2024/25

Please note the year of validity of the module catalogue.

FACULTY OF MANAGEMENT, ECONOMICS AND SOCIAL SCIENCES

UNIVERSITY OF COLOGNE

VICE DEAN OF STUDIES DEPARTMENT



valid for students of the Examination Regulations 2021

(enrolment from winter semester 2021/22)

MODULE CATALOGUE

INFORMATION SYSTEMS

BACHELOR OF SCIENCE

IN ACCORDANCE WITH THE EXAMINATION REGULATIONS FOR THE SINGLE MAJOR BACHELOR PROGRAMME IN INFORMATION SYSTEMS



valid for students of the ER 2021 (enrolment from winter semester 2021/22)

Academic director	Prof. Dr. Christoph Rosenkranz
Programme director	Prof. Dr. Christoph Rosenkranz
Editor	Vice Dean of Studies Department - WiSo Faculty
Student Services	WiSo-Student Service Point (WiSSPo) +49 (0) 221 / 470 - 8818 www.wiso.uni-koeln.de/anfrage
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valid for students of the ER 2021 (enrolment from winter semester 2021/22)

List of abbreviations

AM	Advanced module	PR	Project
AS	Assignment	PRES	Presentation
С	Course	SI	Studium Integrale
CC	Compulsory course	SM	Specialisation module
СМ	Core module	SPM	Supplementary module
СН	Contact hours (= time spent in class)	SPW	Semester period per week
ECTS	Credit Points	SSt	Self-study
CS	Case study	TP	Term paper
EC	Elective course	TPF	Time required for preparation and follow-up
OE	Oral Examination	TR	Credit points transferred from another university
PRP	Project report	WL	Workload
PCR	Practical component report	WT	Written Test
РО	Portfolio		

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1 Information Systems

Information Systems is an independent, interdisciplinary field, which has its roots in informatics and economics, especially business administration.

The Cologne Institute of Information Systems (CIIS) is responsible for teaching Information Systems at the University of Cologne. In addition, the range of courses is supplemented by teaching assignments and practical contributions. There are extra-curricular workshops on current topics (for example App development, Big Data, Soft-Skills) held at irregular intervals, which are mostly financially supported by companies and are sometimes even hosted by them.

1.1 Content and objectives of the programme

Graduates have competences at level 6 of the German Qualification Framework or the bachelor's level of the German Qualification Framework for Higher Education Qualifications. Intended learning outcomes are shown in the table below. On the one hand, the intended learning outcomes comprise the overarching *learning goals* that the programme envisions for the graduates. On the other hand, they include *learning objectives*, which refer to concrete activities of the students during their studies.

	Graduates act
	with a deep understanding of business issues to support organisations in digitalisation and in the development of IT capabilities.
	Students develop criteria for business decisions in relation to application and information systems.
skills	Students analyse different concepts for management support and their use for different challenges in companies and other organisations.
Professional and analytical skills	with a sound specialist knowledge at the interface between business organisation and information technology in order to improve business processes effectively and sustainably.
and ar	Students apply logical and theoretical foundations of computer science and information systems.
ional	Students independently write an academic paper on a practical information systems problem based on systematised literature/data.
rofess	as innovative software programmers to find creative software-based solutions to problems.
Δ.	Students use a programming language in a solution-oriented manner by independently creating application programs.
	Students develop practical solutions for different areas with digital technologies, taking into account situational environmental factors.
Communicative and cooperative skills	as information systems managers in a global and diverse world to address professional issues in information systems.
ommunicativand and cooperative skills	Students defend their independently developed position or solutions to problems.
mm goo s	Students discuss subject-specific problems in German or English.
O O	Students work on problems in a goal-oriented and cooperative manner in diverse teams.
<u>s</u>	as responsible employees in order to face the social challenges of the future.
Personal skills	Students develop an understanding of the impact of technological decisions, taking into account ecological, social and/or ethical criteria.
ersc	Students design their learning and working processes independently.
ď	Students evaluate their own action process in self- and external reflection.

Information Systems deals with the conception, development and application of information systems in economics, management and increasingly in our private life. The subject unites theoretical knowledge of several disciplines with application-oriented focus towards system solutions for operational challenges. In many contexts of work and living environment, it provides solutions to product and (business) process designing under economic framework conditions, with its innovative capacity. Information systems are indispensable in almost all conceivable economic, political and social contexts like resource management, energy, security, health and care, traffic, environment, production, finance, education, production as well as media. Information systems contribute towards decision-making, coordination, steering and control of value-added processes as well as their automation, integration and virtualisation. Information systems can affect product, process and business model innovations. Therefore, a degree course in business informatics opens up a wide operational spectrum for the interface of business management and informatics, especially in planning, development, introduction and operation of information systems. In the labour market, the frequently sought-after dual qualification in the areas of business administration and informatics can be applied in a wide spectrum of various business areas and industries. Here, IT business engineers adopt a translation function between business administration related world of ideas and voice on one hand and of a technically entrenched system world on the other. IT business engineers can accordingly perceive coordinating functions between IT specialists and subject specialists on the application side, whereby consultancy services and project management are paramount. Over and above that, IT business engineers are experts in structuring and modelling information systems and understand how to make a difference in IT non-expert domains, like healthcare. From an industry-related perspective, not only companies related to information technology like IT service providers or consultancies are considered employers, but in connection with corresponding specialisations like employers from the trade, logistics/transport, media, telecommunication or banking and insurance sectors also.

1.2 Requirements

Students must bring along the following professional, methodical and personal strengths and inclinations for a successful bachelor's degree:

- Good mathematical and analytical skills
- Abstract and conceptual thinking
- Good linguistic expressiveness in German and English
- Independent, target and result-oriented work
- Marked interest in economic and information technology issues

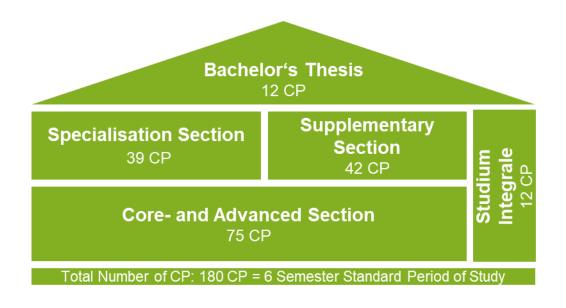
1.3 Programme structure and sequence

Enrollment from winter semester 24/25 onwards:

The degree course comprises of 180 CP and includes a Core and Advanced Section (72 CP), a Supplementary Section (36 CP), as well as a Specialisation Section (48 CP), Studium Integrale (12 CP) and the bachelor's thesis (12 CP). The Core and Advanced Section include compulsory modules in fundamentals and should be completed first for. In the Specialisation Section, students deepen their knowledge in Informatics and Business Informatics with an emphasis on applications, including through a programming project and a Capstone project. The Supplementary Section offers students the chance to acquire knowledge in the areas of Business Administration and ethics. Moreover, students must complete 12 CP from the university wide Studium Integrale. The degree course ends with the bachelor's thesis.

Enrollment before winter semester 24/25:

The degree course comprises overall 180 CP and includes a Core and Advanced Section (75 CP), a Supplementary Section (42 CP), as well as a Specialisation Section (39 CP). The Core and Advanced Section is again divided into a WiSo Core Section, Mathematics, Informatics and Business Informatics Section. It only includes compulsory modules in fundamentals and should be completed first. The Supplementary Section offers students the chance to obtain knowledge in Business Administration. Moreover, 12 CP from the wider range of Studium Integrale must be completed. Moreover, students must complete 12 CP from the university wide Studium Integrale. The degree course ends with the bachelor's thesis.



1.4 Study Abroad Option

The WiSo Faculty offers a broad range of study abroad options within an excellent network of prestigious partner universities worldwide. The Study Abroad Programme (STAP) includes ERASMUS exchanges and provides the opportunity for a single term stay at one of the WiSo Faculty's partner universities. Successful STAP applicants benefit from direct contact and organisational support at the partner university as well as organisational support by the International Relations Center (ZIB WiSo). Additionally, students on STAP are exempt from paying tuition fees at partner universities. The range of universities available depends on the bachelor's course in which the student is enrolled. Possible options, along with detailed information on each university, are listed on the WiSo Exchange (WEX) portal. The WEX portal is only accessible with a student's UoC account.

In addition to the STAP programme, the WiSo Faculty organises an exclusive short-term study option - WiSo@NYC - which takes place in New York City every year.

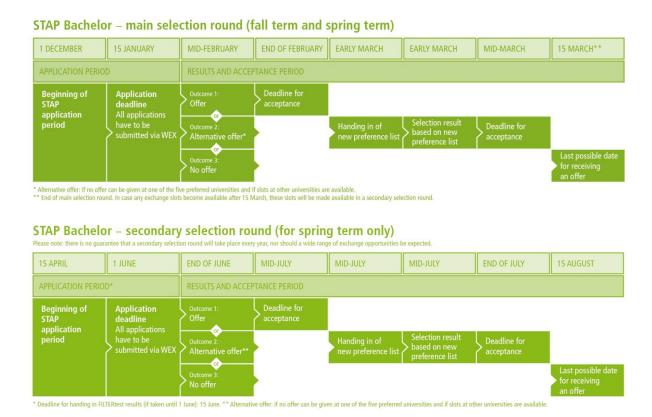
Beyond the WiSo-faculty options for studying abroad, there are non-WiSo exchange options available through the Central International Office of the University of Cologne (Dezernat 9 – Internationales) within the university-wide partnerships framework (link in German only).

Further possibilities include going abroad as a freemover (i.e. a student who organises their study abroad exchange individually) or participating in short courses or summer schools offered under separate terms and conditions.

1.4.1 The Faculty's Study Abroad Programme (STAP)

Bachelor's students should plan their application for a term abroad at the beginning of their studies. The main selection round for STAP takes place once a year, ending on 15th January of each year. It is possible to apply for an exchange in the fall term or spring term of the following academic year. Detailed information regarding selection criteria and the preparation for a STAP application can be found <u>online</u>.

If places are still available after the main selection round, another small, secondary selection round will be offered between April and 1st June. In this round, students can only apply for the following spring term.



1.4.2 Credit transfer options from studies abroad

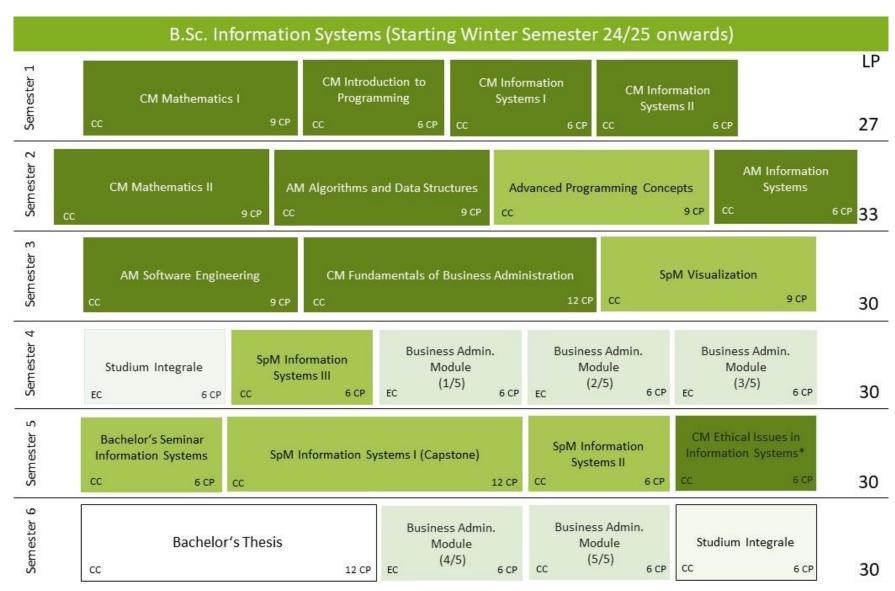
The WiSo-faculty has implemented at least one Studies Abroad module in each of the bachelor's programmes so that broad credit transfer options for all kinds of study abroad options are possible. If requirements are met, a single course-to-course credit transfer can be considered. Moreover, students have the option of crediting courses from their studies abroad as part of Studium Integrale.

Students can contact <u>ZIB WiSo</u> or the <u>WiSo Credit Transfer Center</u> for any questions regarding credit transfer.

1.5 Study Plan

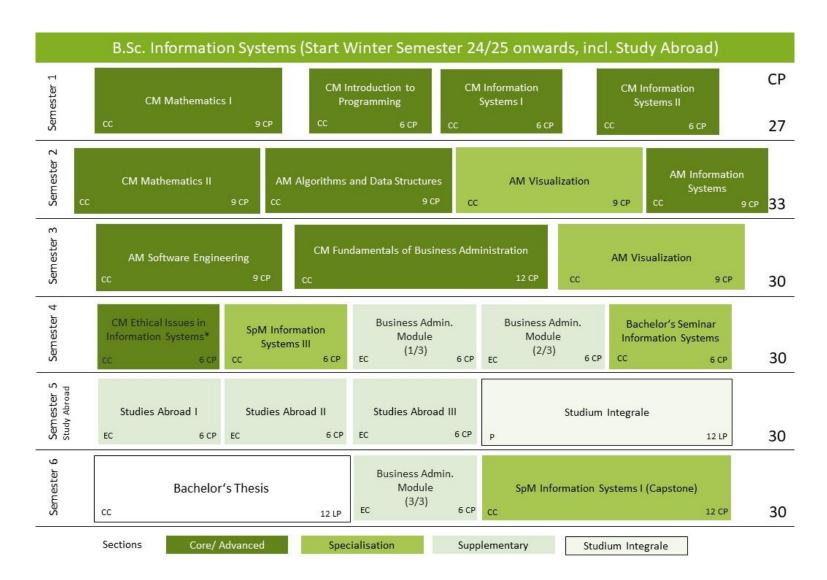
Students must plan their studies individually. This is due to various factors such as some specialisation modules not being offered every term or requiring more than one term to complete. Therefore, the following study plans are provided as recommendations from which students can or have to diverge from depending individual choices.

Students should pay particular attention to the year they enrolled onto the programme when following the guidance of the following study plans.



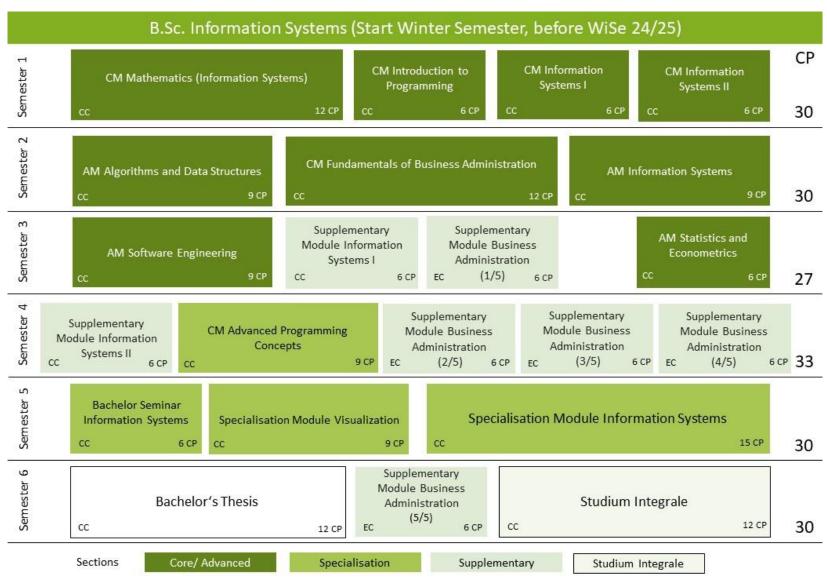
For the Supplementary Modules in Business Administration, it is possible that the modules include mid-term examinations. Further information regarding mid-terms can be found in section 1.6 Modules with mid-term Examinations.

For CM Ethical Issues in Information Systems: Please check whether this module is offered in the current semester in KLIPS.

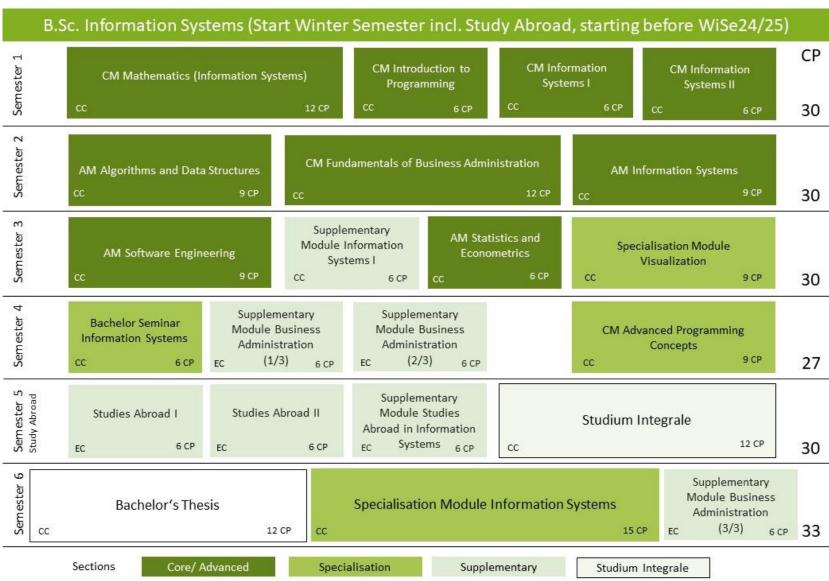


For the Supplementary Modules in Business Administration, it is possible that the modules include mid-term examinations. Further information regarding mid-terms can be found in section 1.6 Modules with mid-term Examinations.

