases.
Literaturempfehlungen	Breisig, T. (2015), Betriebliche Organisation, 2nd edition, NWB, Herne. Kieser, A. / Walgenbach, P. (2010), Organisation, 6th edition, Schäffer-Poeschel, Stuttgart. Further literature will be announced during the semester according to the particular lecture/seminar content.
Links	www.uol.de/orgpers
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Type of module	je nach Studiengang Pflicht oder Wahlpflicht
Module level	---

Examination	Prüfungszeiten	Type of examination
Final exam of module	Written exam: end of the lecture period	portfolio (group seminar paper and online test)

Examination	Prüfungszeiten	Type of examination
	Presentation: During the lecture period Portfolio: During the lecture period	

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

wir210 - Corporate Environmental Management

Module label	Corporate Environmental Management
Modulkürzel	wir210
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Ökologie und Nachhaltigkeit • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Siebenhüner, Bernd (module responsibility) • Lehrenden, Die im Modul (Module counselling)
Prerequisites	
Skills to be acquired in this module	The students: • understand the goals and concepts of sustainable development; • discuss the importance of sustainability for companies; • know basic strategies and instruments that enable companies to achieve sustainable development; • acquire conceptual and practical skills using case studies, in particular about which instruments can be used to prepare companies for the challenges of sustainable development.
Module contents	The module consists of a lecture and a seminar. While the lecture presents and explains concepts, instruments and strategies for sustainable development, the seminar focuses on the practical relevance of the various instruments, concepts and strategies and discusses these based on case studies. • Concepts and goals of sustainable development • Introduction to the current discussion on sustainable development • Current sustainability instruments and strategies for companies • Case studies
Literaturempfehlungen	• Baumast, A. & Pape, J. (Hrsg.) (2009): Betriebliches Umweltmanagement. Nachhaltiges Wirtschaften im Unternehmen (4. Aufl.). Stuttgart: Ulmer • Dyllick, T. & Hockerts, K. (2002): Beyond the Business Case for Corporate Sustainability. In: Business Strategy and the Environment, S. 130-141 • Holliday, C. et al. (2002): Walking the Talk. The Business Case for Sustainable Development. Sheffield: Greenleaf • Pfriem, R.; Fichter, K. & Paech, N. (2005): Nachhaltige Zukunftsmärkte - Orientierungen für unternehmerische Innovationsprozesse im 21. Jahrhundert. Marburg: Metropolis • Siebenhüner, B. et al. (2006): Organisationales Lernen und Nachhaltigkeit. Marburg: Metropolis.
Links	https://www.uni-oldenburg.de/wire/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination		Prüfungszeiten	Type of examination	
Final exam of module		usually around Mid of March	HA	
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

wir260 - Environmental Economics

Module label	Environmental Economics
Modulkürzel	wir260
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Ökologie und Nachhaltigkeit • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Volkswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Vertiefungsmodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Huse, Cristian (module responsibility)
Prerequisites	
Skills to be acquired in this module	The undergraduates • understand the basic subjects of environmental economics • know essentials of economic theory in environmental policy • know environmental problems and are able to analyze and interpret them economically • know the mechanics of instruments in environmental policy and also their conditions of usage • are able to evaluate instruments of environmental policy • know about the problems of transnational environmental burdens • know methods of environmental assessment
Module contents	Following topics will be discussed: • definition and differentiation of environmental economics • economic interpretations of environmental problems • objectives and instruments of environmental policy • market economy instruments of environmental policy • conditions of implementation of environmental politics International environmental problems • environmental assessment
Literaturempfehlungen	Feess, E. (2007): Umweltökonomie und Umweltpolitik, Vahlen, München. Michaelis, P. (1996): Marktwirtschaftliche Instrumente der Umweltpolitik, Physica, Heidelberg.
Links	https://www.uni-oldenburg.de/wire/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	Zum Ende der Vorlesungszeit	KL

