Module code	Module title	Module description	Semester	ECTS
Compulsory modules „General Business Competence"				
4WI-UGU-10	Enterprise in the Global Environment	Students gain an overview of the fundamentals of business administration. They are familiar with the basic categories of modern management theory. The importance of the organization in the specialized labor process and the positioning of marketing in the context of business management decisions round off this topic. Furthermore, students acquire basic knowledge of economics, which enables them to analyze and assess business management issues from an economic perspective.	1	5
4WI-WIMA-12	Business Mathematics	This module provides students with the mathematical tools for successfully studying the contents of business information technology. The following areas of mathematics are particularly important for the combination of business administration and computer science: analysis, linear algebra, financial mathematics, descriptive statistics, probability theory, inductive statistics, linear optimization, optimization models, reliability theory and operation theory. The module takes a problem-oriented approach, using primarily instructive examples from practice.	1 + 2	8
4WI-BWL1-23	Business Administration 1	The module provides an introduction to the issues of external and internal accounting. Focus is placed on the fundamentals and techniques of accounting as well as cost type, cost center, cost unit and contribution margin accounting. On this basis, the module further covers the purpose and conceptual principles of external accounting as well as the fundamental accounting systems. Proceeding from the economic purpose of accounting, students are familiarized with the legal basis and the concrete structure of national and international accounting.	2 + 3	10
4WI-VWL-40	Economics	The module focuses on the acquisition of fundamental knowledge of the main economic issues and correlations. Furthermore, students are enabled to identify and evaluate these economic issues and problems and draw the appropriate conclusions.	4	5

4WI-FIMA-40	Financial Management	The module focuses on investment and financing as core areas of financial management. Furthermore, students are familiarized with the essentials and the systematics of selected types of business taxes (income tax, corporate income tax, trade tax, VAT) as well as the Procedural Law of the German Tax Code (*Abgabenordnung*).	4	5
4WI-RECHT-34	Business and IT Law	The module provides an introduction to the fundamentals and general principles of civil law as well as to the methodology of legal work. Students discuss legal cases in order to become familiar with the legal forms of private autonomy (declaration of intent, legal transaction, contract), as well as the types and contents of debt relationships and the rules on performance defaults. In addition, students are familiarized with the fundamental principles of property law. Furthermore, the module imparts knowledge of the special private law of merchants and their auxiliaries with the regulations on the company, the commercial register and commercial transactions. Finally, students are provided with an overview of the possible legal forms of companies. They are to know the fundamental differences between partnerships and corporations or joint-stock companies regarding formation, management, representation and liability. The module discusses legal cases to impart the fundamentals of individual and collective employment law. Students are familiarized with the legal conditions for the establishment, content and termination of an employment contract. They learn how to deal with collective agreements as well as the mechanisms of labor disputes and gain an insight into the right of co-determination. Furthermore, students acquire fundamental knowledge of the legal framework of information and communication technology as well as the special characteristics of Internet law with a focus on competition, copyright and contract law.	3 + 4	6

4WI-BWL2-56	Business Administration 2	Against the background of globalization and internationalization issues, students are familiarized with the essential contents and methods of corporate management. For a comprehensive understanding, the module focuses on the discussion of systemic interrelationships. Theoretical considerations of the levels of corporate management (normative, strategic and operational) are combined with knowledge of innovative management and control methods used in practice. Furthermore, students become familiar with fundamental concepts of human resource management in general and employee management in particular. Knowledge of the discussed topics is consolidated and deepened by case studies. The "TOPSIM - General Management II" business game is a challenging, generic and up-to-date industrial business game. It covers all sectors of a company from production to purchasing, personnel planning, research and development, marketing and sales, as well as 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 costing accounting, external accounting, detailed market research reports) provides the information for decisions to be made by the participants. The "TOPSIM General Management II" business game can also be replaced by a business game with an equivalent range of functions from a different provider.	5 + 6	8

Compulsory modules "Informatics"