For CM Ethical Issues in Information Systems: Please check whether this module is offered in the current semester in KLIPS.



For the Supplementary Modules in Business Administration, it is possible that the modules include mid-term examinations. Further information regarding mid-terms can be found in section 1.6 Modules with mid-term Examinations.



For the Supplementary Modules in Business Administration, it is possible that the modules include mid-term examinations. Further information regarding mid-terms can be found in section 1.6 Modules with mid-term Examinations.

Study plans including a semester abroad

General remarks

For questions about studying abroad, please contact ZIB WiSo.

It is possible to not request leave of absence (*Urlaubssemester*) for a semester abroad so that examinations can be taken upon return to the University of Cologne (if it is individually feasible).

1.6 Modules with mid-term examinations

Some modules have courses that only run for half a term and, often, with twice the number of classes per week. For these modules, the term is divided into two roughly equal halves. During the winter semester, the mid-term course usually ends at the beginning of December. During the summer semester, the first term usually ends in the middle or at the end of May. Often, the examinations for these courses are held mid-term, enabling students to reduce their examination load at the end of term.

Information regarding the dates of courses and examinations are provided in the campus management system (KLIPS).

1.7 Calculation of the overall mark

The marks for core, supplementary and specialisation sections are calculated as the weighted arithmetic mean of the marks for the respective modules, based on the weighting system described in the examination regulations. If the result of a module examination is calculated based on several components, the mark is calculated based on a weighting given in the module description. For calculating averages, only the first decimal place after the decimal point is taken into account; all other decimal places are deleted without rounding.

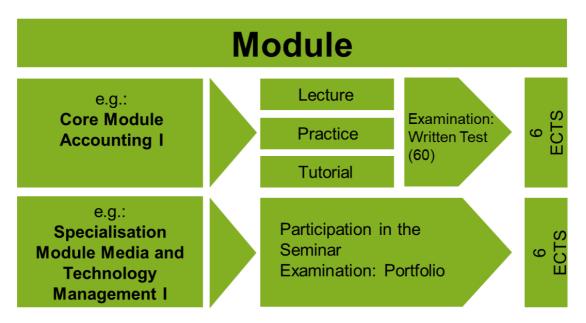
1.8 Modularity

Each section of the bachelor's programme is divided into modules, the contents of which are described in the module descriptions. These descriptions are found at the end of this bachelor's module catalogue. Students who pass the necessary examinations are awarded credit points as proof of their successful participation in a module. The module examinations are taken at regular intervals during the programme. Each module consists of various parts and can usually be completed in one or two terms (see the "duration" section in the module description). A module can consist of lectures, exercises and/or tutorials on the same subject. There are also modules that utilise one teaching format, e.g. a seminar. In some cases, modules offer students a choice between various courses, and they are required to take one

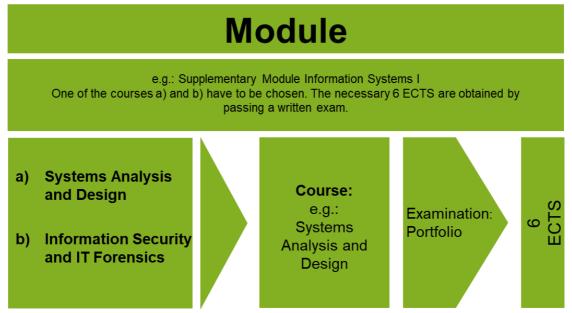
or more of them. In these cases, the examination can consist of two components (e.g. a written test in course one and a term paper in course two) or take the form of one, combined examination (a written test covering the content of courses one and two).

When planning your studies, please remember that not every module is offered every term. To find out whether a module is being offered, please refer to the "module availability" section of the module description.

The following examples are provided for purely illustrative purposes of individual scenarios; they do not necessarily include modules of the present study programme.



Scenario 1: The module can consist of one teaching and learning method or several complementary teaching and learning methods on the same topic.



Scenario 2: One of the two courses must be chosen and the exam must be passed.

1.9 Rules for failed attempts

Students may retake module examinations that they have failed. The number of attempts is limited to three per module.

Furthermore, three additional resit attempts can be granted to students at any point of the programme. Students who have accumulated at least 140 ECTS credits are granted a further additional attempt. If a student fails an examination having exhausted all additional attempts, they are deemed to have failed the programme at the final attempt. Students may only be eligible for additional attempts, beyond the initial three attempts, if none of the first three attempts were failed due to cheating or to an offence. If the candidate fails a module examination three times, they will receive a written notification informing them of the options available. We recommend to all students who fail the initial three attempts of an examination to seek advice from WiSo Student Service Point before embarking upon an additional attempt.

Where a module examination consists of several components, the candidate must obtain a "bestanden" (pass) mark, or at least an "ausreichend (4,0)" (sufficient) mark, in all of the examination components. All components marked "mangelhaft (5,0)" or "nicht bestanden" (fail) must be retaken.

It is not possible to retake module examinations that have already been passed.

A failed bachelor's thesis can be retaken once with a new topic. Students can only register for a second attempt after the result of their first attempt being announced.

2 Support for students

2.1 First Point of Contact for Questions and Counselling

The <u>WiSo Student Service Point</u> (WissPo) is the first, central contact point for students who have questions and problems during their studies. WissPo is also the first point of contact for further counselling offers, e.g. studying abroad, wellbeing, careers guidance. Students can contact WissPo via phone, email or visit in person. Please take note of the opening times and contact details on the website.

2.2 Course registration in KLIPS 2.0

KLIPS 2.0 is the central campus management system of the University of Cologne. At the WiSo Faculty, KLIPS 2.0 serves as a student organisation tool. Students should use it as an online course catalogue, for registration and deregistration of courses and examinations, as well as an overview of the complete study programme and calendar. Information on current dates and deadlines of the WiSo faculty, as well as video tutorials and FAQs about KLIPS can be found on the WiSo-KLIPS-Support website. If you have further questions, please contact WiSo-KLIPS-Support via this contact form. For questions regarding your KLIPS account, please contact the central KLIPS support team.

2.3 Exam registration in KLIPS 2.0

Examinations for the programme are always managed via KLIPS 2.0. Students must register for examinations by the specified deadlines. Please note that the registration for courses without restrictions on participation and the registration for the corresponding module examinations are two separate processes in KLIPS 2.0. In courses where participation restrictions exist, the examination registration is generally only possible if the course registration has been submitted beforehand. Most module examinations with a written test format are offered twice per semester. Often, this will be to "space out" the dates, i.e. students can choose the date that best fits their examination schedule. In some cases, however, the second examination may be a genuine repetition of the first, depending on the department/institute concerned.

All examination candidates at the faculty are entitled to see their examination papers after they have been marked. For more information, please visit the <u>WiSo Examination Office website</u>. Legally binding information concerning examinations and examination procedures is provided by the <u>WiSo Faculty Examination Office</u>. It also issues transcripts of records in German and English, ranking certificates and letters of assignment to the appropriate term of the

programme. All the necessary information and contact details can be found on the <u>examination</u> office website.

2.4 Academic Practice

The University of Cologne offers various courses to support students with the process of academic practice for term papers and theses. The courses include:

- a) Literature research: the <u>WiSo Teaching Library</u> offers various courses for researching literature and databases.
- b) Writing skills: the <u>Kompetenzzentrum Schreiben</u>, the <u>Professional Center</u>, the <u>Kölner Studierendenwerk</u> and the <u>programme SchreibArt</u> offer advice as well as courses related to the issues that arise when writing an academic paper.

Students can register for the courses of the Professional Center and the SchreibArt programme within **Studium Integrale** under "Kompetenzen für das Studium" (competencies for studies) in KLIPS 2.0. In addition, the WiSo faculty offers the course "Wissenschaftliche Arbeitstechniken für Wirtschafts- und Sozialwissenschaft" (in German) within Studium Integrale. It is possible to receive ECTS credits for these courses.

2.5 Preliminary course in Mathematics

Students can compare their mathematics skills from school to the skills required for the mathematics course in the bachelor's programme by taking the online <u>maths test in ILIAS</u> (only in German).

Information Systems students also have the option to take a voluntary, preliminary course in mathematics (only in German) offered by the Faculty of Mathematics and Natural Sciences.

Information about the course and registration can be found via the website of the Mathematics Department.

3 Module tables and descriptions (Enrollment until 23/24)

3.1 Core and Advanced Section

Im Basisbereich gemäß § 28 Absatz 12 Nr. 1 der geltenden Prüfungsordnung müssen die zu Prüfenden 75 LP erwerben.

Group	Module	СР	CC	/EC
CM Introduction to programming ¹	6	CC	57	75
AM Algorithms and data structures ²	9	CC		
AM Software Engineering³	9	CC		
CM Information Systems I	6	СС		
CM Information Systems II	6	СС		
AM Information Systems	9	СС		
CM Fundamentals of Business Administration	12	СС		
CM Mathematics for students of Informatics I⁴	9	EC	18	
CM Mathematics for students of Informatics II ⁴	9	EC		
CM Mathematics (Information Systems)⁵	12	EC		
AM Statistics and Econometrics ⁶	6	EC		
CM Statistics ⁷	6	EC		
CM Mathematics ⁷	6	EC		

¹ The registration for the examination is not possible if the examination for the module "CM Computer Science" has already been successfully completed.

² The registration for the examination is not possible if the examination for the module "AM Computer Science I" has already been successfully completed.

³ The registration for the examination is not possible if the examination for the module "AM Computer Science II" has already been successfully completed.

⁴ This module is compulsory for students who have not successfully completed any other modules in the Mathematics group by the end of the winter semester 2024/2025.

⁵ This module will be offered for the last time in 2024/2025 in accordance with the planned schedule.

⁶ This module can no longer be taken if the "BM Mathematics (Information Systems)" has not been successfully completed by the end of the winter semester 2024/2025.

⁷ This module cannot be specified independently. Only if only the module "AM Statistics and Econometrics" has been successfully completed in the Mathematics group by the end of the winter semester 2024/2025, this module must be taken from the summer semester 2025.

3.2 Supplementary Section

Im Ergänzungsbereich gemäß § 28 Absatz 12 Nr. 2 der geltenden Prüfungsordnung müssen die zu Prüfenden 42 LP in einer Gruppe erwerben.

Group	Module	СР	CC	/EC
CM Ethical Issues in Information Systems ¹	6	EC	30	42
CM Accounting I	6	EC		
CM Corporate Development I	6	EC		
CM Finance I	6	EC		
CM Marketing I	6	EC		
CM Supply Chain Management I	6	EC		
CM Corporate and Business Ethics	6	EC		
CM Decision Analysis	6	EC		
SpM Media and Technology Management I	6	EC		
SpM Media and Technology Management II	6	EC		
SpM Entrepreneurship	6	EC		
Studies Abroad I (Winfo)	6	EC		
Studies Abroad II (Winfo)	6	EC		
SuM Information Systems I	6	EC	12	
SuM Information Systems II	6	EC		
Studies Abroad in Information Systems	6	EC		

¹ This module will be a compulsory module from winter semester 2025/2026. This does not apply if the supplementary area has been successfully completed up to and including summer semester 2025.

3.3 Specialisation Section

Im Schwerpunktbereich gemäß § 28 Absatz 12 Nr. 3 der geltenden Prüfungsordnung müssen die zu Prüfenden 39 LP erwerben.

Group	Module	СР	CC	/EC
CM Advanced programming concepts ¹	9	СС	33	39
AM Visualization ²	9	СС		
SpM Information Systems	15	СС		
Bachelor Seminar Information Science	6	СС	6	

¹ The registration for the examination is not possible if the examination for the module "Programming Project" has already been successfully completed.

3.4 Studium Integrale

All of the Faculty's bachelor programmes include an interdisciplinary component, known as the Studium Integrale, in which students accumulate 12 credit points. The Studium Integrale is a university-wide and interdisciplinary component of the courses of study in which academic and professional competences are imparted. The Studium Integrale has both theoretical and practical content, enabling students to focus on more academic aspects or topics related to their future careers enhancing their employability. It aims to teach and develop skills that go beyond subject-specific knowledge or that are related to basic academic and personal traits: scientific curiosity, systematic and analytical thinking, and ability to deal with complexity, a solution-minded outlook plus other abilities such as teamwork and foreign language skills.

The Studium Integrale courses are run jointly by the faculties and the University's Professional Centre. They enable students to pursue their own interests in more depth, gain an insight into other subjects and departments, attend courses dealing with issues of relevance to society, acquire skills relevant to their future careers and attend language classes. The "Universitas" segment offers formats especially designed for the Studium Integrale, such as lecture series on societal issues with related workshops. In addition, the Studium Integrale offers students assistance with their learning and studying, helping them with such questions as how to write an academic paper or how to conduct literature reviews. Periods of training abroad and work experience can also be credited in the Studium Integrale. The Studium Integrale carries 12 credit points in total and formally counts as a module. There is no restriction on the number of attempts possible for Studium Integrale examinations.

Any credit points attained in the Studium Integrale over and above the 12 credit points specified in the study structure are shown on the transcript of records.

² The registration for the examination is not possible if the examination for the module "SpM Computer Science" has already been successfully completed.

3.5 Bachelor's Thesis

The bachelor's thesis carries 12 CPs and is written at the end of the programme. Its aim is to illustrate that the candidate is capable of working and reflecting independently on a specific problem related to the subject matter covered on the programme, using the necessary methods and within a specified period. The topic of the bachelor's thesis must reflect one of the sub-categories: Core and Advanced Section, Supplementary Section or Specialisation Section.

To be allowed to register for the bachelor's thesis component, candidates must have acquired at least 100 credit points. In line with the number of credit points it carries, the workload allotted for the thesis is 360 hours, i.e. 12 weeks. Bachelor's theses should not be more than 40 pages long. Candidates who have earned all of the necessary credit points, except for the bachelor's thesis, must register within a period of one year to write their bachelor's thesis. Further and more detailed information concerning bachelor's theses can be found in the examination regulations.

Please note that the Cologne Institute for Information Systems (CIIS) offers Bachelor's theses in every semester. Each semester you can start working on your bachelor's thesis at **one fixed starting time** (in November in winter semesters and in May in summer semesters).

3.6 Module Descriptions

3.6.1 Core and Advanced Section

Module Code 5751BEinPr		Workload 180h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Programming Co	ourse		Contact Hours 30h	Self- Studies 150h	Course Language German	
2	Module Conten Basic program comments Algorithmic co Technical tool Systematic ap designing the so developed soluti Paradigm and	nming terms, e oncepts, e.g. lo s such as IDE oproaches to e olution (e.g. wit on (simple tes	tures (conditions, version con imple problems sing existing sing methods	nal branching), trol systems s, e.g. analyzinç olutions (e.g. lib	recursion		
3	Learning Objectives Students learn the basic concepts of programming. They are able to recognize thes apply them to solve simple problems. This enables students to analyze simple prog problems and to design and implement their algorithmic solution. Students are also comment, test and debug the code they have created themselves.						
4	Teaching and L lecture practice	earning Meth	ods				
5	Module Entry R	equirements					
6	Mode of End-On Written test: PO	f-Module Exa	mination				
7		dule examinati rements for the highest for the highest as parelled in parallel to rerage. Achievolule	on. e examination: t of the practice. o the lecture, in wl			ust be successfully pints is sufficient for	
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9	Module Manage Geschäftsführer		in Institut für Info	nformatik			

10	Miscellaneous

	_					
Module Co e 5751 AlgDat		Workload 270h	9	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term
1	1 Courses Algorithms and data structures			Contact Hours 60h	Self- Studies 210h	Course Language German
2	functionality of c The general des sorting and sear	ction to the ter omputers, the ign and analys och methods as be treated. The	lecture deals with sis of algorithms a s well as elementa	n basic content are performed u ary graph algor	s of algorithms using examples ithms. Furtherm	d the structure and and data structures. from the fields of nore, elementary graph trees, graphs and
3	their runtime bel	nplement basic haviour depend	-	tructures used	. know and und	to correctness and lerstand the relevant
4	Teaching and L lecture practice	earning Meth	ods			
5	Module Entry R Recommendation	-				
6	Mode of End-O Written test: WT		mination			
7		dule examination rements for the support of the sup	on. e examination: f of the practice. o the lecture, in wl			nust be successfully pints is sufficient for
8	Core ar Bachelor of Scie	ence Wirtschaf nd Advanced S	tsinformatik (ab W Section Informatio tsinformatik:	-		
9	Module Manage Geschäftsführer		in Institut für Infor	rmatik		
10	Miscellaneous					