Lehrveranstaltungsform	Lecture
SWS	4
Frequency	

wir360 - Environmental and Sustainability Policies

Module label	Environmental and Sustainability Policies
Modulkürzel	wir360
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Ökologie und Nachhaltigkeit • Bachelor's Programme Sustainability Economics (Bachelor) > Vertiefungsmodule • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Siebenhüner, Bernd (Module counselling) • Siebenhüner, Bernd (module responsibility)
Prerequisites	none
Skills to be acquired in this module	students: • have basic information about national and European environmental and sustainability governance • describe the history of national and European environmental and sustainability governance • reflect upon central principles, instruments, players and strategies in environmental and sustainability governance
Module contents	Development directions of German and European environmental and sustainability governance; Analysis of selected topics like energy, agriculture, chemical industry etc.; Principles of environmental and sustainability governance; Instruments of environmental and sustainability governance compared on international level; New mechanisms in governance; Relevant actors of environmental and sustainability governance (administration, industry, media, science, NGOs etc.); International environmental and sustainability governance
Literaturempfehlungen	Aden, Hartmut (2012): Umweltpolitik, Wiesbaden: VS-Verlag Jänicke, M. (1997): National Environmental Policies. Heidelberg: Springer Jänicke, M. et al. (1999): Lern- und Arbeitsbuch Umweltpolitik. Bonn: Dietz Jordan, A. (Hrsg.) (2004): Environmental Policy in the European Union: Actors, Institutions and Processes. London: Earthscan. Kraft, Michael E. (2011): Environmental policy and politics. 5th ed. Upper Saddle River: Pearson Education
Links	https://www.uni-oldenburg.de/wire/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	yearly
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module		presentation

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

wir400 - Strategic and International Marketing

Module label	Strategic and International Marketing
Modulkürzel	wir400
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Alavi, Sascha (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	
Skills to be acquired in this module	Upon completion of the module, students will be able to: • recognize challenges facing marketing strategy in the field of markets and societies and draw conclusions for business management • elaborate and reflect upon the theoretical and conceptual foundations of strategic marketing planning • come up with examples that exemplify the systemic connection between strategic and instrumental marketing planning • discuss core assumptions of internationalization in the context of strategy planning and critically reflect upon its implications • build market research skills in an international context using different methods • develop their own perspectives on the conceptualization and implementation of international marketing strategies and advance them in discourses
Module contents	The core of the module is the application of strategic planning methods in Marketing. A broadened understanding of Marketing in the areas of competitors, market agents and stakeholder orientation will be substantiated in theoretical and practical-normative view. International marketing forms an integrated part of strategic marketing planning; its basics and internal conception are formulated precisely in this course.
Literaturempfehlungen	Latest editions of Meffert, H., Marketing-Management, Analyse - Strategie - Implementierung, Wiesbaden Kreikebaum H., Strategische Unternehmensplanung, Stuttgart/ Berlin/ Köln Benkenstein, M., Strategisches Marketing, Stuttgart/ Berlin/ Köln
Links	www.uni-oldenburg.de/marketing
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of term	written exam; voluntary contributions that improve grades may undertaken as 'portfolio-presentations' during tutorials

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Tutorial		2		28
Seminar				
Präsenzzeit Modul insgesamt				56 h

Wahlbereich Informatik, Kultur und Gesellschaft

inf700 - Computer Science Education I

Module label	Computer Science Education I
Modulkürzel	inf700
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Akzentsetzungsbereich - Wahlbereich Informatik • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Aufbaumodule (60 KP) • Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Basismodule
Zuständige Personen	• Diethelm, Ira (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	Basic knowledge of computer science
Skills to be acquired in this module	Professional competence The students: • characterise the different computer science education (CSE) concepts and approaches, e.g. the early approaches of CSE in school or the concept of computer science (CS) in contexts • select and discuss teaching subjects by analysing didactic approaches and concepts • describe the general education character of CS • compare the different approaches and concepts of CSE and are able to illustrate common features and contradictions • reflect lesson subjects by the approaches and topics of CSE **Methodological competence** The students: • link the concepts and approaches of CSE with the educational reconstruction • classify the similarities and differences of the concepts and approaches of CSE academically **Social competence** The students: • discuss the concepts and approaches of CSE with students and lectures academically • accept the thoughts of other students and lectures • give and accept criticism objectively **Self-competence** The students: • integrate the concepts and approaches of CSE into their planning and operations - reflect their self-perception with regard to the concepts and approaches of CSE
Module contents	The field of CSE is introduced by this module. Different CSE approaches and concepts are presented. **These CSE approaches and concepts are, e.g.:** • early concepts of CS in schools • general education character of CS

