

Module code	Module name	Short description	Semester	ECTS
Compulsory modules „General Business and IT Competence“				
4WI-PROG-10	Programming	The module imparts the knowledge and skills required to proceed from the problem definition via the algorithm to the user-friendly and efficient program. Apart from the basics of programming, the module primarily focuses on the object-oriented paradigm.	1	6
4WI-UGU-10	Business in a Global Environment	Students are given an overview of the fundamentals of business administration. They are familiarized with the basic categories of modern management theory. The importance of organization in the working process and the integration of marketing in the context of business decisions round off this topic. Moreover, students also acquire fundamental macroeconomic knowledge, which enables them to analyze and assess business management issues from a macroeconomic perspective.	1	7
4WI-WIMA-10	Business Mathematics	In this module, students attain the mathematical tools required to successfully complete their Business Informatics studies. The combination of business administration and computer science require knowledge in the following fields of mathematics: analysis, linear algebra, financial mathematics, descriptive statistics, probability theory, inductive statistics, linear optimization, optimization models, reliability theory and operating theory. The module takes a problem-oriented approach and focuses on instructive practical examples.	1	6
4WI-DB-20	Databases	This module imparts knowledge and skills in the modeling, application and administration of relational database systems. In practical exercises students can practice their skills on concrete database management systems and deepen their knowledge.	2	6

4WI-REWE-20	Externes und internes Rechnungswesen	The module offers an introduction to the topic of external and internal accounting. Focus is laid on the foundations and techniques of accounting as well as on cost-type, cost center, cost unit and contribution margin accounting. The objective and conceptual basis of external accounting and the basic accounting principles are discussed. Starting from the economic purpose of accounting, the module covers the legal basis and the concrete structure of national and international accounting.	2	7
4WI-TGI-20	Theoretical Foundations of Computer Science	The module focuses on selected topics from the fields of logic and algebra, algorithms and data structures, complexity and automata theory as well as formal languages.	2	5
4WI-SE-30	Software Engineering	The module imparts knowledge on how to develop modern software systems. Focus is laid on the knowledge of the architecture of large, operational information systems.	3	7
4WI-RAKS-30	Computer Architecture / Communication Systems	The first part of the module imparts knowledge in the fields of organization and interaction of the hardware components of a computer kernel as well as operating systems as a necessary component for the management and allocation of hardware resources (both in consideration of different paradigms). Part two deals with communication systems focusing on an introduction to the physical and organizational principles of information transmission in computer networks and the demonstration of transmission using the OSI layer model as an example.	3	6
4WI-VWL-30	Macroeconomics	Focus is laid on the acquisition of fundamental knowledge of essential macroeconomic questions and interrelationships. Moreover, students are enabled to identify and evaluate these macroeconomic questions and problems and to derive appropriate conclusions.	3	6
4WI-MAWI-30	Materials Management	Apart from an introduction to industrial management, the module focuses on the foundations of materials management. This includes the analytical instruments of materials management as well as procurement planning and disposition.	3	5
4WI-FIMA-40	Financial Management	The module covers investment and financing as core areas of financial management. Furthermore, students are familiarized with the main characteristics and the systematics of selected types of business taxes (income tax, corporation tax, trade tax, VAT) as well as the procedural law of the German Fiscal Code.	4	5
4WI-RECHT-45	Law	The module provides an introduction to the foundations and general principles of private law and legal working methodology. Based on case reviews, students are familiarized with legal forms of private autonomy (declaration of intent, legal transaction, contract), types and contents of	4 and 5	8

		<p>contractual and non-contractual obligations as well as rules regarding the infringement of contractual obligations. Students are also acquainted with the foundations of property law. Moreover, the module imparts knowledge of the special private law for merchants and their auxiliaries. This includes rules regarding the company, the trade register and commercial transactions. The module also provides an overview of possible legal forms of companies. They are enabled to know fundamental differences between business partnerships and corporations in terms of establishment, management, representation and liability. Based on case reviews, the module also imparts the foundations of individual and collective labor law. Students are familiarized with the legal conditions for establishing, implementing or terminating an employment relationship. Furthermore, students gain basic insights into the legal framework of information and communication technology as well as the specifics of Internet law with a focus on competition, copyright and contract law.</p>		
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4WI-COMA-56	Corporate Management	<p>Students are familiarized with essential contents and methods of corporate management in the context of globalization and internationalization. To gain a holistic perspective, the module focuses on the discussion of systemic dependencies. The theory-based discussion of the levels of corporate management (normative, strategic and operative) is complemented by innovative management and control methods from practice. Furthermore, students are acquainted with basic concepts of human resources management in general and personnel management in particular. Case studies complement and enhance the discussion of the covered topics. TOPSIM - General Management II is a sophisticated, generic and contemporary industrial business game. It deals with all business units from production, purchasing, personnel planning, research and development to marketing and sales and includes the topics of product life cycles, personnel qualification, productivity, rationalization, environmental aspects, share price, company value and rating. A comprehensive reporting system (internal accounting with detailed cost accounting, external accounting, detailed market research reports) provides the information upon which participants make their decisions. Instead of the TOPSIM General Management II business game, students may also work on an equivalent business game from another provider with the same range of functions.</p>	5 and 6	8
4WI-WIBAS-60	Knowledge-based Systems	<p>The field of Artificial Intelligence, as an essential prerequisite for intelligence and intelligent behaviour of a system, requires the possession of an inner model of the outer world and the ability to draw reasonable, appropriate and rational conclusions from existing knowledge. Based on the approaches of Artificial Intelligence, this module imparts knowledge and methods of knowledge-based systems, theoretical foundations of knowledge representation, development methods and possible applications. Students test and consolidate their knowledge in exercises with selected software.</p>	6	5