Module Code 5751BSoftw		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term		
1	Courses Software Engine	eering		Contact Hours 90h	Self- Studies 180h	Course Language German		
2	After an introdu functionality of c The general des sorting and sear algorithms can b	Module Content After an introduction to the terminology and definition of computer science and the structure and functionality of computers, the lecture deals with basic contents of algorithms and data structures. The general design and analysis of algorithms are performed using examples from the fields of sorting and search methods as well as elementary graph algorithms. Furthermore, elementary graph algorithms can be treated. The presented elementary data structures include trees, graphs and Union-Find data structures.						
3	their runtime bel	nplement basion	-	tructures used	. know and und	to correctness and erstand the relevant		
4	Teaching and L lecture practice							
5	Module Entry R	equirements						
6	Mode of End-O Written test: WT		mination					
7	Passing the mod Admission requi Coursework con Practices are he	dule examinat rements for th npleted as parallel to rerage. Achiev	e examination: t of the practice. o the lecture, in wi			oust be successfully pints is sufficient for		
8	Core an Bachelor of Scie	ence Wirtschar nd Advanced	itsinformatik (ab W Section Informatio itsinformatik:	-				
9	_	Module Manager Geschäftsführende*r Direktor*in Institut für Informatik						
10	Miscellaneous							

Module Code 1277BBWIF1			ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Information Syst	tems Manager	ment	Contact Hours 60h	Self- Studies 120h	Course Language German
2	 Information systems as a science Strategic role of information systems Internal and inter-company business process integration Electronic commerce and electronic business Computer supported collaborative work IT security Ethical, social and political aspects Information assets Business process reengineering 					
3	• Internet of things Learning Objectives Students know and understand basic theories in the field of information management apply theories in the field of analysis and structuring concepts in pre-structured contexts case studies) in a solution-oriented way use methods in pre-structured contexts in a solution-oriented way in the field of analysis a structuring concepts analyse (current) questions and challenges within the framework of pre-structured context communicate continuously and purposefully within teaching and learning groups establish and evaluate independently developed positions develop an understanding of the impact of decisions that take into account environmental economic, social or ethical criteria question and critically reflect on current social developments know and understand the relevant methods and theories for the points mentioned above					
4	Teaching and L lecture practice	earning Meth	nods			
5	Module Entry R	equirements				
6	Mode of End-O Written test: WT		mination			
7	Prerequisites for Awarding of Credit Points Passing the module examination					
8	Bachelor of Scie Core Scie Bachelor of Arts	virtschaftslehre: on Business Admi tsinformatik: tion Systems	nistration			

	Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems
9	Module Manager UnivProf. Dr. Detlef Schoder
10	Miscellaneous Mandatory accompanying reading: Laudon, K.; Laudon, J.; Schoder, D.: Wirtschaftsinformatik – eine Einführung, Pearson Verlag, 2015, 3rd Edition

Module Co	de	Workload	ECTS Credits	Module	Module	Duration		
1277BBWIF2		180h	6	Language German	Availability every 2nd term - winter	1 Term		
1	Courses Database Syste	ms		Contact Hours 90h	Self- Studies 90h	Course Language German		
2	Module Content Relational model and relational algebra Relational query languages (SQL) Conceptual data modelling (e.g., Entity Relationship Model) Relational database design Normalization (13. normal form, BCNF) Development process of database systems Data organization, data management, data protection and privacy Transactions, Concurrency Control, Indices							
3	Students know and und apply theories (e.g. case studie use methods in a solution-orie develop an un economic, socia know and und	Learning Objectives Students know and understand basic theories in the field of relational databases and data management apply theories in the field of relational databases and data management in pre-structured context (e.g. case studies) in a solution-oriented way use methods in the field of relational databases and data management in pre-structured contexts in a solution-oriented way develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and L lecture tutorial							
5	Module Entry R	Module Entry Requirements none						
6		Mode of End-Of-Module Examination Written test: WT (90)						
7	-	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Scie Supple Bachelor of Scie Core S Bachelor of Arts Media a Bachelor of Scie	ce Gesundheir lisation Section ence Betriebsver mentary Section ence Wirtschaft ection Information Medienwisse and Technologence Wirtschaft Advanced Section Advanced Section	tsökonomie: n Health Economi virtschaftslehre: on Business Admi ftsinformatik: ution Systems	nistration /S24/25):				

9	Module Manager UnivProf. Dr. Christoph Rosenkranz
10	Miscellaneous Mandatory reading is announced every semester. The written test may be in the form of an e-examination. Tutorials will be offered instead of exercise classes. The lecture will be conducted using a flipped classroom concept (videos and documents will be provided for self-study; repetition, discussion and consolidation will take place face-to-face in class).

AM Inform	ation System	S					
Module Code 1277BAWIF1		270h 9 Language German Availa every term -		Module Availability every 2nd term - summer term	Duration 1 Term		
1	Courses Integrated Inform	mation System	s	Contact Hours 90h	Self- Studies 90h	Course Language German	
2	Module Content Integrated information processing Business Process Management Business Process Modelling Intra-organizational application systems (Enterprise Resource Planning (ERP) and Enterprise Systems) Inter-organisational application systems (Supply Chain Management (SCM) and Customer Relationship Management (CRM)) Service-oriented architectures (SOA), Cloud Computing and Micro-Services Enterprise Application Integration (EAI)						
3	process manage apply theories pre-structured c know and und business proces use methods pre-structured c develop an ur economic, socia	derstand basic ement. s in the field of ontexts (e.g. c derstand comn is managemer in the field of i ontexts in a so nderstanding c all and/or ethical derstand the re	integrated inform ase studies) in a s non methods in th at. Integrated informa Sulution-oriented way of the impact of de all criteria.	ation systems solution-oriente e field of integration systems as ay.	and business ped way. rated information and business proceed into account	ocess management in	
4	Teaching and Learning Methods lecture tutorial						
5	Module Entry Requirements Recommendation: CM Information Systems I, CM Information Systems II						
6	Mode of End-Of-Module Examination Written test: WT (90)						
7	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9	Module Manager UnivProf. Dr. Christoph Rosenkranz						
10	Miscellaneous Mandatory texts can be indicated, which must be read before the lecture. The degree of preparation						

is checked in the lectures and exercises. Case studies and exercises can be prepared in group work, which must be presented in the plenum by students. The solutions presented will be analysed and discussed. Mandatory reading will be announced each semester. The exam may take the form of an e-examination. Tutorials will be offered instead of practices.

Module Code 1230BBGDB1		Workload 360h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term	
1	Courses Fundamentals	Courses Fundamentals of Business Administration Contact Hours Studies 120h Course Lang German German					
2	Module Content Management structures and models Strategy and target systems of companies Corporate functions and processes and their interrelationships Analysis and design of service provision, in particular the deployment of personnel Main features of the operational cost and performance accounting Main features of operational investment and financing decisions						
3	Learning Objectives Students analyse market and environment conditions for entrepreneurial action and their influence on corporate decisions reflect and justify basic positions and basic standards (competition, freedom, social justice) of companies in a social market economy structure corporate actions according to different process categories and differentiate between management, business and support processes design individual management processes with the help of procedures and instruments (values, strategy and corporate goals, coordination and motivation, information and control system) make decisions for the design and optimization of business processes (customer attraction, customer loyalty, brand management, service delivery, service innovation) and use them to shape relationships with sales and procurement markets select adequate financial management procedures for various business decisions and apply them in extracts (external accounting, internal controlling, investment and financial accounting) assess the success of corporate decisions with the help of key performance indicator systems and draw conclusions from them know and understand the relevant methods and theories for the points mentioned above under						
4	Teaching and Learning Methods lecture tutorial						
5	Module Entry Requirements none						
6	Mode of End-Of-Module Examination Written test: WT (90)						
7	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Other Programmes that Use the Module Bachelor of Science Mathematik: Nebenfach WiWi Bachelor of Science Wirtschaftsmathematik: Nebenfach WiWi Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems Bachelor of Science Gesundheitsökonomie:						

	Core and Advanced Section Health Economics Bachelor of Arts Regionalstudien China - Betriebswirtschaftslehre: Ergänzungsbereich BWL Bachelor of Arts Lehramt: Bachelor Education WiSo Bachelor of Arts Medienwissenschaft: Media and Technology Management Bachelor of Science Geographie: Nebenfach BWL Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Informatik: Nebenfach Wirtschaftswissenschaften
9	Module Manager Geschäftsführende*r Direktor*in des Instituts für Berufs-, Wirtschafts- und Sozialpädagogik
10	Miscellaneous

Module Code 5751BMath1		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Mathematics for	students of Ir	nformatics I	Contact Hours 84h	Self- Studies 186h	Course Language German
2	Module Content The topics include: Basics: Proofs, proof principles and reasoning (incl. full induction) Basic concepts of sets, relations and functions Elementary number theory Geometry basics Linear algebra: Algebraic structures (groups, rings, solids, Boolean algebras) Complex numbers Vector and matrix calculus Linear systems of equations Vector spaces Linear combinations and bases Dimension Linear mappings and representation matrices Determinants Eigenvalues, eigendecomposition Singular value decomposition Analysis: Numbers, sequences, series Continuity					
3	Learning Objectives Students The students know and understand the relevant methods and theories for the points mentioned above under "Contents of the module" learn basic proof techniques as well as elementary mathematical terms and methods are able to formulate problems analytically are able to solve mathematical problems independently can present and communicate their solutions in an understandable way gain an understanding of linear and algebraic relationships train their mathematical intuition					
4	Teaching and Learning Methods lecture practice					
5	Module Entry Requirements none					

6	Mode of End-Of-Module Examination Written test: WT (120 – 180)
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Prof. Dr. Andreas Vogelsang
10	Miscellaneous

Module Code 5751BMath2		Workload 270h ECTS Credit	ECTS Credits	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term	
1	Courses Mathematics for	students of Ir	nformatics II	Contact Hours 84h	Self- Studies 186h	Course Language	
2	Module Content The topics include Analysis Differential calculus: Differentiation, extreme values, mean value theorem and higher derivatives, Taylor polynomial and series, applications of differentiation Integral calculus: definite and indefinite integral, integration of rational and comproper integrals, Fourier series Ordinary differential equations Probability theory Probability space, distribution Conditional probabilities Expected value, variance, random variables, Markov, Chebyshev, Chernoff in Hypothesis tests Markov chains Bayesian statistics					mplex functions,	
3	Learning Objectives Students The students know and understand the relevant methods and theories for the points mentioned above under "Contents of the module" are able to formulate problems analytically are able to solve mathematical problems independently can present and communicate their solutions in an understandable way learn how to deal with real and complex numbers, sequences and series acquire knowledge and learn methods of differential and integral calculus can deal with elementary functions and carry out mathematical reasoning familiarise themselves with basic concepts of probability theory and can apply these independently						
4	Teaching and Learning Methods lecture practice						
5	Module Entry R Recommended:	•	for Computer Scie	entists I			
6	Mode of End-O Written test: WT		mination				
7	Written test: WT (120 – 180) Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						

8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Prof. Dr. Andreas Vogelsang
10	Miscellaneous

Module Code		Workload	ECTS Credits	Module	Module	Duration	
5722BMMa00		360h	12	Language German	Availability every 2nd term - winter term	1 Term	
1	Courses Mathematik			Contact Hours 120h	Self- Studies 240h	Course Language German	
2		olex numbers o structures and rential and into and linear rep	nd functions, seque egral calculus, set presentations			, bodies, vector	
3	Learning Objectives Students know and understand basic concepts and methods of mathematics, familiarity with the associat techniques and knowledge of the applications gain a deep insight into the methods of abstract mathematical argumentation independent of the substance translate facts into the abstract language of mathematics and explain abstract terms can recognize the connections and similarities of the different mathematical areas independently solve mathematical problems and present the solutions in an understandable was for fellow students know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and Learning Methods lecture practice						
5	Module Entry R	equirements					
6	Mode of End-O Written test: WT		mination				
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9	Module Manager Mathematisches Institut Mathematisch-Naturwissenschaftliche Fakultät						
10	Miscellaneous Mandatory read	ing is annound	ced every semeste	er.			

Module Code 1314BAMST1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term	
1	Courses Statistical Infer	ence and Econ	ometrics	Contact Hours 120h	Self- Studies 60h	Course Language German	
2	 Module Content Continuation of probability theory from the Core Module Fundamentals of statistical inference Fundamentals of econometrics 						
3	Learning Objectives Students use methods in the area of statistics and econometrics in pre-structured contexts in a solution oriented way systematize and synthesize data communicate continuously and purposefully within teaching and learning groups design their learning and working processes independently know and understand the relevant methods and theories for the points mentioned above un "Module content".						
4	Teaching and Learning Methods lecture practice tutorial						
5	Module Entry Requirements Recommendation: CM Statistics or CM Mathematics (Information Systems)						
6	Mode of End-O		mination				
7	Prerequisites Passing the mo	_	of Credit Points				
8	Bachelor of Sci Neber Bachelor of Sci Neber Bachelor of Art Ergän: Bachelor of Art Ergän: Bachelor of Sci Core a Bachelor of Sci Core a Bachelor of Art	ience Mathema ifach WiWi ience Wirtschaf ifach WiWi ience Mathema ifach VWL ience Wirtschaf ifach VWL ience Wirtschaf ifach VWL ience Regionalstud zungsbereich Vience Betriebsvand ience Betriebsvand Advanced	ttik: ftsmathematik: ftsmathematik: ftsmathematik: ien Ost- und Mitte /WL ien Lateinamerika /WL virtschaftslehre: Section Business a schaftslehre: Section Economic ien China - Volksy	- Volkswirtsch Administration s	naft:	e:	

	Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Prof. Dr. Rainer Dyckerhoff Dr. Bastian Gribisch
10	Miscellaneous In the self-study phase, tutorials are offered.

CM Statis	stics							
Module Code 1314BBMST1		Workload 180h ECTS Credits 6		Module Language German	Module Availability every term	Duration 1 Term		
1	Courses Descriptive Stat	urses scriptive Statistics and Probability Theory			Self- Studies 60h	Course Language German		
2	Fundamental	Module Content • Fundamental methods of descriptive statistics • Fundamentals of probability theory						
3	Students know and und discuss result design their le know and und	Learning Objectives Students know and understand common methods in the areas of statistics and probability discuss results with teaching staff and other students design their learning and working processes independently know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and L lecture practice tutorial	practice						
5	Module Entry R	Module Entry Requirements none						
6		Mode of End-Of-Module Examination Written test: WT (90)						
7		Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Arts Ergänz Bachelor of Arts Ergänz Bachelor of Scie Core an Bachelor of Scie Core an Bachelor of Arts Ergänz Bachelor of Arts Ergänz Bachelor of Scie	Other Programmes that Use the Module Bachelor of Arts Regionalstudien Ost- und Mitteleuropa - Volkswirtschaftslehre:						
9	Prof. Dr. Rainer	Module Manager Prof. Dr. Rainer Dyckerhoff Dr. Bastian Gribisch						
10								

CM Mathematics									
Module Code 1314BBMMA1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term			
1	Courses Mathematical M	ethods		Contact Hours 105h	Self- Studies 75h	Course Language German			
2	 Module Content Repetition of relevant school knowledge Combinatorics Basic concepts of linear algebra Basics of financial mathematics Functions of several variables Differential calculus for functions of several variables and their economic applications Optimization with and without constraints for functions of several variables Integral calculus for functions of one and several variables as well as their application in statistic 								
3	Learning Objectives Students use methods in mathematics for business and economics in pre-structured contexts in a solution oriented way communicate continuously and purposefully within teaching and learning groups design their learning and working processes independently reflect their own performance during their electronic homework and implement feedback constructively know and understand the relevant methods and theories for the points mentioned above under "Module content".								
4	Teaching and Learning Methods lecture practice tutorial								
5	Module Entry R	Requirements							
6	Mode of End-O Written test: WT		mination						
7	Prerequisites for Passing the mod		of Credit Points						
8	Specia Bachelor of Arts Ergänz Bachelor of Arts Ergänz Bachelor of Scie Core an Bachelor of Arts Core an Bachelor of Arts Ergänz	ence Managen lisation Sections Regionalstud ungsbereich Vernce Betriebsv and Advanced Sence Volkswirt and Advanced Sence Regionalstud ungsbereich Vernces	nent, Economics a n Management, E ien Ost- und Mitte /WL ien Lateinamerika /WL virtschaftslehre: Section Business a schaftslehre: Section Economic ien China - Volksv	conomics and leuropa - Volk - Volkswirtsch Administration s virtschaftslehre	Social Sciences swirtschaftslehr naft:				

	Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Dr. Christoph Scheicher
10	Miscellaneous After lectures, electronic homework should be completed. Bonus points towards the final exam can be achieved through completing e-homework. The contents of the lecture are to be reviewed before exercise classes (if necessary, with the help of the linked video tutorials). The e-homework has to be completed individually before exercise classes and the material is assumed to be known for these classes. Interactive exercise classes take place in larger groups, interactive tutorials in smaller groups. Required reading (in German): Mosler, Dyckerhoff, Scheicher (current edition): Mathematische Methoden für Ökonomen. Video tutorials (in German): https://www.youtube.com/MathematischeMethoden

3.6.2 Supplementary Section Information Systems

Module Code 1277BEETH1		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Ethics and Resp	oonsibility in a	Digital World	Contact Hours 45h	Self- Studies 135h	Course Language German	
2	Module Content This module highlights the critical interface between ethics and the field of Information Systems (and provides students with the opportunity to acquire relevant knowledge and skills to better navigate the complex ethical landscape of modern information technologies. In particular, it aims foster three key competencies - ethical awareness, ethical analysis and value-based action - that essential for professional and responsible action throughout one's academic and professional career.						
3	Learning Objectives Students know and understand the relevant methods and theories for the points mentioned above under "Module content" know and understand basic ethical concepts and theories analyze and evaluate (current) ethical issues and challenges in practical contexts (e.g. case studies, simulation games) justify and evaluate independently developed positions and present and/or discuss them with teaching staff and other students develop an understanding of the impact of decisions taking into account ecological, economic, social and/or ethical criteria question and critically reflect on current social developments.						
4	Teaching and I lecture practice	_earning Meth	nods				
5	Module Entry R	Requirements					
6	Mode of End-O Written test: PO		mination				
7	Prerequisites for Awarding of Credit Points Passing the module examination.						
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems						
9	Module Manage AD B.Sc. Wirts		tik				
10	Miscellaneous This module will	l be a mandato	ony module starting	n in winter sem	ester 2025/202	6. This does not apply	

if the supplementary section has been successfully completed up to and including summer semester
2025.