- idea oriented approach of CSE
- information centred approach of CSE
- CSE in elementary school
- system oriented approach Subjects like „CS projects in class“ are also part of this module.

Literaturempfehlungen

- Schwill, A.; Schubert, S.: Didaktik der Informatik. Berlin: Spektrum Akademischer Verlag, 2004.
- Hubwieser, P.: Didaktik der Informatik. Berlin: Springer Verlag, 2000.

Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Teaching/Learning method	V+Ü
Previous knowledge	Basic knowledge of computer science

Examination	Prüfungszeiten	Type of examination
Final exam of module		
	At the end of the lecture period	Oral exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	SoSe	28
Exercises		2	SoSe	28
Präsenzzeit Modul insgesamt				56 h

inf851 - Computer Science and Society

Module label	Computer Science and Society
Modulkürzel	inf851
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	

- Bachelor's Programme Biology (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Business Administration and Law (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Business Informatics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft
- Bachelor's Programme Chemistry (Bachelor) > Säule "Überfachliche Professionalisierung" more...
- Bachelor's Programme Comparative and European Law (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Computing Science (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft
- Bachelor's Programme Economics and Business Administration (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Wirtschaftsinformatik
- Bachelor's Programme Education (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Engineering Physics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Environmental Science (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Intercultural Education and Counselling (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Mathematics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Physics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Physics, Engineering and Medicine (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Social Studies (Bachelor) > Säule "Überfachliche Professionalisierung"
- Bachelor's Programme Sustainability Economics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Art and Media (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Biology (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Chemistry (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Computing Science (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Dutch Linguistics and Literary Studies (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Economic Education (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Education (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Elementary Mathematics (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme English Studies (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme Gender Studies (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme General Education (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme German Studies (Bachelor) > Säule "Überfachliche Professionalisierung"
- Dual-Subject Bachelor's Programme History (Bachelor) > Säule "Überfachliche Professionalisierung"

	• Dual-subject bachelor's programme Low German (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Material Culture: Textiles (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Mathematics (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Music (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Philosophy / Values and Norms (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Physics (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Politics-Economics (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Protestant Theology and Religious Education (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Slavic Studies (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Social Studies (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Special Needs Education (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Sport Science (Bachelor) > Säule "Überfachliche Professionalisierung" • Dual-Subject Bachelor's Programme Technology (Bachelor) > Säule "Überfachliche Professionalisierung" • Fach-Bachelor Pädagogisches Handeln in der Migrationsgesellschaft (Bachelor) > Säule "Überfachliche Professionalisierung" • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Pflichtmodule • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Recht und Gesellschaft
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Dittert, Nadine (module responsibility)
Prerequisites	no participant requirements
Skills to be acquired in this module	Graduates of the module Informatik und Gesellschaft know the history of the development of Information technology and its impact on society and are familiar with issues of data protection. They will be able, individually or in a team, to analyze the ethical and socio-political implications of different areas and applications of computer science and develop a reasoned own position on this, in particular concerning their professional responsibilities as computer scientists. They have learned to present the results of their work convincingly and suitable for their target group using appropriate media and they are able to organize events such as workshops or small conferences for that purpose. **Professional competence** The students: • reflect on the ethical and societal aspects of selected areas of computer science • create and design websites • create and manage documents in a team **Methodological competence** The students: • explore methods of structured teamwork • organize project work • make presentations with different media **Social competence** The students: • develop a subject area as a team • teach a bigger audience to appreciate their knowledge • discuss their observations and opinions with others **Self-competence** The students: • reflect their role in a team • reflect their role as computer scientists in society
Module contents	In brief, topics like the following are covered:

- Computer Crime
- Computer Games
- Data Protection
- Electronic Democracy
- Ethics in Computer Science
- History of Information Technology
- Use of information technology at school
- Internet - integration or division of society?
- Artificial Intelligence
- Manipulation by War Games
- Open Source Software
- Robots in Society
- Trustworthy Systems

Literaturempfehlungen

- See reference books Informatik und Gesellschaft in BIS.
- Joseph Weizenbaum, 2001: Die Macht der Computer und die Ohnmacht der Vernunft.
- H. Klaeren u.a., (Eds.), 1999: Tübinger Studientexte Informatik und Gesellschaft. Universität Tübingen.
- J. Friedrich, Th. Herrmann, M. Peschek, A. Rolf (Hrsg.),1995: Informatik und Gesellschaft. Spektrum.

Links	https://uol.de/iug
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	annual
Module capacity	unlimited
Reference text	The topics for the teams are assigned during the first week of the semester
Teaching/Learning method	1VL + 1S
Previous knowledge	none

Examination	Prüfungszeiten	Type of examination
Final exam of module	During semester and at the end	Portfolio (5-6 partial performances)

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2	WiSe	28
Seminar		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir041 - Introduction to economics

Module label	Introduction to economics
Modulkürzel	wir041
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Bachelor's Programme Mathematics (Bachelor) > Nebenfachmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Grundlagen-/Basiscurriculum • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Basismodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Rahmeier Seyffarth, Anelise (Module counselling) • Böhringer, Christoph (module responsibility)
Prerequisites	none
Skills to be acquired in this module	Students: acquire a basic understanding of economics - know elementary economic terms and theories - learn to analyze economic problems graphically and/or mathematically - are able to grasp both micro- and macroeconomic relationships based on theory - understand basic economic models and are able to apply them to current economic problems - place current economic and political events and debates in economic contexts - understand under which conditions market interventions by policy makers are justified from an economic perspective - are able to assess possible effects of economic policy instruments (for example: taxes, subsidies, minimum and maximum prices, etc.).
Module contents	The course introduces students to economic thinking and gives an elementary overview of the fundamental themes in economics. Key causal relationships will be verbally, analytically and graphically elucidated and underpinned with real-world examples. Main contents: - Introduction to economic thinking; - Explanation of basic concepts of economic theory; - Economic cycle and national product; - Interdependence and trade; - Functioning and efficiency of markets; - Market failures and government activity; - Firms behavior in markets with diverse structures; - Foundations of game theory.
Literaturempfehlungen	- Mankiw, N. Gregory & Taylor, Mark P.: Grundzüge der Volkswirtschaftslehre, 7. Aufl., Stuttgart: Schäffer-Poeschel, 2018; 1162 S. - Samuelson, Paul A. & Nordhaus, William D.: Volkswirtschaftslehre –Das internationale Standardwerk der Makro- und Mikroökonomie, 5. Aufl., München: FinanzBuch Verlag, 2016; 1056 S. - The CORE Team: The Economy (free, open access text for introductory undergraduate courses; continuous updates), URL: https://www.core-econ.org - Weimann, Joachim: *Wirtschaftspolitik - Allokation und kollektive Entscheidung*, 5.Aufl. 2009, Berlin, Heidelberg: Springer Verlag; 458 S. - Kurz, Heinz D.: Geschichte des ökonomischen Denkens, München: C.H. Beck, 2017; 128 S.

Links	http://www.vwl.uni-oldenburg.de/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	The module consists of lectures and tutorials. The contents of the course will be taught in the lecture. The tutorial sessions are aimed at solving problem sets or exercises to deepen students understanding. Lecture notes and other relevant materials will be uploaded to the learning management system (Stud IP).