4WI-PROG-10	Programming	The module imparts the knowledge and skills required to proceed from the problem definition to the algorithm to the user-friendly and efficient program. Apart from the fundamentals of programming, the module particularly focuses on the object-oriented paradigm.	1	5
4WI-TGI-10	Theoretical Fundamentals of Informatics	The module focuses on selected topics from the areas of logic and algebra, algorithms and data structures, complexity and automata theory, and formal languages.	1	5
4WI-DB-20	Databases	The module imparts knowledge and skills of modeling, application and administration of relational database systems. In practical exercises, students can test their skills on concrete database management systems and deepen their knowledge.	2	5
4WI-PRO1-23	Project 1 - Software Engineering	Students gain profound knowledge and practical experience in software development and project-oriented work. In the context of a defined case study, students apply their knowledge of software analysis, design and implementation. They acquire skills in the planning and implementation of software projects. Students strengthen their ability to work in a team and communicate their results.	2 + 3	10
4WI-MDWI-30	Methods of Business Information Technology	The module imparts fundamental knowledge and skills on core competencies of business information technology, ranging from the requirements analysis to the system design, while focusing on the respective requirements and tasks of IT project management. The understanding of object orientation is fostered through the use of Unified Modeling Language (UML).	3	5
4WI-ITM-40	IT Management and Business Process Management	The module imparts measures and methods for the optimal design of a corporate business processes using the IT organization as well as for the corresponding operation of the necessary IT. To this end, students are introduced to the methods of business process analysis and optimization as well as measures and methods of IT service management and related areas. Students apply and deepen their knowledge of the covered topics in an exercise using modeling tools for business process management.	4	5
4WI-ITSK-40	IT Service and Concepts	This module covers current approaches to 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 dealt with in more detail.	4	5

4WI-PRO2-56	Project 2 – Enterprise Resource Planning	The module expands knowledge and skills in the field of Enterprise Resource Planning through a project-oriented approach. Students apply their knowledge of business process management and the implementation of ERP systems in the context of a defined case study. They gain skills in the planning and implementation of consulting projects. Students strengthen their teamwork skills and communicate their results.	5 + 6	10
4WI-BUIN-60	Business Intelligence	The module enables students to practically apply the knowledge gained in the basic subjects of business administration and informatics to a company. They demonstrate their skills in operational data and information processing and apply basic technologies for data management and data processing to fulfill administrative and dispositional business functions. Furthermore, students will be able to visualize information and thus support the decision-making process in companies.	6	5

Compulsory modules "Personal, Social and Language Competence"				
4WI-WIEN-20	,Business English	This English language module meets the needs of students in cooperative degree programs and 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 and places great emphasis on helping students boost their lexical range (terminology). This English course also encourages students to sharpen their communication skills and draw on their own experience at work. Authentic material and motivating activities provide constant opportunities for discussion, offer an intercultural perspective, and maximize learner involvement.	2	5
4WI-WIKO-10	Academic Work and Communication Techniques	The module prepares students for their studies. It provides an introduction to the organization of studies and future academic work. Participants are familiarized with fundamental theoretical and practical aspects of academic work. Further focus is placed on the formal and content-related design of academic work as well as communication theory and the fundamentals of rhetoric. Students are enabled to plan their work in an adequate and timely manner and to present academic findings by using supporting software.	1	5

Compulsory elective modules

4WI-GEKO-50	Generative Design for Additive Manufacturing	Upon completion of the module, students are expected equipped with a tool for describing and developing complex three-dimensional objects in a descriptive way. This requires good imagination and abstraction skills. Thus, the seminar also focuses on the training and improvement of these skills.	5	5
4WI-QACO-50	Quantum Computing and Quantum Communication	Upon completion of the module, students have gained a profound understanding of the possibilities and opportunities of quantum computers, as well as of their mode of operation. Students are enabled to assess the technology and to identify fields of application.	5	5
4WI-MC-50	Mobile Computing	Upon completion of the module, students have acquired practical and theoretical knowledge of the creation, deployment, and operation of mobile applications. They are enabled to select the appropriate technology for the assigned task from a variety of technologies. Students have gained the skills to design graphical user interfaces for mobile devices and to read out sensor technology.	5	5
4WI-BUKO-50	Office Communication	In this module, students acquire and deepen practical skills in the areas of office communication and standard software.	5	5
4WI-MAIN-50	Mainframe Systems	Upon completion of the module, the students are familiar with the structure and possible applications of mainframes. They are enabled to provide support for the use of such systems and develop utilization concepts together with the specialist departments of the companies. Students gain an understanding of current solutions and are able to refine them.	5	5