CM Accour	9 '					T	
Module Code 1016BBMAT1		Workload 180h	ECTS Credits 6	Module Language German	Module Availability every term	Duration 1 Term	
1	Courses Accounting I			Contact Hours 90h	Self- Studies 90h	Course Language German	
2	Module Content Introduction to Accounting Fundamentals in Financial Accounting Fundamentals in Managerial Accounting Book Keeping Case Studies						
3	Learning Objectives Students know and understand basic theories apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way know and understand common methods use methods in pre-structured contexts in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts know and understand the relevant methods and theories for the points mentioned above und "Module content".						
4	Teaching and Learning Methods lecture practice tutorial						
5	Module Entry F	Requirements	i				
6	Mode of End-O		mination				
7	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Scie Supple Bachelor of Scie Specia Specia Specia Bachelor of Scie Supple Bachelor of Arts Ergänz Bachelor of Arts Bachelor of Arts Media	ence Betriebsy nd Advanced ence Sozialwis ementary Section ence Volkswirt disation Section disation Section ence Gesundhermentary Section ence Gesundhermentary Section served Regionalstude ence Gesundhermentary Section served Regionalstude ence Gesundhermentary Section ence G	virtschaftslehre: Section Business senschaften: on Social Science schaftslehre: n Track Economic n Track Business n Track Social Sci eitsökonomie: on Health Economic ien China - Betrie BWL	s Administration ences nics oswirtschaftsle	1		

	Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems
9	Module Manager Area Accounting and Taxation
10	Miscellaneous Courses take place in first part of the semester (1. midterm).

Modulo Carla		Morklass	ECTS Credits	Module	Module	Duration			
Module Code 1253BBMCD1		Workload 180h	6	Module Language German	Module Availability every term	1 Term			
1	Courses Corporate Deve	urses rporate Development I (2. Midterm) Contact Hours 90h Self- Studies 90h Course Langua German							
2	Module Content This course first introduces foundations of Corporate Governance and Corporate Strategy. Building on this, concepts of Organizational Design and Instruments of Human Resource Management are presented and analysed.								
3	Learning Objectives Students know and understand basic theories in the area of corporate governance, business strategy, organizational design and HR-management apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way know and understand common methods analyse (current) questions and challenges within the framework of pre-structured contexts establish and evaluate independently developed positions develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".								
4	Teaching and Learning Methods lecture tutorial								
5	Module Entry Requirements none								
6	Mode of End-O Written test: WT		mination						
7	Prerequisites for Passing the mod	_	of Credit Points						
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Special Bachelor of Scie Supple Bachelor of Arts Ergänz Bachelor of Arts Bachelor of Arts	ence Betriebswind Advanced Sence Wirtschaftmentary Section Sec	virtschaftslehre: Section Business visinformatik: on Information Systemschaften: on Social Science schaftslehre: on Track Business eitsökonomie: on Health Economien China - Betriel WL ViSoinschaft: by Management	stems s Administration nics pswirtschaftsle	n				

9	Module Manager UnivProf. Dr. 'Anne Burmeister UnivProf. Dr. Matthias Heinz UnivProf. Dr. Bernd Irlenbusch UnivProf. Dr. Dirk Sliwka
10	Miscellaneous

CM Finar	ice i								
Module Code 1259BBMFI1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term			
1	Courses Finance								
2	Fundamentals • Fundamental • Capital budge	Module Content Fundamentals of capital budgeting Fundamental questions related to terminology and decision theory Capital budgeting under certainty Prospects of capital budgeting under uncertainty							
	Internal finance External finar	financing							
3	apply theories oriented way. know and und use methods design their le	derstand basic s in the area of derstand comm in the area of earning and wo derstand the re	non methods in th finance in pre-stru orking processes i	e area of finantictured context ndependently.	ce. ts in a solution-c	tudies) in a solution- priented way.			
4	Teaching and I lecture practice	Learning Meth	nods						
5	Module Entry F	Requirements							
6	Mode of End-O Written test: WT		mination						
7	Prerequisites f	_	of Credit Points						
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Arts	ence Betriebsv nd Advanced Sence Wirtschaft ementary Section ence Sozialwist ementary Section ence Volkswirts disation Section ence Gesundhementary Section experience Betriebs sungsbereich Betriebs	virtschaftslehre: Section Business Atsinformatik: on Information Systemschaften: on Social Science schaftslehre: n Track Business eitsökonomie: on Health Economien China - Betriel	stems s Administration nics	n				

	Media and Technology Management Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems
9	Module Manager UnivProf. Dr. Alexander Kempf Dr. Alexander Pütz UnivProf. Dr. Heinrich R. Schradin
10	Miscellaneous

CM Market	ing I								
Module Code 1266BBMMA		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term			
1	Courses Introduction to Marketing (1. midterm) Contact Hours 60h Self- Studies 120h German								
2	Module Content The module covers theories and methods to analyse key marketing decision problems and to develop sound recommendations how to solve these decision problems. To this end, it looks at (i) consumers' responses to marketing activities and the underlying psychological mechanisms (consumer behaviour), (ii) the collection and analysis of data about markets and key stakeholders (e.g., consumers) which serves as the empirical basis for decision-making (market research), (iii) the marketing planning process (strategic marketing decisions), and (iv) marketing mix decisions (e.g., brand/product, price, etc.).								
3	know and und decisions and m	derstand basio derstand comr narketing mix o derstand the re		nning methods	s, including stra				
4	Teaching and Learning Methods lecture practice								
5	Module Entry R	Requirements							
6	Mode of End-O Written test: WT		mination						
7	Prerequisites for Passing the modern	_	of Credit Points						
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Arts Ergänz Bachelor of Arts Bachel Bachelor of Arts Media	ence Betriebsy and Advanced a ence Wirtschaf mentary Secti ence Sozialwis mentary Secti ence Volkswirt lisation Sectio ence Gesundh mentary Secti a Regionalstud ungsbereich E a Lehramt: or Education V a Medienwisse and Technolog	virtschaftslehre: Section Business ftsinformatik: on Information Sy senschaften: on Social Science schaftslehre: n Track Business eitsökonomie: on Health Econon ien China - Betrie BWL	stems s Administration nics bswirtschaftsle	n				

9	Module Manager UnivProf. Dr. Werner Reinartz UnivProf. Dr.' Franziska Völckner
10	Miscellaneous

Module Code		Workload	ECTS Credits	Module	Module	Duration		
1271BBMSC1		180h	6	Language German	Availability every term	1 Term		
1	Courses Operations Man	agement		Contact Hours 75h	Self- Studies 105h	Course Language German		
2	Module Content Fundamentals of Operations Management Demand Forecasting Inventory Management Production Planning Supply Chain Management Location Planning Process Design							
3	Learning Objectives Students know and understand basic theories in the area of supply chain management know and understand common methods in the area of supply chain management use methods in the area of supply chain management in pre-structured contexts in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".							
4	Teaching and L lecture practice tutorial	earning Meth	nods					
5	Module Entry R	Requirements						
6	Mode of End-O Written test: WT		mination					
7	Prerequisites for Passing the modern	_	of Credit Points on					
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Special Bachelor of Scie Supple Bachelor of Arts	ence Betriebswind Advanced Sence Wirtschaftmentary Section Sec	virtschaftslehre: Section Business Atsinformatik: on Information Systemschaften: on Social Science schaftslehre: n Track Business eitsökonomie: on Health Economien China - Betriel	stems s Administration nics	n			

	Bachelor Education WiSo Bachelor of Arts Medienwissenschaft: Media and Technology Management Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems
9	Module Manager Area Supply Chain Management UnivProf. Dr. Ulrich W. Thonemann
10	Miscellaneous

Module Code 1253BBMUW1		180h 6 Language A			Module Availability every term	Duration 1 Term		
1	Courses Corporate and	Business Ethic	s	Contact Hours 60h	Self- Studies 120h	Course Language German		
2	 Normative a Moral decision bounded ethica Ethics of ecc Moral decision cheating, whist Application to 	 Module Content Normative approaches to moral decision-making (teleology, deontology, virtue ethics) Moral decision making from a psychological perspective (e.g. determinants of moral behaviour, bounded ethical behaviour, moral disengagement) Ethics of economics (e.g. moral criteria of markets, competition and corruption) Moral decision making within a company (e.g. discrimination, fairness and justice, lying and cheating, whistleblowing) Application to examples from compliance management, accounting, corporate development, finance, marketing, supply chain management 						
3	apply theoric establish an develop an u economic, soci	nderstand basic es in pre-structu d evaluate inde understanding c ial and/or ethica nderstand the re		case studies) ped positions. cisions that tak	in a solution-or	iented way.		
4	Teaching and lecture practice							
5	Module Entry none	Requirements						
6	Mode of End- Written test: W	Of-Module Exa	mination					
7	-	for Awarding o	of Credit Points					
8	Other Programmes that Use the Module Bachelor of Science Betriebswirtschaftslehre: Core and Advanced Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Gesundheitsökonomie: Supplementary Section Health Economics Bachelor of Arts Lehramt: Bachelor Education WiSo Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Business Administration							
9	UnivProf. Dr.	' Anne Burmeist Matthias Heinz Bernd Irlenbusc	-					

10	Miscellaneous

Module Cod	de	Workload	ECTS Credits	Module	Module	Duration			
1282BBEDT1		180h	6	Language German	Availability every term	1 Term			
1	Courses Decision theory								
2	 Fundamental Structuring all characteristics Description of Application of Applicatio	Module Content							
3	communicate	derstand basic derstand comr in pre-structur continuously derstand the re	non methods. red contexts in a s and purposefully v	vithin teaching	and learning gr	oups. tioned above under			
4	Teaching and lecture practice								
5	Module Entry F	Requirements							
6	Mode of End-C		mination						
7	Prerequisites f	_	of Credit Points						
8	Bachelor of Scient Supple Bachelor of Scient Core at Bachelor of Arts Ergänz Bachelor of Scient Bachelor of Scient Scient Supplementation Scient Supplementation Scient Supplementation Scient Supplementation	ence Betriebsvermentary Secti ence Wirtscharementary Secti ence Gesundhand Advanced is Regionalstud eungsbereich E	virtschaftslehre: on Business Admi ftsinformatik: on Information Sy: eitsökonomie: Section Health Ectien China - Betrie	stems onomics bswirtschaftsle /S24/25):	hre:				
9	Module Manag	er							
10		UnivProf. Dr. Ludwig Kuntz							

Module Code 1284BSMTM1		Workload 180h	ECTS Credits 6	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term		
1	Courses Media and Tech	Courses Media and Technology Management I Media an						
2	Introduction to Corporate stra	Module Content Introduction to the management of digital and hybrid media and technology goods and service Corporate strategies of various media genres in the fields of journalism and entertainment and their significance in a social context						
3	analyse (curro establish and design their le	derstand basic in pre-structur ent) questions evaluate inde earning and wo erstehen die r	red contexts in a s and challenges w pendently develop orking processes i	ithin the frameved ed positions. Independently.	work of pre-stru	uctured contexts. r unter "Inhalte des		
4	Teaching and L	Teaching and Learning Methods seminar						
5	Module Entry R	Requirements						
6		Mode of End-Of-Module Examination Written test: PO						
7	-	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Scie Specia Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Management, Economics and Social Sciences: Specialisation Section Management, Economics and Social Sciences Bachelor of Science Betriebswirtschaftslehre: Specialisation Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Sozialwissenschaften: Supplementary Section Social Sciences Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Business Administration Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems Bachelor of Arts Medienwissenschaft: Media and Technology Management						
9	Module Manage UnivProf. Dr. (ecke, M.B.A.					
10		UnivProf. Dr. Claudia Loebbecke, M.B.A. Miscellaneous						

-	dia and Techno	T .	J-2						
Module Code 1284BSMTM2		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term			
1	Courses Media and Tech	Courses Media and Technology Management II Media and Technology Management II Self- Studies 30h Course Langua German and En							
2	In-depth deve	Module Content • In-depth development of topics related to the management of digital and hybrid media and technology goods and services based on changing, industry-specific project content and case studies							
3	Students know and und apply theories analyse (curre communicate establish and present and/d design their le	 know and understand basic theories. apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way. analyse (current) questions and challenges within the framework of pre-structured contexts. communicate continuously and purposefully within teaching and learning groups. establish and evaluate independently developed positions. present and/or discuss results with teaching staff and other students. design their learning and working processes independently. know and understand the relevant methods and theories for the points mentioned above under 							
4	Teaching and L	earning Metl	nods						
5	Module Entry R	equirements	i						
6	Mode of End-O Written test: PO		ımination						
7	Prerequisites for Passing the mod	_	of Credit Points						
8	Other Programmes that Use the Module Bachelor of Science Management, Economics and Social Sciences: Specialisation Section Management, Economics and Social Sciences Bachelor of Science Betriebswirtschaftslehre: Specialisation Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Sozialwissenschaften: Supplementary Section Social Sciences Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Business Administration Bachelor of Arts Medienwissenschaft: Media and Technology Management Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems					S			

9	Module Manager UnivProf. Dr.' Claudia Loebbecke, M.B.A.
10	Miscellaneous

Module Code 1253BEEnt1		Workload ECT 180h 6	ECTS Credits	Module Language	Module Availability	Duration 1 Term		
		16011	0	German and English	every 2nd term - winter term	T Teilli		
1	Courses Entrepreneurshi	ip		Contact Hours 60h	Self- Studies 120h	Course Language English		
2	Strategies on	Module Content • Strategies on Market Entry, Products, Markets and Value Creation • Entrepreneurial Behaviour						
3	Learning Objectives Students know and understand basic theories apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".							
4	Teaching and I lecture practice							
5	_	Module Entry Requirements Recommended: CM Corporate Development I						
6		Mode of End-Of-Module Examination Written test: WT (60)						
7	=	Prerequisites for Awarding of Credit Points Passing of the module examination						
8	Other Programmes that Use the Module Bachelor of Science Betriebswirtschaftslehre: Supplementary Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Sozialwissenschaften: Supplementary Section Social Sciences Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Economics Specialisation Section Track Business Administration Specialisation Section Track Social Sciences Bachelor of Science Gesundheitsökonomie: Supplementary Section Health Economics Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems							
9	Module Manage UnivProf. Dr. C	er	<u> </u>					
10	0 Miscellaneous							

	Abroad I (Winfo	r I							
Module Code 1277BESAb1		Workload 180h	ECTS Credits	Module Language selected language	Module Availability every term	Duration 1 Term			
1	Courses			Contact Hours	Self- Studies	Course Language			
2		Module Content Topics from the subjects: Business Administration, Economics, Social Sciences or Information Systems.							
3	Students The students acquire the kr beyond the curri knowledge (from and skills which Through com skills within the study progi	Learning Objectives Students The students acquire the knowledge and skills from the areas named in the module content which extend beyond the curriculum of the relevant bachelor programme and impart additional foundation knowledge (from subjects outside the relevant programme's curriculum); deepen attained knowledg and skills which contribute towards the specialisation or content-specific individualisation of studies Through completing examinations at a university abroad, students widen their knowledge and skills within the subject areas named above that go beyond the module structure of the curriculum of their study programme. Content studied within a module abroad can only be credited once within one of the Studies Abroad modules.							
4	Teaching and L		ods						
5	Module Entry R None	equirements							
6	Mode of End-O depending on co								
7	Prerequisites for depends on cou	_	of Credit Points						
8	Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems							
9	_	Module Manager Programmdirektor:in							
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module can also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this case registration for the exams should be carried out in advance according to the regulations of the WiS faculty.								

Studies F	Abroad II (Winfo	J)			1	ı			
Module Code 1277BESAb2		Workload ECTS Cred 6		Module Language selected language	Module Availability every term	Duration 1 Term			
1	Courses			Contact Hours	Self- Studies	Course Language			
2		Module Content Topics from the subjects: Business Administration, Economics, Social Sciences or Information Systems.							
3	Students The students acquire the kr beyond the curri knowledge (from and skills which Through com skills within the study progi	Learning Objectives Students The students acquire the knowledge and skills from the areas named in the module content which extend beyond the curriculum of the relevant bachelor programme and impart additional foundation knowledge (from subjects outside the relevant programme's curriculum); deepen attained knowledg and skills which contribute towards the specialisation or content-specific individualisation of studies Through completing examinations at a university abroad, students widen their knowledge and skills within the subject areas named above that go beyond the module structure of the curriculum of their study programme. Content studied within a module abroad can only be credited once within one of the Studies Abroad modules.							
4	Teaching and L		ods						
5	Module Entry R None	equirements							
6		Mode of End-Of-Module Examination depending on course selection							
7	Prerequisites for depends on cou	_	of Credit Points						
8	Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems							
9		Module Manager Programmdirektor:in							
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module can also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this case registration for the exams should be carried out in advance according to the regulations of the WiSo faculty.								