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of semester	written exam; voluntary contributions that improve grades may undertaken as 'portfolio-presentations' during tutorials

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		3		42
Tutorial		1		14
Präsenzzeit Modul insgesamt				56 h

wir070 - Principles of Marketing

Module label	Principles of Marketing
Modulkürzel	wir070
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Basiscurriculum Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Alavi, Sascha (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt)
Prerequisites	keine
Skills to be acquired in this module	Upon completion of the module, students will be able to: • recognize and provide solutions to challenges in market-oriented business management • reflect on market-oriented business management with regard to practise, as well as related societal and ethical implications • actively participate in scholarly marketing discourse • build their own capacities to acquire knowledge and skills within the discipline
Module contents	The module focuses on the fundaments of marketing in the sense of market-orientated management by linking philosophy and theoretical connections, as well as the necessary analytical and methodical knowledge with concrete case studies.
Literaturempfehlungen	Bruhn, M. (2010), Marketing. Grundlagen für Studium und Praxis, Gabler, Wiesbaden. Hansen, U. & Bode, M. (1999), Marketing & Konsum. Vahlen, München. (in excerpts)
Links	www.uni-oldenburg.de/marketing
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	end of term	written exam; voluntary contributions that improve grades may undertaken as 'portfolio-presentations' during tutorials

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar und Tutorium		2	WiSe	28
Präsenzzeit Modul insgesamt				56 h

wir090 - Human Resource Management

Module label	Human Resource Management
Modulkürzel	wir090
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Comparative and European Law (Bachelor) > Module • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Akzentsetzungsmodule • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Aufbaumodule • Dual-Subject Bachelor's Programme Economics and Business Administration (Bachelor) > Schwerpunkt Management und Ökonomie • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Junker-Michel, Mareike (Module counselling) • Breisig, Thomas (Module counselling) • Lehrenden, Die im Modul (Prüfungsberechtigt) • Breisig, Thomas (module responsibility)
Prerequisites	keine
Skills to be acquired in this module	Upon completion of the module (two complementary lectures), students will be able to: • understand the complex issues, challenges and fields of action in organisational Human Resource (HR) Management; • analyse, interpret and manage HR issues within heterogeneous fields of stakeholders and environments; • effectively analyse and apply HR instruments according to the specific practical context; • develop skills to self-reflection by dealing with theoretical as well as practical issues in HR Management and are able to press their point within the scientific discussion; • are able to locate a specific research question within the scientific discussion in the field of Human Resource Management and to interlink, reflect and evaluate it accordingly. By attending the non-compulsory tutorials and participating in lecture discussions, students can develop their own position on the inter-linkages between theoretical approaches and practical courses of action. Students will thus be able to identify problems, analyse them critically, and develop solutions. As they have the opportunity to work in small groups within the tutorials and to participate during lecture discussions, students may also learn to handle different points of view and discuss constructively. Overall they will be prepared for the specific requirements faced in the field of HR Management.
Module contents	Students develop theoretical as well as practical insights into the backgrounds and specific characteristics of “Human Resource” Management, in particular the following: - origins and theoretical basis - development and framework requirements - workforce planning - recruitment and selection - work organisation - working time organisation - leadership - performance reviews

	- training and development - compensation - staff reduction
Literaturempfehlungen	Berthel, J. / Becker, F. D. (2013), Personal-Management. Grundzüge für Konzeptionen betriebli¬cher Personalarbeit, 10thedition, Schäffer-Pöschel, Stuttgart. Breisig, T. / Michel, M. (2016): Personal: Grundlagen und Handlungsfelder aus arbeitspolitischer Perspektive, 2nd edition, NWB, Herne. Oechsler, W.A. / Paul, C. (2015), Personal und Arbeit. Einführung in das Personalmanagement, 10thedition, de Gruyter, Berlin et al. Scholz, C. (2014), Personalmanagement. Informationsorientierte und verhaltenstheoretische Grundlagen, 6thedition, Vahlen, München. Further literature will be announced during the semester according to the particular lecture/seminar content.
Links	www.uol.de/orgpers
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination	Prüfungszeiten	Type of examination
Final exam of module	At the end of the lecture period and at the end of the semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		4		56
Exercises	freiwillig	2	WiSe	28
Präsenzzeit Modul insgesamt				84 h