4WI-IKK-50	Intercultural Competence	In this elective module, students gain intercultural, social and communicative competencies. Upon completion of the module, they are able to grasp culture-related differences in perception, thinking, feeling, acting and judging in themselves and others. They can analyze these differences against the background of their own and foreign cultural orientation systems and effectively design communication processes in professional situations. In this context, the module particularly focuses on the following countries and cultures: India, China as well as Southern and Eastern Europe.	5	5
4WI-OPRE-50	Operations Research	The compulsory elective module "Operations Research (OR)" provides students with in-depth knowledge in the field of mathematical optimization to solve economic problems. Upon completion of the module, students are able to present operational problems in models and solve them by applying suitable OR methods. For this, they acquire knowledge, skills and competences in the following mathematical subfields relevant to economics: network and network flow problems, linear optimization, integer optimization, dynamic optimization and nonlinear optimization - as optimization methods of OR. The course takes a problem-oriented approach, using instructive practical examples.	5	5
4WI-MIM-50	Medical Information Management	The module focuses on the requirements for medical information systems resulting from the support of medical actions, the fundamentals of medical documentation, the interfaces that must be complied with, and the introduction of new telematics technologies.	5	5
4WI-IES-56	Intra-Corporate Entrepreneurship and Entrepreneurship	Upon completion of the module, students have fundamental knowledge of business administration from the perspective of entrepreneurial thinking and action (entrepreneurship / intra-corporate entrepreneurship). Focus is placed on the development of the business process from invention to innovation to diffusion. In the field of entrepreneurship, this means the foundation of a new company to implement a new business model. In the field of intracorporate entrepreneurship, it means the integration of a new business model in an existing company. In addition, students are familiarized with the anatomy and methodology of change processes in organizational development and learn how to apply.	5 + 6	10
4WI-ITSG-60	IT Security in Healthcare	Upon completion of the module, students have gained an awareness of the particularly high demands placed on IT security and data protection when dealing with medical data. Students	6	5

		become acquainted with the methods and knowledge required to meet the special challenges of IT security in the healthcare sector. Particular focus is placed on telemedical applications, and the large volume of personal data collected and processed during the treatment process.		
4WI-COFO-50	Computer Forensics	The module provides students with solid background information on forensic examinations performed on computer workstations and servers, as well as concrete instructions on how to act in the event of a disaster. Students are enabled to secure digital evidence and carry out simple manual analyses. They are familiar with concrete applications for the execution of a forensic investigation and have experience with at least one tool.	5	5
4WI-KRIS-60	IT Security and Cryptography	Upon completion of the module, students are familiar with the basic concepts and contexts of IT security. They have developed awareness of the existence of possible vulnerabilities and have a strategy for detecting and systematically eliminating such vulnerabilities. Students gain an understanding of the functionality of cryptographic procedures and know their possibilities and limitations.	6	5

Practical modules				
4WI-PMUGU-10	Partner Company in the Global Environment	In this practical module, students become familiar with their partner company and its elementary processes and activities. They gain an overview of the communication relationships in the company as well as the information systems used. Students are directly integrated into practical teams and thus receive essential impulses for the development of new or the consolidation of previously acquired social competences. Students deepen the professional knowledge gained in the theoretical modules and apply it in a presentation.	1	6
4WI-PMAP-20	Practical Module "Application of Work and Problem Solutions"	In this practical module, students become familiar with fundamental processes in selected functional areas. They apply and practice work and problem-solving techniques including the corresponding IT. Students expand their professional, methodical and social competences. They practice methods of business information technology in first guided projects. Students prepare a report on their practical work, which is evaluated in an in-class lecture.	2	6
4WI-PMEK-30	Practical Module "Expansion of Professional, Methodological and Social Competence"	In this practical module, students become familiar with further fundamental processes in selected functional areas. Thus, they expand their professional, methodical and social competences. Students practice their ability to carry out independent academic work by writing the second report on their practical work, which is evaluated in an in-class lecture.	3	6
4WI-PMAV-40	Practical Module „Independent Work"	In this practical module, students solve operational tasks in an increasingly independent manner. Students expand their professional knowledge, their ability to think analytically, critically and constructively, as well as their capacity to analyze and assess specific practical processes and translate theoretical knowledge into practice and vice versa. In so doing, they strengthen their independence, further develop their competencies and enhance their decision-making skills. Students select and apply problem-solving and project management techniques.	4	6

4WI-PMEA-50	Practical Module „Autonomous Work"	In this practical module, students work autonomously on operational tasks and consolidate their methodological project management skills. They attend trade fairs or participate in customer negotiations thus acquiring sales and conflict management skills.	5	6
4WI-BAWI-60	Bachelor's Thesis	With their bachelor's thesis, students demonstrate their ability to independently work on, critically evaluate, and further develop a problem in the field of business information technology within a specified period of time using the previously acquired practical and theoretical knowledge and recognized academic methods. They are able to present the results in a presentation.	6	9

Kommentiert [MF2]: BAWI oder BTHES?