Module Code 1277BEWIF1		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses a) Systems Ana b) Information S	-	-	Contact Hours a) 60h b) 40h	Self- Studies a) 120h b) 140h	Course Language a) German b) German	
2	a) Systems An Requirement System mode Project plann Prototyping Unified Mode Human-comp b) Information Terms, prote Historical Ca Presentation Design of sec 27001, risk and Recognized f Security mode Fundamental Authentication	 Unified Modeling Language (UML) Human-computer interaction Information Security and IT Forensics Terms, protection goals, threat classifications Historical Case Studies and Conclusions for Future Situations Presentation of concrete attack techniques and threats Design of secure systems (consideration in the development process, frameworks, ISO/IEC 17001, risk analysis) Recognized frameworks (BSI Basic Protection, ISO 27001, Business Continuity Management, Security models Fundamentals of cryptographic procedures Authentication procedures and identity management Mobile Security Incident Response and IT-Forensics 					
3	Learning Objectives Students know and understand common methods in the field of a) analysis and design of information systems; b) cryptographic procedures and protection requirements of information systems communicate continuously and purposefully within teaching and learning groups develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria design their learning and working processes independently know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and Learning Methods lecture practice						
5	Module Entry I	Module Entry Requirements none					
6		Mode of End-Of-Module Examination Written test: PO					
7	Prerequisites for Awarding of Credit Points Passing the module examination of course a) or b)						

8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems
9	Module Manager Sprecher des Fachbereichs Wirtschaftsinformatik
10	Miscellaneous a) Systems Analysis and Design: In some sessions case studies and exercises are prepared in group work and presented and discussed in the plenum by the students. Mandatory reading will be announced during the respective semester. b) Information security and IT forensics: The course is usually offered by a lecturer and is offered as a block course in the first or second half of the semester. Please note the course dates given in KLIPS. Within the scope of the exercise, practical work with IT security gaps within a laboratory environment (hacking and subsequent security) will take place. Previous knowledge of Linux is useful, but not necessary.

SuM Inform	nation Systen	ns II				
Module Code 1277BEWIF2		Workload 180h ECTS Cree 6		Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses a) Information S b) Introduction to Learning	-	•	Contact Hours a) 60h b) 60h	Self- Studies a) 120h b) 120h	Course Language a) German b) English
2	Module Content a) Information Systems Development • Processes and important challenges in the development of IS • Alternatives for the realization of IS ("Make or Buy", Outsourcing, Software as a Service, • Procedures for the development of IS (waterfall model, evolutionary development, agile s development) • Concept and forms of project management for IS development • Project control and evaluation methods • Communication and leadership • Time, team and project management • Ethics in the development of IS b) Introduction to Data Science and Machine Learning • The value of data from a business perspective • Data quality and data cleansing • Design of a data analysis process • Explanation vs. forecast • Data visualization • Use of data to support entrepreneurial activity • Introduction to machine learning					·
3	Learning Objectives Students know and understand common methods in the areas of (a Information Systems Development at (b Data Science and Machine Learning use methods in the areas of (a Information Systems Development and (b Data Science and Machine Learning in pre-structured contexts in a solution-oriented way communicate continuously and purposefully within teaching and learning groups present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria design their learning and working processes independently know and understand the relevant methods and theories for the points mentioned above under "Module content".					ata Science and oups.
4	Teaching and Learning Methods lecture practice					
5	Module Entry R	equirements				
6	Mode of End-Of-Module Examination Written test: PO					

7	Prerequisites for Awarding of Credit Points Passing the module examination of course a) or b)
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems
9	Module Manager Geschäftsführende*r Direktor*in Kölner Institut für Wirtschaftsinformatik
10	Miscellaneous Mandatory reading will be announced in the respective semester of the course. b) Python is used in the course.

Module Co 1014BESA		Workload 180h	ECTS Credits	Module Language selected language	Module Availability every term	Duration 1 Term			
1	Courses		Self- Studies	Course Language					
2		Module Content Topics from the subject Information Systems.							
3	Students The student acquire the I beyond the cu knowledge (fro and skills whic Through coi skills within the	The students acquire the knowledge and skills from the areas named in the module content which extend beyond the curriculum of the relevant bachelor programme and impart additional foundation knowledge (from subjects outside the relevant programme's curriculum); deepen attained knowledge and skills which contribute towards the specialisation or content-specific individualisation of studies. Through completing examinations at a university abroad, students widen their knowledge and skills within the subject areas named above that go beyond the module structure of the curriculum of their study programme. Content studied within a module abroad can only be credited once within							
4	Teaching and depending on	Learning Metl	nods						
5	Module Entry	Requirements	i						
6		Of-Module Exa							
7		Prerequisites for Awarding of Credit Points depending on course choice							
8	Bachelor of So Supp Bachelor of So	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems							
9	Module Mana Programmdir	-							
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module car also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this cas registration for the exams should be carried out in advance according to the regulations of the WiS faculty.								

3.6.3 Specialisation Section Information Systems

CM Advar	ced programi	ning conce	pts				
Module Code 5751BWeiPr		Workload 270h	ECTS Credits 9	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term	
1	Courses Advanced progr	amming conce	pts	Contact Hours 56h	Self- Studies 214h	Course Language German	
2	Module Content Object-oriented programming concepts, such as classes, objects, inheritance, as well as comparison with other paradigms and other languages (e.g. Python, JavaScript) Advanced programming topics such as multithreading, external libraries and their use where applicable Deepening the knowledge already acquired in programming, e.g. testing, debugging Structured writing, commenting and organizing of code (including annotations, interfaces, packages,) Possibilities of collaborative work with a version control system Systematic approach to more complex problems ("from problem to program")						
3	Learning Objectives Students In this module, students essentially deepen and expand the knowledge and programming skills they have already acquired. Students are thus enabled to solve more complex tasks with programs they have written themselves. In particular, they learn or deepen their skills in object-oriented programming and also become familiar with other programming paradigms and languages. This enables students to read, understand and implement simple programs in other programming languages and thus find their way around other programming languages.						
4	Teaching and L lecture practice	earning Meth	ods				
5	Module Entry Requirements Recommendation: CM Introduction to programming						
6	Mode of End-Of-Module Examination Written test: PO						
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems Bachelor of Science Wirtschaftsinformatik: Specialisation Section Information Systems						
9	Module Manage Geschäftsführer		in Institut für Infor	matik			

10	Miscellaneous

Madula Oa !		•					
Module Code 5751BVisua		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Visualization			Contact Hours 90h	Self- Studies 180h	Course Language German	
2	Module Content The lecture focuses on the visual representation of data. Interactive visualisation is the communication of data in visual form. In the lecture, the fundamentals of visualisation are introduced. This includes selected topics from the areas of: the visualisation process, interaction, human perception, colour space, data types, data structure, transformation and processing, visual depiction of data such as 2D, 3D or multivariate data, time-specific data, space-orientated data, graphs. The foundation methods and their practical usages and purposes in current research areas will be introduced. Visual analysis can be used for exploration, analysis and communication in reports, presentations or online. Usage of visual analysis can be found in the areas of finance, economics, geo-sciences, meteorology, medicine, biology, transport or sport. In the exercise classes, the material from the lectures will be further discussed. Exercises will be discussed under the guidance of a tutor. The exercises serve to both expand technical knowledge and to develop communication and presentation skills.						
3	Learning Objectives Students understand continuing, specialised theories and methods in the field of visualisation analyse (current) questions and challenges in the area of visualisationdefend their independently developed position or solutions to problems know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and Learning Methods lecture practice						
5	Module Entry Requirements Recommendation: CM Computer Science, AM Computer Science I, AM Computer Science II, AM Programming Project, CM Mathematics						
6	Mode of End-Of-Module Examination Written test: WT (120 – 180)						
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						
	completed on a	verage. Achiev	ving 50% of the ma	aximum numbe	ei oi exercise po	oints is sufficient for	
8	completed on a successful com Other Program Bachelor of Scie Specia Bachelor of Scie	verage. Achieve pletion. Immes that Use ence Wirtschaft lisation Section ence Wirtschaft ence	the Module ftsinformatik (ab W n Information Syst	/S24/25): tems	er di exerdise po	ornis is sufficient for	

10	Miscellaneous

SpM Inform	nation Syster	ns						
Module Code 1277BSWIF1	•	Workload 450h	ECTS Credits 15	Module Language German and English	Module Availability every term	Duration 1 Term		
1	Courses Capstone Project	ct Information S	Systems (PO 21)	Contact Hours 90h	Self- Studies 360h	Course Language German		
2	Module Content Independent and autonomous development of an information system in a team in a project Project and team management Requirements analysis Draft Implementation Testing Customer communication and management							
3	Learning Objectives Students communicate continuously and purposefully within teaching and learning groups establish and evaluate independently developed positions present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria design their learning and working processes independently reflect their own performance and implement feedback constructively know and understand the relevant methods and theories for the points mentioned above under							
4	Teaching and I	_	ods					
5	SuM Information	on: CM Informa n Systems I, Su		stems II; CM C	•	Information Systems, ice, AM Computer		
6	Mode of End-O Combined exam							
7	Prerequisites for Passing the modern	_						
8	Other Program Bachelor of Scie	ence Wirtschaft		ems				
9	Module Manage UnivProf. Dr. C		nkranz					
10	Miscellaneous Important note: this course starts in the lecture-free period during which components of the por are completed. Basic knowledge of programming, databases, modeling, architectures, data structures and algorithms as well as project management is required. The students work selforganized in teams. On fixed dates the teams have to present fixed milestones (e.g. requireme specification, requirement specification, sprint meeting, backlogs, intermediate presentation, fir presentation, finished product incl. program code). The work results are compared and, if nece							

corrected so that all teams are able to complete their development assignment. If necessary, the
students receive training in the tools and methods to be used as part of a preliminary course.

Bachelor Seminar Information Science							
Module Code 1277BSSWF1		Workload 180h ECTS Credits 6		Module Language German and English	Module Availability every term	Duration 1 Term	
1	Courses a) Bachelorseminar Information Systems for Sustainable Society (Prof. Ketter) b) Bachelorseminar Information Systems at Digital Technology (Prof. Seidel) c) Bachelorseminar Integrated Information Systems (Prof. Rosenkranz) d) Bachelorseminar Information Managem (Prof. Schoder) e) Bachelorseminar Machine Learning (Jun Prof. Zyue Li)		rer) n Systems and el) Information n Management	Contact Hours a) 30h b) 30h c) 30h d) 30h e) 30h	Self- Studies a) 150h b) 150h c) 150h d) 150h e) 150h	Course Language a) German and English b) German and English c) German and English d) German and English e) German and English	

2 Module Content

- Project planning in the context of scientific work
- Structure and argumentation in scientific works: problem, objective, terminology system, outline
- Dealing with scientific literature: literature research, literature administration, literature evaluation, referencing and citation in scientific work
- · Scientific Writing
- Formal requirements
- Writing, presenting and defending one's own scientific work

Seminar work topics are taken from the following areas, among others:

- a) Business Intelligence, Analytics, Machine Learning and Learning Agents research in the domains of Energy Markets, Smart Sustainable Mobility, Energy Storage and Transactive Energy & Blockchain
- b) Conceptual Modeling, Business Process Management, Information Systems Development, Systems Analysis and Design, Digital Innovation, Digital Entrepreneurship, Green IS, Environmental Sustainability
- c) IT Outsourcing, IT Strategy, Information Systems Development & IT Project Management, Open Source Software Development, Agile Development, Business Process Management, Digital Transformation
- d) Business Analytics, Artificial Intelligence in Trading, Health and Logistics, Media Mass Customization, Electronic Commerce, Social Media Analysis, Openness, Decision Support Systems e)

Supervised, unsupervised and semi-supervised learning

Clustering, principal component analysis, high-dimensional data

Transfer learning and federated learning

Neural network, convolutional neural network, graph convolutional network

Recurrent neural networks for natural language processes and more

Self-supervised learning

Reinforcement learning

3 Learning Objectives

Students...

- \ldots know and understand basic theories from the above mentioned areas.
- ... collect, systematize and synthesize literature and data material for a scientific work on a selected topic.
- \dots present and/or discuss results with teaching staff and other students.
- ... reflect their own performance and implement feedback constructively.
- ... use under guidance techniques of scientific work and good scientific practice.
- ... know and understand the relevant methods and theories for the points mentioned above under "Module content".

4	Teaching and Learning Methods seminar
5	Module Entry Requirements none
6	Mode of End-Of-Module Examination Combined examination: PRES, TP
7	Prerequisites for Awarding of Credit Points Passing the module examination of one of the courses a) to d)
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Specialisation Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems
9	Module Manager Geschäftsführende*r Direktor*in Kölner Institut für Wirtschaftsinformatik
10	Miscellaneous In the first step, the Bachelor's seminar module is taken by students via KLIPS. This allocation takes place in the 1st allocation phase through the submission of prioritised allocation requests. When enrolling via KLIPS, priority enrolment requests must be submitted for the Bachelor's seminars offered by the various examiners. As a rule, there will be no booking in the 2nd occupancy phase or in the allocation of remaining places. Subsequently, each student is allocated a place in a Bachelor's seminar, taking into account the available capacities. After the allocation to the Bachelor seminars, the students give preferences for concrete seminar work topics. This is usually done at the beginning of the semester via a survey in ILIAS. Part of the Bachelor's seminar is the participation in the block course "Scientific Work", which is offered at the beginning of the semester. Further information on the allocation procedure and the block course can be found in the course descriptions in KLIPS or on the website of the Cologne Institute for Information Systems. The seminar paper can be written in German or English. It is strongly recommended to complete the Bachelor's seminar before the Bachelor's thesis, as the Bachelor's seminar teaches basic competences for scientific work and especially for writing a scientific paper.

3.6.4 Bachelor Thesis Information Systems

		mation Sys	T		Τ			
Module Code 1277BMWIN1		Workload 360h	ECTS Credits 12	Module Language German and English	Module Availability every term	Duration 1 Term		
1	1 Courses a) Bachelor Thesis with Prof. Dr. Ketter b) Bachelor Thesis with Prof. Dr. Seidel c) Bachelor Thesis with Prof. Dr. Rosenkranz d) Bachelor Thesis with Prof. Dr. Schoder e) Bachelor Thesis with JunProf. Zyue Li				Contact Hours Studies a) 0h b) 0h c) 0h c) 360h d) 0h e) 0h e) 360h e) 360h e) 360h c) German a English d) German a English d) German a English d) German a English			
2	Module Content Preparation of a scientific thesis. Bachelor's thesis topics are taken from the following areas, amonothers: a) Business Intelligence, Analytics, Machine Learning and Learning Agents research in the domatof Energy Markets, Smart Sustainable Mobility, Energy Storage and Transactive Energy & Blockchain b) Conceptual Modeling, Business Process Management, Information Systems Development, Systems Analysis and Design, Digital Innovation, Digital Entrepreneurship, Green IS, Environment Sustainability c) IT Outsourcing, IT Strategy, Information Systems Development & IT Project Management, Software Development, Open Source Software, Agile Development, Business Process Management, Digital Transformation d) Business Analytics, Artificial Intelligence in Trading, Health and Logistics, Media Mass Customization, Electronic Commerce, Social Media Analysis, Openness, Decision Support Systems							
3	Learning Objectives Students analyse current questions and challenges within the framework of prepared cases collect, systematize and synthesize literature and data material for a scientific work on a select topic establish and evaluate independently developed positions design their learning and working processes independently use techniques of scientific work and good scientific practice.							
4	Teaching and Learning Methods Bachelor's Thesis							
5	Module Entry Requirements 100 CP successfully passed; Recommendation: Bachelor Seminar							
6	Mode of End-O Written test 12 v		mination					
7	Prerequisites for Passing the modern							
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Bachelor Thesis Information Syster							

	Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Bachelor Thesis Information Systems
9	Module Manager Geschäftsführende*r Direktor*in Kölner Institut für Wirtschaftsinformatik
10	Miscellaneous Bachelor's theses at the Cologne Institute for Information Systems are assigned in a central assigning procedure. In the first step, the Bachelor's thesis module is assigned to students via KLIPS. This allocation takes place in the 1st allocation phase through the submission of prioritised allocation requests. In the case of KLIPS, prioritized requests for the Bachelor's thesis modules offered by the various examiners must be submitted. As a rule, there will be no enrolment in the 2nd phase or in the allocation of remaining places. Subsequently, each student is allocated a place for a Bachelor's thesis, taking into account the available capacities. After the allocation to the examiners, the students give preferences for concrete Bachelor's thesis topics. This is usually done about three weeks before the respective start date via a survey in ILIAS. Further information on the assigning procedure can be found in the course descriptions in KLIPS or on the website of the Cologne Institute for Information Systems. The Bachelor's thesis can be written in German or English. It is strongly recommended that you complete the Bachelor seminar before writing your Bachelor's thesis, as the Bachelor seminar teaches basic skills for scientific work and especially for writing a scientific paper. Please note that the Cologne Institute for Information Systems (CIIS) offers Bachelor's theses in every semester. Each semester you can start working on your bachelor's thesis at a fixed starting time (in November in winter semesters and in May in summer semesters).