wir160 - Entrepreneurship

Module label	Entrepreneurship
Modulkürzel	wir160
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Nicolai, Alexander (module responsibility)
Prerequisites	none
Skills to be acquired in this module	The module introduces to the basics of Entrepreneurship Upon completion of the module, students will be able to: - understand the challenges of launching an enterprise, - strategically analyse the structure of market - understand how employees are able to behave like an entrepreneur in established enterprises - develop innovative business ideas - shape the key factors for realizing a business idea - demonstrate a knowledge of the entrepreneurial process - demonstrate a knowledge of cost accounting (especially break-even analysis, etc.) and will be able to calculate costs by themselves - analyse and evaluate business models
Module contents	The module combines the lecture “Strategie und Entrepreneurship” with a tutorial. It investigates the challenges of launching enterprises and entrepreneurial behaviour in large companies as well. The content of the module follows the process of an entrepreneur. It starts with business ideas, their perception, and evaluation. In addition, it deals with the most important questions of development and management of new business models. The contents of the courses include the following topics: - historical, institutional, and theoretical context - development, evaluation, and pitching ideas - business models - building entrepreneurial teams - entrepreneurship in large enterprises - resources and finance - management of growth
Literaturempfehlungen	Corsten, H. (Hrsg.) (2002): Dimensionen der Unternehmensgründung. Berlin: Schmidt. Klandt, H. (2005): Gründungsmanagement (2. Aufl.), Oldenbourg, München. Fueglistaller, Urs/Müller, Chrsitoph/Müller, Susan/Volery, Thierry (2016): Entrepreneurship. Modelle – Umsetzung – Perspektiven. Mit Fallbeispielen aus Deutschland, Österreich und der Schweiz (4. Auflage), Gabler Verlag/Springer Fachmedien, Wiesbaden. Grichnik, Dietmar/Brettel, Malte/Koropp, Christian/Mauer, René (2010): Entrepreneurship. Unternehmerisches Denken, Entscheiden und Handeln in innovativen und technologieorientierten Unternehmungen. Schäffer-Pöschel Verlag, Stuttgart. Grant, R. M., Nippa, M. (2006): Strategisches Management: Analyse, Entwicklung und Implementierung von Unternehmensstrategien (5. Aufl.), Pearson Studium, München.

Links	http://www.uni-oldenburg.de/wire/entrepreneurship/lehrangebot/veranstaltungen/lehrangebot-wise-20162017/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Reference text	The lecture “Strategie und Entrepreneurship” must be attended in combination with the “Tutorium”.

Examination	Prüfungszeiten	Type of examination
Final exam of module	at the end of the semester	written exam

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Course or seminar		2	WiSe	28
Tutorial		2		28
Präsenzzeit Modul insgesamt				56 h