Compulsory modules " Special Business Informatics Competence "				
4WI-EWI-10	Introduction to Business Informatics	This module provides an introduction to the study of business information systems and imparts fundamental knowledge of computer science and business informatics. The functionalities of essential hardware and software components in companies are explained. An introduction to the organization of studies and subsequent academic work is given. The module conveys competence in self and time management thus enabling students to independently plan, coordinate and analyze their studying and working style.	1	5
4WI-MDWI-20	Methods of Business Informatics	The module imparts fundamental knowledge and skills on core competencies in business informatics, ranging from the requirements definition during the system analysis to the system design, while at the same time focusing on the respective requirements and tasks of IT project management. The understanding of object orientation is promoted through the use of the Unified Modeling Language (UML).	2	6
4WI-ITM-40	IT Management	The module imparts measures and methods to optimally design the business processes of a company by means of IT organization and to operate the necessary information technology. This also includes the methods of business process analysis and optimization as well as measures and methods of IT service management and related areas. The lecture material is applied and consolidated in an exercise using the business process management tool ARIS.	4	5
4WI-ITSK-60	IT Service and Concepts	This module imparts the current approaches of integrative service and information management structures and the associated technologies and concepts. Opportunities and risks of electronic business and the increasing digitalization of information are discussed in more detail.	6	5

Compulsory modules "Personal, Social and Linguistic Competence"				
4WI-EBIS-45	English Business Information Systems	<p>This English language module meets the needs of dual-bachelor students, provides an introduction to general aspects of economics and computer science in a company environment. It systematically develops key language skills for efficient communication in this field. Great emphasis is placed on helping students boost their lexical range (terminology).</p> <p>As the second step within a two-level modular business and special English course, this part encourages students to sharpen their communication skills and draw on their own experience at work. Authentic materials and motivating activities provide constant opportunities for discussion, offer an intercultural perspective and maximize learner involvement.</p>	4 and 5	9
4WI-MTITP-56	Management Techniques in IT Projects	<p>Working in groups, students learn how to design and implement an IT system under practical conditions. They apply modern methods of system analysis/system design and project management to a concrete, practical task on the computer using a current programming language. Students acquire knowledge that is necessary for the development of complex IT solutions with current technologies and tools. Participation in a project group and the acquisition of management techniques develops and consolidates the students' capacity for teamwork and their leadership, moderation and conflict management skills in the area of social competence.</p>	5 and 6	9

Kommentiert [GL1]: Lag bereits in Englisch vor

Compulsory elective modules				
4WI-SFGW-40	Structures and Financing of the Health Care System	Students are familiarized with the fundamental structures and interrelationships of the health care system. They understand the complexity of the medical business and are able to evaluate the role of the actors. They are familiarized with important regulations and nomenclatures. Knowledge of the language, structure and processes of the health care system is a prerequisite for the solution of business informatics tasks in this area. Furthermore, students are acquainted with the financing of the health care system.	4	5
4WI-VBWEG-40	Administrative Management and E-Government	The module imparts the fundamentals for understanding public business administration and e-government.	4	5
4WI-LOQM-40	Logistics and Quality Management	The module imparts knowledge of logistics and quality management. Apart from basic terms, students are familiarized with the different types of logistics and their connection to quality management. The gained knowledge is consolidated in a business game and a case study.	4	5
4WI-BK-40	Office Communication	In this module, students acquire and consolidate practice-oriented skills in the fields of office communication and standard software.	4	5
4WI-QMNSG-50	Quality Management and New Health Care Structures	Students are familiarized with new structures and forms of cooperation in the health care system and their requirements for medical information systems. Furthermore, the module provides an overview of quality management in the health care system.	5	5
4WI-ERP-50	ERP-Systeme	The module imparts basic and advanced knowledge of ERP systems. This includes a functional overview as well as the structure and mode of operation of ERP systems. A market overview and current trends round off the topic. Students participate in an exercise with a suitable ERP system to apply and consolidate the attained knowledge.	5	5