4 Module tables and descriptions (Enrollment from 24/25)

4.1 Core and Advanced Section

Im Basisbereich gemäß § 28 Absatz 20 Nr. 1 der geltenden Prüfungsordnung müssen die zu Prüfenden 72 LP erwerben.

Group	Module	СР	CC/EC
CM Introduction to programming	6	СС	72
AM Algorithms and data structures	9	СС	
AM Software Engineering	9	СС	
CM Information Systems I	6	СС	
CM Information Systems II	6	СС	
AM Information Systems	6	СС	
CM Mathematics for students of Informatics I	9	СС	
CM Mathematics for students of Informatics II	9	СС	
CM Fundamentals of Business Administration	12	СС	

4.2 Supplementary Section Information Systems

Im Ergänzungsbereich gemäß § 28 Absatz 20 Nr. 2 der geltenden Prüfungsordnung müssen die zu Prüfenden 36 LP erwerben.

Group	Module	СР	CC/EC
CM Ethical Issues in Information Systems	6	СС	36
CM Accounting I	6	EC	
CM Corporate Development I	6	EC	
CM Finance I	6	EC	
CM Marketing I	6	EC	
CM Supply Chain Management I	6	EC	
CM Decision Analysis	6	EC	
SpM Media and Technology Management I	6	EC	
SpM Media and Technology Management II	6	EC	
SpM Entrepreneurship	6	EC	
Studies Abroad I (Winfo)	6	EC	
Studies Abroad II (Winfo)	6	EC	

4.3 Specialisation Section Information Systems

Im Schwerpunktbereich gemäß \S 28 Absatz 20 Nr. 3 der geltenden Prüfungsordnung müssen die zu Prüfenden 48 LP erwerben.

Group	Module	СР	CC	/EC
Advanced programming concepts	9	CC	30	48
SpM Visualization	9	CC		
SpM Information Systems	12	CC		
SpM Information Systems II	6	EC	12	
SpM Information Systems III	6	EC		
Studies Abroad in Information Systems	6	EC		
Bachelor Seminar Information Science	6	CC	6	

4.4 Studium Integrale

All of the Faculty's bachelor programmes include an interdisciplinary component, known as the Studium Integrale, in which students accumulate 12 credit points. The Studium Integrale is a university-wide and interdisciplinary component of the courses of study in which academic and professional competences are imparted. The Studium Integrale has both theoretical and practical content, enabling students to focus on more academic aspects or topics related to their future careers enhancing their employability. It aims to teach and develop skills that go beyond subject-specific knowledge or that are related to basic academic and personal traits: scientific curiosity, systematic and analytical thinking, and ability to deal with complexity, a solution-minded outlook plus other abilities such as teamwork and foreign language skills.

The Studium Integrale courses are run jointly by the faculties and the University's Professional Centre. They enable students to pursue their own interests in more depth, gain an insight into other subjects and departments, attend courses dealing with issues of relevance to society, acquire skills relevant to their future careers and attend language classes. The "Universitas" segment offers formats especially designed for the Studium Integrale, such as lecture series on societal issues with related workshops. In addition, the Studium Integrale offers students assistance with their learning and studying, helping them with such questions as how to write an academic paper or how to conduct literature reviews. Periods of training abroad and work experience can also be credited in the Studium Integrale. The Studium Integrale carries 12 credit points in total and formally counts as a module. There is no restriction on the number of attempts possible for Studium Integrale examinations.

Any credit points attained in the Studium Integrale over and above the 12 credit points specified in the study structure are shown on the transcript of records.

4.5 Bachelor's Thesis

The bachelor's thesis carries 12 CPs and is written at the end of the programme. Its aim is to illustrate that the candidate is capable of working and reflecting independently on a specific problem related to the subject matter covered on the programme, using the necessary methods and within a specified period. The topic of the bachelor's thesis must reflect one of the sub-categories: Core and Advanced Section, Supplementary Section or Specialisation Section.

To be allowed to register for the bachelor's thesis component, candidates must have acquired at least 100 credit points. In line with the number of credit points it carries, the workload allotted for the thesis is 360 hours, i.e. 12 weeks. Bachelor's theses should not be more than 40 pages long. Candidates who have earned all of the necessary credit points, except for the bachelor's thesis, must register within a period of one year to write their bachelor's thesis. Further and more detailed information concerning bachelor's theses can be found in the examination regulations.

Please note that the Cologne Institute for Information Systems (CIIS) offers Bachelor's theses in every semester. Each semester you can start working on your bachelor's thesis at **one fixed starting time** (in November in winter semesters and in May in summer semesters).

4.6 Module Descriptions

4.6.1 Core and Advanced Section

Module Code 5751BEinPr		Workload 180h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Programming Co	ourse	1	Contact Hours 30h	Self- Studies 150h	Course Language German	
2	 Module Content Basic programming terms, e.g. variables, operators, modifiers, data structures, methods, comments Algorithmic concepts, e.g. loops, control structures (conditional branching), recursion Technical tools such as IDEs, SDKs, compilers, version control systems Systematic approaches to efficiently solving simple problems, e.g. analyzing the problem, designing the solution (e.g. with pseudocode), using existing solutions (e.g. libraries), checking t developed solution (simple tests), troubleshooting methods Paradigm and structure-specific concepts (e.g. classes, objects) 						
3	Students learn the apply them to so problems and to	Learning Objectives Students learn the basic concepts of programming. They are able to recognize these concepts and apply them to solve simple problems. This enables students to analyze simple programming problems and to design and implement their algorithmic solution. Students are also able to comment, test and debug the code they have created themselves.					
4	Teaching and L lecture practice	earning Meth	ods				
5	Module Entry R	equirements					
6	Mode of End-O	f-Module Exa	mination				
7		dule examinati rements for the highest das partiled in parallel to rerage. Achiev	on. e examination: t of the practice. o the lecture, in wl			oust be successfully bints is sufficient for	
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9	Module Manage Geschäftsführer		in Institut für Infol	matik			

10	Miscellaneous

				I	T	I	
Module Co 5751 AlgDat		Workload 270h	9	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term	
1	Courses Algorithms and data structures			Contact Hours 60h	Self- Studies 210h	Course Language German	
2	Module Content After an introduction to the terminology and definition of computer science and the structure a functionality of computers, the lecture deals with basic contents of algorithms and data structure. The general design and analysis of algorithms are performed using examples from the fields a sorting and search methods as well as elementary graph algorithms. Furthermore, elementary algorithms can be treated. The presented elementary data structures include trees, graphs and Union-Find data structures.						
3	Students design and im	Learning Objectives Students design and implement basic algorithms and analyse algorithms with regard to correctness and their runtime behaviour depending on the data structures used. know and understand the relevant methods and theories for the points mentioned above under "Module content".					
4	Teaching and L lecture practice	earning Meth	ods				
5	Module Entry R Recommendation	-					
6	Mode of End-O Written test: WT		mination				
7	Passing the mod Admission requi Coursework con Practices are he completed on av	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.					
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9		Module Manager Geschäftsführende*r Direktor*in Institut für Informatik					
10	Miscellaneous						

Module Code 5751BSoftw		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term		
1	Courses Software Engine	eering		Contact Hours 90h	Self- Studies 180h	Course Language German		
2	After an introdu functionality of c The general des sorting and sear algorithms can b	Module Content After an introduction to the terminology and definition of computer science and the structure and functionality of computers, the lecture deals with basic contents of algorithms and data structures. The general design and analysis of algorithms are performed using examples from the fields of sorting and search methods as well as elementary graph algorithms. Furthermore, elementary graph algorithms can be treated. The presented elementary data structures include trees, graphs and Union-Find data structures.						
3	Students design and im their runtime bel	Learning Objectives Students design and implement basic algorithms and analyse algorithms with regard to correctness and their runtime behaviour depending on the data structures used. know and understand the releval methods and theories for the points mentioned above under "Module content".						
4	Teaching and L lecture practice							
5	Module Entry R	equirements						
6	Mode of End-O Written test: WT		mination					
7	Passing the mod Admission requi Coursework con Practices are he completed on av	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						
8	Bachelor of Scie Core an Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems						
9	_	Module Manager Geschäftsführende*r Direktor*in Institut für Informatik						
10	Miscellaneous							

Module Code 1277BBWIF1		Workload 180h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Information Syst	Courses nformation Systems Management			Self- Studies 120h	Course Language German	
2	Module Content Information systems as a science Strategic role of information systems Internal and inter-company business process integration Electronic commerce and electronic business Computer supported collaborative work IT security Ethical, social and political aspects Information assets Business process reengineering Internet of things						
3	apply theories case studies) in use methods structuring conc analyse (curre communicate establish and develop an ur economic, socia question and	derstand basics in the field of a solution-orie in pre-structurepts. ent) questions continuously a evaluate indenderstanding of l or ethical critically reflecterstand the reflecters and reflecters and reflecters are reflected to the reflecters and reflected to the reflec	ented way. ed contexts in a s and challenges w and purposefully v pendently develop of the impact of de eria. et on current socia	cturing conception of the conc	ots in pre-structured way in the field work of pre-structure and learning growe into account of the structure.	red contexts (e.g. d of analysis and ctured contexts. oups.	
4	Teaching and L lecture practice	earning Meth	nods				
5	Module Entry R	equirements					
6	Mode of End-O Written test: WT		mination				
7	-	Prerequisites for Awarding of Credit Points Passing the module examination					
8	Other Programmes that Use the Module Bachelor of Science Betriebswirtschaftslehre: Supplementary Section Business Administration Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems Bachelor of Arts Medienwissenschaft: Media and Technology Management						

	Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems
9	Module Manager UnivProf. Dr. Detlef Schoder
10	Miscellaneous Mandatory accompanying reading: Laudon, K.; Laudon, J.; Schoder, D.: Wirtschaftsinformatik – eine Einführung, Pearson Verlag, 2015, 3rd Edition

CM Infor	mation System	s II				
Module Code 1277BBWIF2		Workload 180h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Database Syste	ms		Contact Hours 90h	Self- Studies 90h	Course Language German
2	Module Content Relational model and relational algebra Relational query languages (SQL) Conceptual data modelling (e.g., Entity Relationship Model) Relational database design Normalization (13. normal form, BCNF) Development process of database systems Data organization, data management, data protection and privacy Transactions, Concurrency Control, Indices					
3	apply theories (e.g. case studie use methods in a solution-orie develop an ur economic, socia	derstand basic is in the field of es) in a solution in the field of rented way. Inderstanding on the oretical critical c	relational databasen-oriented way. elational database f the impact of deeria.	ses and data mes and data ma	anagement in punagement in punagement in pune into account of	data management. ore-structured contexts re-structured contexts environmental, tioned above under
4	Teaching and L lecture tutorial	earning Meth	ods			
5	Module Entry R	Requirements				
6	Mode of End-O Written test: WT		mination			
7	Prerequisites for Passing the mod	_				
8	Bachelor of Scie Supple Bachelor of Scie Core S Bachelor of Arts Media a Bachelor of Scie Core au Bachelor of Scie	ce Gesundheit lisation Section ence Betriebsw mentary Section ence Wirtschaftection Information Medienwisser and Technologence Wirtschaftend Advanced Section Information of Section Information Informatio	sökonomie: n Health Economi virtschaftslehre: on Business Admi tsinformatik: tion Systems nschaft: ly Management tsinformatik (ab W Section Informatio	nistration /S24/25):		

9	Module Manager UnivProf. Dr. Christoph Rosenkranz
10	Miscellaneous Mandatory reading is announced every semester. The written test may be in the form of an e-examination. Tutorials will be offered instead of exercise classes. The lecture will be conducted using a flipped classroom concept (videos and documents will be provided for self-study; repetition, discussion and consolidation will take place face-to-face in class).

AM Infor	mation System	S					
Module Code 1277BAWI11		Workload 180h	ECTS Credits	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term	
1	Courses Integrated Inform	mation System	s	Contact Hours 90h	Self- Studies 90h	Course Language German	
2	Module Content • Integrated information processing • Business Process Management • Business Process Modelling • Intra-organizational application systems (Enterprise Resource Planning (ERP) and Enterprise Systems) • Inter-organisational application systems (Supply Chain Management (SCI and Customer Relationship Management (CRM)) • Service-oriented architectures (SOA), Cloud Computing and Micro-Services • Enterprise Application Integration (EAI)						
3	Students know and und process manage process manage and understand process manage process manage understanding of	know and understand basic theories in the field of integrated information systems and business process management. apply theories in the field of integrated information systems and business process management in pre-structured contexts (e.g. case studies) in a solution-oriented way. known and understand common methods in the field of integrated information systems and business process management. use methods in the field of integrated information systems and business process management in pre-structured contexts in a solution-oriented way. develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria. know and understand the relevant methods and theories for the points					
4	Teaching and L lecture tutorial	earning Meth	ods				
5	Module Entry R	-	ation Systems I, C	M Information	Systems II		
6	Mode of End-O Written test: WT		mination				
7	Prerequisites for Passing the mod	_					
8	Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems					
9	_	Module Manager UnivProf. Dr. Christoph Rosenkranz					
10	is checked in the work, which mus and discussed.	UnivProf. Dr. Christoph Rosenkranz					

Module Code 5751BMath1		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Mathematics for	students of Ir	nformatics I	Contact Hours 84h	Self- Studies 186h	Course Language German
2	Basics: Proofs, proof pr Basic concepts Elementary nun Geometry basic Linear algebra: Algebraic struct Complex numb Vector and mat Linear systems Vector spaces Linear combina Dimension Linear mapping Determinants Eigenvalues, ei Singular value of	the topics include: asics: oofs, proof principles and reasoning (incl. full induction) asic concepts of sets, relations and functions ementary number theory elementary number theory elementary basics The ear algebra: gebraic structures (groups, rings, solids, Boolean algebras) elemplex numbers elector and matrix calculus the ear systems of equations elector spaces the ear combinations and bases mension the ear mappings and representation matrices eleminants genvalues, eigendecomposition ingular value decomposition malysis: umbers, sequences, series				
3	trigonometric functions) Learning Objectives Students The students know and understand the relevant methods and theories for the points mentioned above under "Contents of the module" learn basic proof techniques as well as elementary mathematical terms and methods are able to formulate problems analytically are able to solve mathematical problems independently can present and communicate their solutions in an understandable way gain an understanding of linear and algebraic relationships train their mathematical intuition					
4	Teaching and Learning Methods lecture practice					
5	Module Entry R	equirements				

6	Mode of End-Of-Module Examination Written test: WT (120 – 180)
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Prof. Dr. Andreas Vogelsang
10	Miscellaneous

Module Code 5751BMath2		Workload 270h	ECTS Credits	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term	
1	Courses Mathematics for	students of Ir	nformatics II	Contact Hours 84h	Self- Studies 186h	Course Language	
2	Module Content The topics include Analysis Differential calculus: Differentiation, extreme values, mean value theorem and consequences, higher derivatives, Taylor polynomial and series, applications of differentiation Integral calculus: definite and indefinite integral, integration of rational and complex functions, improper integrals, Fourier series Ordinary differential equations Probability theory Probability space, distribution Conditional probabilities Expected value, variance, random variables, Markov, Chebyshev, Chernoff inequality Hypothesis tests Markov chains Bayesian statistics Learning Objectives Students The students know and understand the relevant methods and theories for the points mentioned above under "Contents of the module" are able to formulate problems analytically are able to solve mathematical problems independently can present and communicate their solutions in an understandable way learn how to deal with real and complex numbers, sequences and series acquire knowledge and learn methods of differential and integral calculus can deal with elementary functions and carry out mathematical reasoning familiarise themselves with basic concepts of probability theory and can apply these independently						
3							
4	Teaching and Learning Methods lecture practice						
5		Module Entry Requirements Recommended: Mathematics for Computer Scientists I					
6		Mode of End-Of-Module Examination Written test: WT (120 – 180)					
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.						