wir200 - Principles of Organisation

Module label	Principles of Organisation
Modulkürzel	wir200
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master)
Zuständige Personen	• Lehrenden, Die im Modul (Prüfungsberechtigt) • Bartel, Teodora (Module counselling) • Breisig, Thomas (Module counselling) • Prokop, Jörg (module responsibility) • Breisig, Thomas (module responsibility)
Prerequisites	Keine
Skills to be acquired in this module	Upon completion of the module, students will be able to: - explain and apply the approaches and instruments of organisational sciences; - demonstrate a familiarity with the basic assumptions, strategies, and core themes of organisational theories and are able to compare and reflect upon them; - know different forms of organisational design and are able to differentiate them; - know how to identify and predict issues and developments within operational and organisational structures and processes; - demonstrate an awareness of the relevance of organisational culture, can describe its characteristics and discuss different analytical techniques; - describe and analyse processes of organizational change, can point out their influences on strategy, organisational culture, operational and organisational structure, and estimate the relevance of change process initiation; - work cooperatively and self-dependant within teams and to present complex professional contents precisely and with profound arguments (if chosen to present a topic within the seminar). Furthermore, the students are able: • to locate a specific research question within the scientific discussion in this research area and to interlink, reflect and evaluate it accordingly • to press their point within the scientific discussion in this research area.
Module contents	The module contents are arranged in the following way: - Basic concepts and conceptual demarcation - Objectives of an organisation - Dimensions in formal organisation - Organisational culture - Organisational structure - Operational structure and processes These basic principles of organisation are presented and discussed within the lectures. Current economic and business developments are included. Seminars and tutorials are offered to deepen the lecture presentations and to relate them to examples and cases.
Literaturempfehlungen	Breisig, T. (2015), Betriebliche Organisation, 2nd edition, NWB, Herne. Kieser, A. / Walgenbach, P. (2010), Organisation, 6th edition, Schäffer-Poeschel, Stuttgart. Further literature will be announced during the semester according to the particular lecture/seminar content.
Links	www.uol.de/orgpers
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Type of module	je nach Studiengang Pflicht oder Wahlpflicht
Module level	---

Examination	Prüfungszeiten	Type of examination
Final exam of module	Written exam: end of the lecture period	portfolio (group seminar paper and online test)

Examination	Prüfungszeiten	Type of examination
	Presentation: During the lecture period Portfolio: During the lecture period	

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

wir210 - Corporate Environmental Management

Module label	Corporate Environmental Management
Modulkürzel	wir210
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Administration and Law (Bachelor) > Aufbaubereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Akzentsetzungsbereich Wirtschaftswissenschaften • Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Betriebswirtschaftslehre more... • Bachelor's Programme Economics and Business Administration (Bachelor) > Studienrichtung Ökologie und Nachhaltigkeit • Bachelor's Programme Sustainability Economics (Bachelor) > Wahlpflichtbereich • Master of Education Programme (Vocational and Business Education) Economics and Business Administration (Master of Education) > Mastermodule • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Siebenhüner, Bernd (module responsibility) • Lehrenden, Die im Modul (Module counselling)
Prerequisites	
Skills to be acquired in this module	The students: • understand the goals and concepts of sustainable development; • discuss the importance of sustainability for companies; • know basic strategies and instruments that enable companies to achieve sustainable development; • acquire conceptual and practical skills using case studies, in particular about which instruments can be used to prepare companies for the challenges of sustainable development.
Module contents	The module consists of a lecture and a seminar. While the lecture presents and explains concepts, instruments and strategies for sustainable development, the seminar focuses on the practical relevance of the various instruments, concepts and strategies and discusses these based on case studies. • Concepts and goals of sustainable development • Introduction to the current discussion on sustainable development • Current sustainability instruments and strategies for companies • Case studies
Literaturempfehlungen	• Baumast, A. & Pape, J. (Hrsg.) (2009): Betriebliches Umweltmanagement. Nachhaltiges Wirtschaften im Unternehmen (4. Aufl.). Stuttgart: Ulmer • Dyllick, T. & Hockerts, K. (2002): Beyond the Business Case for Corporate Sustainability. In: Business Strategy and the Environment, S. 130-141 • Holliday, C. et al. (2002): Walking the Talk. The Business Case for Sustainable Development. Sheffield: Greenleaf • Pfriem, R.; Fichter, K. & Paech, N. (2005): Nachhaltige Zukunftsmärkte - Orientierungen für unternehmerische Innovationsprozesse im 21. Jahrhundert. Marburg: Metropolis • Siebenhüner, B. et al. (2006): Organisationales Lernen und Nachhaltigkeit. Marburg: Metropolis.
Links	https://www.uni-oldenburg.de/wire/
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited

Examination		Prüfungszeiten	Type of examination	
Final exam of module		usually around Mid of March	HA	
Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

wir806 - Information Technology Law

Module label	Information Technology Law
Modulkürzel	wir806
Credit points	6.0 KP
Workload	180 h
Verwendbarkeit des Moduls	• Bachelor's Programme Business Informatics (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Bachelor's Programme Computing Science (Bachelor) > Wahlbereich Informatik, Kultur und Gesellschaft • Master Applied Economics and Data Science (Master) > Specialization • Master of Education Programme (Gymnasium) Computing Science (Master of Education) > Pflichtmodule • Master of Education Programme (Hauptschule and Realschule) Computing Science (Master of Education) > Mastermodule more... • Master of Education Programme (Vocational and Business Education) Computing Science (Master of Education) > Recht und Gesellschaft • Master's programme Business Administration: Management and Law (Master) > Basismodule • Master's programme Business Administration: Management and Law (Master) > Schwerpunktmodule RdW - Recht • Master's Programme Business Informatics (Master) > Module der Wirtschafts- und Rechtswissenschaften (Master) • Master's Programme Computing Science (Master) > Module aus anderen Studiengängen
Zuständige Personen	• Rott, Peter (module responsibility) • Lehrenden, Die im Modul (Prüfungsberechtigt) • Rott, Peter (Module counselling)
Prerequisites	not applicable
Skills to be acquired in this module	The students are familiar with the effects of digitalisation with its chances and risks in European and German private law and, in particular, consumer law. They obtain knowledge of specific areas of digitalised private law and consumer law with particular relevance for their future professional practice, are able to solve consumer law cases in a goal-oriented way, are able to find approaches for legal problems as well as recognise liability risks and how to deal with them, and are, in contract negotiations, able to recognise the requirements for regulation and to evaluate its consequences
Module contents	This module conveys how new technologies impact on private law and, in particular, on consumer law. It focuses on the (modified) interpretation of existing laws but even more on the reactions of the EU and national legislators and of the judiciary to new technological developments. The module discusses, among others, distance selling law, digitalised sales law and product liability law, the law of digital content and digital services, unfair commercial practices on internet and the law of the platform economy. Finally, the module looks at enforcement.
Literaturempfehlungen	to be announced in the first lecture
Links	
Language of instruction	German
Duration (semesters)	1 Semester
Module frequency	jährlich
Module capacity	unlimited
Type of module	Wahlpflicht / Elective
Module level	MM (Mastermodul / Master module)
Teaching/Learning method	Lecture and Seminar
Previous knowledge	basic knowledge of civil law is helpful.

Examination	Prüfungszeiten	Type of examination
Final exam of module		to be taken from the examination regulations

Lehrveranstaltungsform	Comment	SWS	Frequency	Workload of compulsory attendance
Lecture		2		28
Seminar		2		28
Präsenzzeit Modul insgesamt				56 h

Abschlussmodul

bam - Bachelor Thesis Module Business Informatics

Module label			Bachelor Thesis Module Business Informatics
Modulkürzel			bam
Credit points			15.0 KP
Workload			450 h
Verwendbarkeit des Moduls			• Bachelor's Programme Business Informatics (Bachelor) > Abschlussmodul
Zuständige Personen			• Lehrenden, Die im Modul (Prüfungsberechtigt) • der Informatik, Lehrende (module responsibility)
Prerequisites			No participant requirements
Skills to be acquired in this module			Students demonstrate the ability to conduct an in-depth scientifically oriented treatment of a topic in computer science.
Module contents			Current topics in computer science are worked on independently with theoretical, scientific and practical components. The results are presented in the context of a seminar (accompanying seminar, usually upper seminar of the supervising department).
Literaturempfehlungen			According to specification thematic
Links			
Language of instruction			German
Duration (semesters)			1 Semester
Module frequency			every semester
Module capacity			unlimited
Teaching/Learning method			1S
Previous knowledge			none
Examination	Prüfungszeiten		Type of examination
Final exam of module	different		Final paper, seminar presentation
Lehrveranstaltungsform	Seminar		
SWS	2		
Frequency	SoSe und WiSe		