4WI-SMMA-50	Social Media Marketing	The elective module qualifies students for the changes in communication culture through social media - especially in the corporate context. After completing the module, they are able to develop social media strategies and sustainable social media concepts, implement them successfully and ensure their value creation by means of social media monitoring. Apart from conceptual competence, the module also enables students to use social media platforms (social networks - corporate blogging - microblogging - video and photo sharing) in internal and external corporate contexts in an application-oriented manner.	5	5
4WI-IFSZ-50	International Language Certificate English	The seminar imparts the necessary skills for the acquisition of an English language certificate (LCCI EFB, Level 2/3; Cambridge Advanced, TOEIC or TOEFL) and thus prepares students for a career abroad, an internship abroad and/or a master program. Furthermore, it enables students to reliably assess their language skills in accordance with the European Reference Framework. The seminar focuses on European commercial correspondence. Upon completing the module, students will have broadened their business communication skills by dealing with tasks from real business life as well as their academic English skills. Moreover, they gain an insight into intercultural diversities in international business and acquire an increased sensitivity towards communicative peculiarities and cultural differences. Focus is laid on intercultural teamwork and the staff-customer relationship, which is of increasing importance in the context of globalization.	5	5
4WI-ERPV-50	ERP Systems in Administration	The module Enterprise Resource Planning in Administration explains how ERP systems can be used to support business processes in public administrations. To this end, both logistical and financial processes and their implementation in ERP systems are covered in detail. Furthermore, the module imparts knowledge about the structure and architecture of ERP systems as well as trends and different integration models. Students participate in an exercise with a suitable ERP system to apply and consolidate the attained knowledge.	5	5
4WI-VSE-60	Consolidation Software Engineering	The module deals with current practice-relevant topics in software engineering. In particular, the techniques and methods of programming are consolidated by means of case studies.	6	5
4WI-MSS-60	Management Support Systems	Students apply the knowledge gained in the basic subjects of business administration and computer science in ideal or hypothetical business situations. They demonstrate their ability to work in a team and apply basic technologies for data management and data processing to fulfil administrative and dispositive corporate functions.	6	5

4WI-IKK-60	Intercultural Competence	The elective module develops students' intercultural, social and communicative skills. Upon completion of the module, students are able to grasp culturally determined differences in perception, thinking, feeling, acting and judging in themselves and in others. They are capable of analyzing these differences against the background of their own and foreign cultural orientation system and effectively designing communication processes in professional situations. The module focuses in particular on the following countries and cultures: India, China and Southern and Eastern Europe.	6	5
4WI-OPRE-60	Operations Research	The elective module Operations Research (OR) provides students with in-depth knowledge in the field of mathematical optimization for the solution of economic problems. After completion of the module, students have the ability to model operational issues and solve them using suitable methods of OR. They acquire knowledge, skills and competencies in the following areas of mathematics that are relevant to the field of economics: network and network flow problems, linear optimization, integer optimization, dynamic optimization and nonlinear optimization - as optimization methods of OR. The module takes a problem-oriented approach and includes instructive examples from practice.	6	5
4WI-MIM-60	Medical Information Management	The module focuses on the requirements for medical information systems that result from the support of medical activities, the basics of medical documentation, given interfaces and the introduction of new telematics technologies.	6	5

Practical modules				
4WI-PMUGU-10	Practice Company in the Global Environment	This practical module familiarizes students with their practice company and elementary processes and activities there. They obtain an overview of the communication relations and information systems used in the company. Students are directly involved in practical teams and thus receive essential impulses for the development of new or the consolidation of previously attained social skills. They strengthen professional skills acquired in the theoretical modules and apply them in the required practical presentation.	1	6
4WI-PMAP-20	Application of Work and Problem Solutions	In this practical module, students are familiarized with basic procedures in selected functional areas. They apply and practice working and problem-solving techniques including the associated information technology. They enhance their action competence as well as their methodological and social skills. In first guided projects, students practice methods of business informatics. Students independently prepare a report, which is then reviewed during in-class seminars. In this report, students deal with the topics of individual lectures in greater depth and consolidate them through the practical knowledge they have gained in the company.	2	6
4WI-PMEK-30	Enhancement of Action Competence and Methodical and Social Skills	In this practical module, students get to know further essential processes in selected functional areas and thus expand their action competence and their methodological and social skills. They practice their ability to carry out independent scientific work by preparing their second report, which is reviewed during in-class seminars.	3	6
4WI-PMAV-40	Autonomous Work	In this practical module, students solve operational tasks in an increasingly autonomous way. With the aim of strengthening independence, developing skills and the ability to make decisions, students expand their specialist knowledge and their ability to think analytically, critically and constructively. They are enabled to analyze and evaluate specific practical processes and put theoretical knowledge into practice and vice versa. Students select and apply problem-solving and project management techniques.	4	6

4WI-PMEA-50	Independent Work	In this practical module, students work independently on operational tasks and consolidate their methodological project management competence. At trade fairs or in customer negotiations they acquire sales and conflict management skills.	5	6
4WI-BAWI-60	Bachelor Thesis	In their theses, students work on a defined problem from the field of business informatics within the stipulated timeframe and in target- and result-oriented way. They are supposed to apply their acquired theoretical, methodological and practical expertise and present their results in a logically structured and comprehensible scientific work. Students defend their results in the form of a presentation.	6	9