8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Wirtschaftsinformatik: Core Section Information Systems
9	Module Manager Prof. Dr. Andreas Vogelsang
10	Miscellaneous

Module Code 1230BBGDB1		Workload 360h ECTS Credits 12 Module Language German		Module Availability every term	Duration 1 Term		
1	Courses Fundamentals of Business Administration Contact Hours 120h Self- Studies German German						
2	Module Content Management structures and models Strategy and target systems of companies Corporate functions and processes and their interrelationships Analysis and design of service provision, in particular the deployment of personnel Main features of the operational cost and performance accounting Main features of the annual accounts Main features of operational investment and financing decisions						
3	Learning Objectives Students analyse market and environment conditions for entrepreneurial action and their influence on corporate decisions reflect and justify basic positions and basic standards (competition, freedom, social justice) of companies in a social market economy structure corporate actions according to different process categories and differentiate between management, business and support processes design individual management processes with the help of procedures and instruments (values, strategy and corporate goals, coordination and motivation, information and control system) make decisions for the design and optimization of business processes (customer attraction, customer loyalty, brand management, service delivery, service innovation) and use them to shape relationships with sales and procurement markets select adequate financial management procedures for various business decisions and apply them in extracts (external accounting, internal controlling, investment and financial accounting) assess the success of corporate decisions with the help of key performance indicator systems and draw conclusions from them know and understand the relevant methods and theories for the points mentioned above under						
4	Teaching and Learning Methods lecture tutorial						
5	Module Entry F	Requirements					
6	Mode of End-C Written test: W		mination				
7	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Science Neben Bachelor of Science	ence Mathema fach WiWi ence Wirtschaf fach WiWi ence Wirtschaf Section Informa	ntik: ftsmathematik: ftsinformatik: ation Systems				

	Core and Advanced Section Health Economics Bachelor of Arts Regionalstudien China - Betriebswirtschaftslehre: Ergänzungsbereich BWL Bachelor of Arts Lehramt: Bachelor Education WiSo Bachelor of Arts Medienwissenschaft: Media and Technology Management Bachelor of Science Geographie: Nebenfach BWL Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Core and Advanced Section Information Systems Bachelor of Science Informatik: Nebenfach Wirtschaftswissenschaften
9	Module Manager Geschäftsführende*r Direktor*in des Instituts für Berufs-, Wirtschafts- und Sozialpädagogik
10	Miscellaneous

4.6.2 Supplementary Section Information Systems

Module Code 1277BEETH1		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - winter term	Duration 1 Term	
1	Courses Ethics and Responsibility in a Digital World Ethics and Responsibility in a Digital World Contact Hours 45h Self- Studies 135h German						
2	Module Content This module highlights the critical interface between ethics and the field of Information Systems (IS) and provides students with the opportunity to acquire relevant knowledge and skills to better navigate the complex ethical landscape of modern information technologies. In particular, it aims to foster three key competencies - ethical awareness, ethical analysis and value-based action - that are essential for professional and responsible action throughout one's academic and professional career.						
3	Learning Objectives Students know and understand the relevant methods and theories for the points mentioned above under "Module content" know and understand basic ethical concepts and theories analyze and evaluate (current) ethical issues and challenges in practical contexts (e.g. case studies, simulation games) justify and evaluate independently developed positions and present and/or discuss them with teaching staff and other students develop an understanding of the impact of decisions taking into account ecological, economic, social and/or ethical criteria question and critically reflect on current social developments.					ntexts (e.g. case	
4	Teaching and Learning Methods lecture practice						
5	Module Entry Requirements none						
6	Mode of End-O Written test: PC		mination				
7	Prerequisites for Awarding of Credit Points Passing the module examination.						
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems						
9	Module Manager AD B.Sc. Wirtschaftsinformatik						
10	Miscellaneous This module will be a mandatory module starting in winter semester 2025/2026. This does not apply						

2020.		if the supplementary section has been successfully completed up to and including summer semester 2025.
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CM Accou	······9 '		_			I		
Module Code 1016BBMAT1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term		
1	Courses Accounting I			Contact Hours 90h	Self- Studies 90h	Course Language German		
2	Module Content Introduction to Accounting Fundamentals in Financial Accounting Fundamentals in Managerial Accounting Book Keeping Case Studies							
3	Learning Objectives Students know and understand basic theories apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way know and understand common methods use methods in pre-structured contexts in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts know and understand the relevant methods and theories for the points mentioned above under "Module content".							
4	Teaching and Learning Methods lecture practice tutorial							
5	Module Entry Requirements none							
6	Mode of End-Of-Module Examination Written test: WT (60)							
7	Prerequisites for Awarding of Credit Points Passing the module examination							
8	Bachelor of Scie Supple Bachelor of Scie Specia Specia Specia Bachelor of Scie Supple Bachelor of Arts Ergänz Bachelor of Arts Bachelor of Arts	ence Betriebsy and Advanced ence Sozialwis ementary Section lisation Section lisation lisation Section lisation lisation Section lisation Section lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisation lisat	wirtschaftslehre: Section Business Assenschaften: on Social Science schaftslehre: n Track Economic n Track Business n Track Social Scientsökonomie: on Health Economilien China - Betriel BWL WiSo nschaft: gy Management	s Administration ences nics	1			

	Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems
9	Module Manager Area Accounting and Taxation
10	Miscellaneous Courses take place in first part of the semester (1. midterm).

Module Code		Worldoad	ECTS Credits	Module	Module	Duration	
1253BBMCD1		Workload 180h	6	Module Language German	Module Availability every term	1 Term	
1	Courses Corporate Deve	lopment I (2. N	/lidterm)	Contact Hours 90h	Self- Studies 90h	Course Language German	
2	Module Content This course first introduces foundations of Corporate Governance and Corporate Strategy. Building on this, concepts of Organizational Design and Instruments of Human Resource Management are presented and analysed.						
3	Learning Objectives Students know and understand basic theories in the area of corporate governance, business strategy, organizational design and HR-management apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way know and understand common methods analyse (current) questions and challenges within the framework of pre-structured contexts establish and evaluate independently developed positions develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and Learning Methods lecture tutorial						
5	Module Entry Requirements none						
6	Mode of End-Of-Module Examination Written test: WT (60)						
7	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Special Bachelor of Scie Supple Bachelor of Arts Ergänz Bachelor of Arts Bachelor of Arts Media a	ence Betriebswind Advanced Sence Wirtschaftmentary Section Section Section Section Section Regional Studiungsbereich Buchramt: The Education View Medienwisser and Technologien Sence Section Section Section Section Regional Studiungsbereich Buchramt: The Education View Medienwisser and Technologien Sence Section View Medienwisser and Technologien Sence Section Se	virtschaftslehre: Section Business Atsinformatik: on Information Systemschaften: on Social Science schaftslehre: on Track Business eitsökonomie: on Health Economien China - Betriei WL	stems s Administration nics pswirtschaftsle	n		

9	Module Manager UnivProf. Dr. 'Anne Burmeister UnivProf. Dr. Matthias Heinz UnivProf. Dr. Bernd Irlenbusch UnivProf. Dr. Dirk Sliwka
10	Miscellaneous

Andula Cast		Montdeed	ECTS Credits	Module	Module	Duration		
Module Code 1259BBMFI1		Workload 180h	6	Module Language German	Availability every term	Duration 1 Term		
1	Courses Finance			Contact Hours 60h	Self- Studies 120h	Course Language German		
2	Module Content Fundamentals of capital budgeting • Fundamental questions related to terminology and decision theory • Capital budgeting under certainty • Prospects of capital budgeting under uncertainty Fundamentals of financing • Internal financing • External financing							
3	Learning Objectives Students know and understand basic theories in the area of finance apply theories in the area of finance in pre-structured contexts (e.g. case studies) in a solution-oriented way know and understand common methods in the area of finance use methods in the area of finance in pre-structured contexts in a solution-oriented way design their learning and working processes independently know and understand the relevant methods and theories for the points mentioned above under "Module content".							
4	Teaching and I lecture practice	Learning Meth	nods					
5	Module Entry F	Requirements						
6	Mode of End-C		mination					
7	Prerequisites f Passing the mo	_	of Credit Points					
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Arts	ence Betriebsy and Advanced a ence Wirtschar ementary Secti ence Sozialwise ence Volkswirt alisation Sectionence Gesundh ementary Sectionence Gesundhermentary Sectioner Sectioner Et al	virtschaftslehre: Section Business A ftsinformatik: on Information Systemschaften: on Social Science schaftslehre: n Track Business eitsökonomie: on Health Economien China - Betriel	stems s Administration nics	n			

	Media and Technology Management Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems
9	Module Manager UnivProf. Dr. Alexander Kempf Dr. Alexander Pütz UnivProf. Dr. Heinrich R. Schradin
10	Miscellaneous

Module Code 1266BBMMA1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term		
1	Courses Introduction to Marketing (1. midterm) Contact Hours 60h Self- Studies 120h Course Language German							
2	The module cordevelop sound is consumers' resp (consumer behalf) (e.g., consumer marketing plann	Module Content The module covers theories and methods to analyse key marketing decision problems and to develop sound recommendations how to solve these decision problems. To this end, it looks at (i) consumers' responses to marketing activities and the underlying psychological mechanisms (consumer behaviour), (ii) the collection and analysis of data about markets and key stakeholders (e.g., consumers) which serves as the empirical basis for decision-making (market research), (iii) the marketing planning process (strategic marketing decisions), and (iv) marketing mix decisions (e.g., brand/product, price, etc.).						
3	Students know and und know and und decisions and m know and und	Learning Objectives						
4	Teaching and Lecture practice							
5	Module Entry R	Requirements						
6	Mode of End-O Written test: WT		ımination					
7	Prerequisites for Passing the modern	_	of Credit Points					
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Arts Ergänz	ence Betriebsy and Advanced ence Wirtschar ementary Secti ence Sozialwist ementary Secti ence Volkswirt lisation Sectio ence Gesundhamentary Secti	wirtschaftslehre: Section Business Aftsinformatik: on Information Syssenschaften: on Social Science schaftslehre: n Track Business leitsökonomie: on Health Economie China - Betrie	stems s Administration nics	n			

9	Module Manager UnivProf. Dr. Werner Reinartz UnivProf. Dr.' Franziska Völckner
10	Miscellaneous

				T			
Module Code 1271BBMSC1		Workload 180h	ECTS Credits	Module Language German	Module Availability every term	Duration 1 Term	
1	Courses Operations Man	nagement	Contact Hours 75h	Self- Studies 105h	Course Language German		
2	Module Content Fundamentals of Operations Management Demand Forecasting Inventory Management Production Planning Supply Chain Management Location Planning Process Design						
3	Learning Objectives Students know and understand basic theories in the area of supply chain management know and understand common methods in the area of supply chain management use methods in the area of supply chain management in pre-structured contexts in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under "Module content".						
4	Teaching and Learning Methods lecture practice tutorial						
5	Module Entry R	Requirements					
6	Mode of End-O Written test: WT		mination				
7	Prerequisites for Passing the modern	_	of Credit Points on				
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Bachelor of Scie Supple Bachelor of Arts	ence Betriebsv nd Advanced Sence Wirtschaft ementary Section ence Sozialwist ementary Section ence Volkswirts lisation Section ence Gesundhementary Section s Regionalstud eungsbereich E	virtschaftslehre: Section Business Atsinformatik: on Information Systemschaften: on Social Science schaftslehre: n Track Business eitsökonomie: on Health Economien China - Betriel	stems s Administration nics	n		

	Bachelor Education WiSo Bachelor of Arts Medienwissenschaft: Media and Technology Management Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems
9	Module Manager Area Supply Chain Management UnivProf. Dr. Ulrich W. Thonemann
10	Miscellaneous

Module Cod	de	Workload	ECTS Credits	Module	Module	e Duration		
1282BBEDT1		180h	6	Language German	Availability every term	1 Term		
1	Courses Decision theory	,		Contact Hours 60h	Self- Studies 120h	Course Language German		
2	 Fundamental Structuring all characteristics Description of Application of the App	Module Content Fundamentals of rational decision-making Structuring and differentiation of complex decision situations with regard to different characteristics Description of theoretical prerequisites for the application of decision theoretical methods Application of methods to practical examples Determination and justification of optimal alternatives using formal procedures						
3	Students know and und know and und use methods communicate	 know and understand basic theories. know and understand common methods. use methods in pre-structured contexts in a solution-oriented way. communicate continuously and purposefully within teaching and learning groups. know and understand the relevant methods and theories for the points mentioned above under 						
4	Teaching and lecture practice							
5	Module Entry F	Requirements						
6	Mode of End-C		mination					
7	=	Prerequisites for Awarding of Credit Points Passing the module examination						
8	Bachelor of Scient Supplet Bachelor of Scient Bachelor of Arts Ergänz Bachelor of Scient Bachelor of Scient Bachelor of Scient Scient Bachelor of Scient Scient Scient Bachelor of Scient Scient Scient Bachelor of Scient	ence Betriebsvermentary Secti ence Wirtschar ementary Secti ence Gesundhand Advanced is Regionalstud zungsbereich E	virtschaftslehre: on Business Admi ftsinformatik: on Information Sy: eitsökonomie: Section Health Ectien China - Betrie	stems onomics bswirtschaftsle /S24/25):	ehre:			
9	Module Manag UnivProf. Dr. I	er						
10	Miscellaneous The event is off the semester br	ered in the sec	cond term. An exa	m is offered bo	oth after the sec	ond term and during		

Module Code 1284BSMTM1		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term		
1	Courses Media and Tech	ınology Manaç	gement I	Contact Hours 30h	Self- Studies 150h	Course Language German and English		
2	Module Content Introduction to the management of digital and hybrid media and technology goods and services Corporate strategies of various media genres in the fields of journalism and entertainment and their significance in a social context							
3	Learning Objectives Students know and understand basic theories use methods in pre-structured contexts in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts establish and evaluate independently developed positions design their learning and working processes independently kennen und verstehen die relevanten Methoden und Theorien zu den zuvor unter "Inhalte des Moduls" genannten Punkten.							
4	Teaching and Learning Methods seminar							
5	Module Entry R	Requirements						
6	Mode of End-O Written test: PO		mination					
7	Prerequisites for Passing the mod	_	of Credit Points					
8	Other Programmes that Use the Module Bachelor of Science Management, Economics and Social Sciences: Specialisation Section Management, Economics and Social Sciences Bachelor of Science Betriebswirtschaftslehre: Specialisation Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Sozialwissenschaften: Supplementary Section Social Sciences Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Business Administration Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems Bachelor of Arts Medienwissenschaft: Media and Technology Management							
9	Module Manage	er	-					
10	UnivProf. Dr.' Claudia Loebbecke, M.B.A. Miscellaneous							

•	dia and Techno	T .							
Module Code 1284BSMTM2		Workload 180h	6	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term			
1	Courses Media and Tech	nology Manaç	gement II	Contact Hours 30h	Self- Studies 150h	Course Language German and English			
2	In-depth deve	Module Content In-depth development of topics related to the management of digital and hybrid media and technology goods and services based on changing, industry-specific project content and case studies							
3	Students know and und apply theories analyse (curre communicate establish and present and/d design their le	 know and understand basic theories. apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way. analyse (current) questions and challenges within the framework of pre-structured contexts. communicate continuously and purposefully within teaching and learning groups. establish and evaluate independently developed positions. present and/or discuss results with teaching staff and other students. design their learning and working processes independently. know and understand the relevant methods and theories for the points mentioned above under 							
4	Teaching and L	earning Meth	nods						
5	Module Entry R	equirements	i						
6	Mode of End-O Written test: PO		ımination						
7	Prerequisites for Passing the mod	_	of Credit Points						
8	Special Bachelor of Scie Special Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Special Bachelor of Arts Media	ence Managen lisation Section ence Betriebsvelisation Section ence Wirtschaft mentary Section ence Sozialwist mentary Section ence Volkswirt lisation Section Medienwisse and Technolog	nent, Economics a n Management, E virtschaftslehre: n Business Admir ftsinformatik: on Information Sy senschaften: on Social Science schaftslehre: n Track Business	conomics and S istration stems s Administration	Social Sciences	5			

9	Module Manager UnivProf. Dr.' Claudia Loebbecke, M.B.A.
10	Miscellaneous

Module Code 1253BEEnt1		Workload EC	ECTS Credits	Module Language	Module Availability	Duration 1 Term		
		180n	6	German and English	every 2nd term - winter term	1 Term		
1	Courses Entrepreneurshi	ip		Contact Hours 60h	Self- Studies 120h	Course Language English		
2	Module Content Strategies on Market Entry, Products, Markets and Value Creation Entrepreneurial Behaviour							
3	Learning Objectives Students know and understand basic theories apply theories in pre-structured contexts (e.g. case studies) in a solution-oriented way analyse (current) questions and challenges within the framework of pre-structured contexts present and/or discuss results with teaching staff and other students develop an understanding of the impact of decisions that take into account environmental, economic, social and/or ethical criteria know and understand the relevant methods and theories for the points mentioned above under							
4	Teaching and Learning Methods lecture practice							
5	_	Module Entry Requirements Recommended: CM Corporate Development I						
6	Mode of End-O Written test: WT		mination					
7	Prerequisites for Passing of the n	_	of Credit Points nation					
8	Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Supple Bachelor of Scie Specia Specia Specia Specia Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Betriebswirtschaftslehre: Supplementary Section Business Administration Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Sozialwissenschaften: Supplementary Section Social Sciences Bachelor of Science Volkswirtschaftslehre: Specialisation Section Track Economics Specialisation Section Track Business Administration Specialisation Section Track Social Sciences Bachelor of Science Gesundheitsökonomie: Supplementary Section Health Economics Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems						
9	Module Manage UnivProf. Dr. C	er	<u> </u>					
10	Miscellaneous							

Madel	4-	Workload ECTS Credits Module Module Duration						
Module Co 1277BESA		180h	6	Language selected language	Availability every term	1 Term		
1	Courses	Courses Contact Self- Hours Studies Course Lang						
2	Module Conten Topics from the Systems.	· -	iness Administrati	ion, Economics	, Social Scienc	es or Information		
3	Students The students acquire the kr beyond the curri knowledge (from and skills which Through com skills within the study program	Learning Objectives Students The students acquire the knowledge and skills from the areas named in the module content which extend beyond the curriculum of the relevant bachelor programme and impart additional foundation knowledge (from subjects outside the relevant programme's curriculum); deepen attained knowledge and skills which contribute towards the specialisation or content-specific individualisation of studies Through completing examinations at a university abroad, students widen their knowledge and skills within the subject areas named above that go beyond the module structure of the curriculum of their study programme. Content studied within a module abroad can only be credited once within one of the Studies Abroad modules.						
4	Teaching and L		ods					
5	Module Entry R None	equirements						
6	Mode of End-O depending on co							
7	Prerequisites for depends on cou		of Credit Points					
8	Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems						
9	_	Module Manager Programmdirektor:in						
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module can also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this case registration for the exams should be carried out in advance according to the regulations of the WiSo faculty.							

Judies P	Abroad II (Winfo					I	
Module Cod 1277BESAb		Workload 180h	ECTS Credits	Module Language selected language	Module Availability every term	Duration 1 Term	
1	Courses			Contact Hours	Self- Studies	Course Language	
2	Module Conten Topics from the Systems.		iness Administrati	ion, Economics	, Social Scienc	es or Information	
3	Students The students acquire the kr beyond the curri knowledge (from and skills which Through com skills within the study programmer.	Learning Objectives Students The students acquire the knowledge and skills from the areas named in the module content which extend beyond the curriculum of the relevant bachelor programme and impart additional foundation knowledge (from subjects outside the relevant programme's curriculum); deepen attained knowledg and skills which contribute towards the specialisation or content-specific individualisation of studies Through completing examinations at a university abroad, students widen their knowledge and skills within the subject areas named above that go beyond the module structure of the curriculum of their study programme. Content studied within a module abroad can only be credited once within one of the Studies Abroad modules.					
4	Teaching and L		ods				
5	Module Entry R None	equirements					
6	Mode of End-O depending on co						
7	Prerequisites for depends on cou	_	of Credit Points				
8	Bachelor of Scie Supple Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Supplementary Section Information Systems					
9		Module Manager Programmdirektor:in					
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module can also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this case registration for the exams should be carried out in advance according to the regulations of the WiSo faculty.						

3.6.3 Specialisation Section Information Systems

CM Advan	ced programi	ming conce	pts			
Module Code 5751BWeiPr	\$	Workload 270h	ECTS Credits 9	Module Language German	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses Advanced progr	amming conce	pts	Contact Hours 56h	Self- Studies 214h	Course Language German
2	comparison with programming to Deepening the k writing, commer Possibilities of c	ed programmin other paradig pics such as m anowledge alre uting and organ ollaborative wo	g concepts, such ms and other lang ultithreading, exteady acquired in paizing of code (incork with a version em to program")	guages (e.g. Py ernal libraries a rogramming, e. luding annotati	thon, JavaScrip nd their use wh g. testing, debu ons, interfaces,	ot) • Advanced nere applicable • ugging • Structured packages,) •
3	Learning Objectives Students In this module, students essentially deepen and expand the knowledge and programming skills they have already acquired. Students are thus enabled to solve more complex tasks with programs they have written themselves. In particular, they learn or deepen their skills in object-oriented programming and also become familiar with other programming paradigms and languages. This enables students to read, understand and implement simple programs in other programming languages and thus find their way around other programming languages.					
4	Teaching and L lecture practice	earning Meth	ods			
5	Module Entry R Recommendation	=	ction to programm	ning		
6	Mode of End-O Written test: PO		mination			
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.					
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems Bachelor of Science Wirtschaftsinformatik: Specialisation Section Information Systems					
9	Module Manager Geschäftsführende*r Direktor*in Institut für Informatik					

10	Miscellaneous

SpM Visua	lization					
Module Code 5751BVisua				Module Language German	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses Visualization			Contact Hours 90h	Self- Studies 180h	Course Language German
2	communication of introduced. This human perception depiction of data graphs. The four will be introduce reports, presents economics, geoclasses, the material communication of the communication of th	uses on the visor data in visual includes selecton, colour space such as 2D, 3 andation method d. Visual analy ations or onlined sciences, meterial from the leatutor. The ex	ee, data types, data types, data types, data types, data their practisis can be used for the corology, medicinectures will be fur ercises serve to be	ure, the fundame areas of: the a structure, traidata, time-special usages and or exploration, analysis can be, biology, tranther discussed	nentals of visual visualisation properties of the visualisation and control of the visualisation of visualisation of the visualisation of the visualisation of visualisa	lisation are rocess, interaction, d processing, visual e-orientated data, urrent research areas ommunication in areas of finance,
3	Learning Objectives Students understand continuing, specialised theories and methods in the field of visualisation analyse (current) questions and challenges in the area of visualisationdefend their independently developed position or solutions to problems know and understand the relevant methods and theories for the points mentioned above under "Module content".					
4	Teaching and Learning Methods lecture practice					
5	Module Entry R Recommendation Programming Programming	n: CM Comput		Computer Scien	ce I, AM Comp	outer Science II, AM
6	Mode of End-On Written test: WT		mination			
7	Prerequisites for Awarding of Credit Points Passing the module examination. Admission requirements for the examination: Coursework completed as part of the practice. Practices are held in parallel to the lecture, in which exercises are set which must be successfully completed on average. Achieving 50% of the maximum number of exercise points is sufficient for successful completion.					
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems Bachelor of Science Wirtschaftsinformatik: Specialisation Section Information Systems					
9	Module Manage	er				

10	Miscellaneous

flodule Co 277BSWI		Workload 360h	ECTS Credits 12	Module Language German and English	Module Availability every term	Duration 1 Term	
1	Courses Capstone Project	ct Information S	Systems (PO 24)	Contact Hours 90h	Self- Studies 270h	Course Language German	
2	 Independent a Project and tean 	Module Content • Independent and autonomous development of an information system in a team in a project • Project and team management • Requirements analysis • Draft • Implementation • Testing • Customer communication and management					
3	Students communicate evaluate indeper other students. c environmental, c	Learning Objectives Students communicate continuously and purposefully within teaching and learning groups. establish and evaluate independently developed positions. present and/or discuss results with teaching staff and other students. develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria. design their learning and working processes independently. reflect their own performance and implement feedback constructively.					
4	Teaching and L Research project	_	ods				
5	SuM Information	n: CM Informa Systems I, Su		stems II; CM C		Information Systems	
6	Mode of End-On Combined exam						
7	-	Prerequisites for Awarding of Credit Points Passing the module examination					
8	Bachelor of Scie	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems					
9	_	Module Manager UnivProf. Dr. Christoph Rosenkranz					
	Miscellaneous						

Spivi Intor	mation Syster	ns II				
Module Code 1277BSWI12		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - winter term	Duration 1 Term
1	Courses a) Systems Ana b) Information S			Contact Hours a) 60h b) 40h	Self- Studies a) 120h b) 140h	Course Language a) German b) German
2	Module Content a) Systems Analysis and Design • Requirements analysis and survey • System modelling • Projection planning • Prototyping • Unified Modeling Language (UML) • Human-computer interaction b) Information Security and IT Forensics • Terms, protection goals, threat classifications • Histor Case Studies and Conclusions for Future Situations • Presentation of concrete attack techniques and threats • Design of secure systems (consideration in the development process, frameworks, ISO/IEC 27001, risk analysis) • Recognized frameworks (BSI Basic Protection, ISO 27001, Busin Continuity Management,) • Security models • Fundamentals of cryptographic procedures • Authentication procedures and identity management • Mobile Security • Incident Response and I Forensics • Legal framework					
3	Learning Objectives Students know and understand common methods in the field of a) analysis and design of information systems; b) cryptographic procedures and protection requirements of information systems. communicate continuously and purposefully within teaching and learning groups. develop an understanding of the impact of decisions that take into account environmental, economic, social or ethical criteria. design their learning and working processes independently.					
4	Teaching and L lecture practice	earning Meth	ods			
5	Module Entry R	Requirements				
6	Mode of End-O Written test: PO		mination			
7	Prerequisites for Passing the mod	_	f Credit Points on of course a) or	b)		
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems					
9	Module Manager Sprecher des Fachbereichs Wirtschaftsinformatik					
10	Miscellaneous a) Systems Analysis and Design: In some sessions case studies and exercises are prepared in group work and presented and discussed in the plenum by the students. Mandatory reading will be announced during the respective semester. b) Information security and IT forensics: The course is usually offered by a lecturer and is offered as a block course in the first or second half of the semester. Please note the course dates given in KLIPS. Within the scope of the exercise, practical work with IT security gaps within a laboratory environment (hacking and subsequent security) will take place. Previous knowledge of Linux is useful, but not necessary.					datory reading will be ensics: The course is and half of the ne exercise, practical

SpM Inform	mation Systen	ns III				
Module Code 1277BSWI13		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every 2nd term - summer term	Duration 1 Term
1	Courses a) Information S b) Introduction to Learning	•	•	Contact Hours a) 60h b) 60h	Self- Studies a) 120h b) 120h	Course Language a) German b) English
2	IS • Alternatives Procedures for t development) • evaluation meth Ethics in the dev b) Introduction t perspective • Da forecast • Data	Systems Developments for the realization of the development of the Community of the Data Science of the Quality and the Country of the Countr	tion of IS ("Make nt of IS (waterfall orms of project m nication and leade s e and Machine Le data cleansing •	esses and important challenges in the development or Buy", Outsourcing, Software as a Service, etc. I model, evolutionary development, agile software nanagement for IS development • Project control lership • Time, team and project management • Learning • The value of data from a business • Design of a data analysis process • Explanation upport entrepreneurial activity • Introduction to		
3	(b Data Science Development an oriented way. co present and/or of the impact of de	derstand comm and Machine I nd (b Data Scie ommunicate co discuss results cisions that tak	Learning. use me nce and Machine ntinuously and puwith teaching state	thods in the are Learning in pre Irposefully withing ff and other study Invironmental, ed	eas of (a Inform e-structured co in teaching and dents. develop	ems Development and ation Systems neexts in a solution-learning groups. an understanding of or ethical criteria.
4	Teaching and L lecture practice	earning Meth	ods			
5	Module Entry R	equirements				
6	Mode of End-O Written test: PO		mination			
7	Prerequisites for Awarding of Credit Points Passing the module examination of course a) or b)					
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems					
9	Module Manage Geschäftsführer		in Kölner Institut f	ür Wirtschaftsir	nformatik	
10	Miscellaneous Mandatory reading will be announced in the respective semester of the course. b) Python is us the course.					e. b) Python is used in

Module Code 1014BESAI1		Workload 180h	ECTS Credits					
1	Courses							
2	Module Conte Topics from th		mation Systems.					
3	beyond the cur knowledge (fro and skills which Through con skills within the	s Inowledge and riculum of the riculm of the riculum of the riculm of the ri	vards the specialist nations at a univer named above that ent studied within a	orogramme and rogramme's content ation or content sity abroad, storage go beyond the	d impart additio urriculum); deep nt-specific indivi udents widen the module structi			
4	Teaching and depending on o		nods					
5	Module Entry none	Requirements						
6	Mode of End-0 depending on o							
7	Prerequisites depending on o	_	of Credit Points					
8	Bachelor of Sci Suppli Bachelor of Sci	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Supplementary Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems						
9		Module Manager Programmdirektor:in						
10	Miscellaneous If required, students can apply for credit transfer using the standardised procedure. Information about recognition of courses (deadlines and procedure) is provided by the WiSo Credit Transfer Centre (WiSo Anrechnungszentrum: https://www.anrechnungwiso.uni-koeln.de/). This module can also be used for crediting Academic Short Programmes organised by the WiSo-faculty. In this case, registration for the exams should be carried out in advance according to the regulations of the WiSo faculty.							

Bachelor Seminar Information Science							
Module Code 1277BSSWF1		Workload 180h	ECTS Credits	Module Language German and English	Module Availability every term	Duration 1 Term	
1	Sustainable Soc b) Bachelorsem Digital Technolo c) Bachelorsem Systems (Prof. I d) Bachelorsem (Prof. Schoder)	a) Bachelorseminar Information Systems for Sustainable Society (Prof. Ketter) b) Bachelorseminar Information Systems and Digital Technology (Prof. Seidel) c) Bachelorseminar Integrated Information Systems (Prof. Rosenkranz) d) Bachelorseminar Information Management (Prof. Schoder) e) Bachelorseminar Machine Learning (Jun			Self- Studies a) 150h b) 150h c) 150h d) 150h e) 150h	Course Language a) German and English b) German and English c) German and English d) German and English e) German and English	
2	Module Conten	.4		1	I		

2 Module Content

- Project planning in the context of scientific work
- Structure and argumentation in scientific works: problem, objective, terminology system, outline
- Dealing with scientific literature: literature research, literature administration, literature evaluation, referencing and citation in scientific work
- · Scientific Writing
- Formal requirements
- Writing, presenting and defending one's own scientific work

Seminar work topics are taken from the following areas, among others:

- a) Business Intelligence, Analytics, Machine Learning and Learning Agents research in the domains of Energy Markets, Smart Sustainable Mobility, Energy Storage and Transactive Energy & Blockchain
- b) Conceptual Modeling, Business Process Management, Information Systems Development, Systems Analysis and Design, Digital Innovation, Digital Entrepreneurship, Green IS, Environmental Sustainability
- c) IT Outsourcing, IT Strategy, Information Systems Development & IT Project Management, Open Source Software Development, Agile Development, Business Process Management, Digital Transformation
- d) Business Analytics, Artificial Intelligence in Trading, Health and Logistics, Media Mass Customization, Electronic Commerce, Social Media Analysis, Openness, Decision Support Systems e)

Supervised, unsupervised and semi-supervised learning

Clustering, principal component analysis, high-dimensional data

Transfer learning and federated learning

Neural network, convolutional neural network, graph convolutional network

Recurrent neural networks for natural language processes and more

Self-supervised learning

Reinforcement learning

3 Learning Objectives

Students...

- \ldots know and understand basic theories from the above mentioned areas.
- ... collect, systematize and synthesize literature and data material for a scientific work on a selected topic.
- \dots present and/or discuss results with teaching staff and other students.
- ... reflect their own performance and implement feedback constructively.
- ... use under guidance techniques of scientific work and good scientific practice.
- ... know and understand the relevant methods and theories for the points mentioned above under "Module content".

4	Teaching and Learning Methods seminar
5	Module Entry Requirements none
6	Mode of End-Of-Module Examination Combined examination: PRES, TP
7	Prerequisites for Awarding of Credit Points Passing the module examination of one of the courses a) to d)
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Specialisation Section Information Systems Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Specialisation Section Information Systems
9	Module Manager Geschäftsführende*r Direktor*in Kölner Institut für Wirtschaftsinformatik
10	Miscellaneous In the first step, the Bachelor's seminar module is taken by students via KLIPS. This allocation takes place in the 1st allocation phase through the submission of prioritised allocation requests. When enrolling via KLIPS, priority enrolment requests must be submitted for the Bachelor's seminars offered by the various examiners. As a rule, there will be no booking in the 2nd occupancy phase or in the allocation of remaining places. Subsequently, each student is allocated a place in a Bachelor's seminar, taking into account the available capacities. After the allocation to the Bachelor seminars, the students give preferences for concrete seminar work topics. This is usually done at the beginning of the semester via a survey in ILIAS. Part of the Bachelor's seminar is the participation in the block course "Scientific Work", which is offered at the beginning of the semester. Further information on the allocation procedure and the block course can be found in the course descriptions in KLIPS or on the website of the Cologne Institute for Information Systems. The seminar paper can be written in German or English. It is strongly recommended to complete the Bachelor's seminar before the Bachelor's thesis, as the Bachelor's seminar teaches basic competences for scientific work and especially for writing a scientific paper.

4.6.4 Bachelor Thesis Information Systems

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Module Code 1277BMWIN1		Workload 360h	ECTS Credits 12	Module Language German and English	Module Availability every term	Duration 1 Term
1	Courses a) Bachelor The b) Bachelor The c) Bachelor The d) Bachelor The e) Bachelor The	esis with Prof. [esis with Prof. [esis with Prof. [Or. Seidel Or. Rosenkranz Or. Schoder	Contact Hours a) 0h b) 0h c) 0h d) 0h e) 0h	Self- Studies a) 360h b) 360h c) 360h d) 360h e) 360h	Course Language a) German and English b) German and English c) German and English d) German and English
2	Module Content Preparation of a scientific thesis. Bachelor's thesis topics are taken from the following areas, among others: a) Business Intelligence, Analytics, Machine Learning and Learning Agents research in the domains of Energy Markets, Smart Sustainable Mobility, Energy Storage and Transactive Energy & Blockchain b) Conceptual Modeling, Business Process Management, Information Systems Development, Systems Analysis and Design, Digital Innovation, Digital Entrepreneurship, Green IS, Environmental Sustainability c) IT Outsourcing, IT Strategy, Information Systems Development & IT Project Management, Software Development, Open Source Software, Agile Development, Business Process Management, Digital Transformation d) Business Analytics, Artificial Intelligence in Trading, Health and Logistics, Media Mass Customization, Electronic Commerce, Social Media Analysis, Openness, Decision Support Systems e) Data Mining, Statistics, Machine Learning, Deep Learning, Smart Mobility					
3	Learning Objectives Students analyse current questions and challenges within the framework of prepared cases collect, systematize and synthesize literature and data material for a scientific work on a selected topic establish and evaluate independently developed positions design their learning and working processes independently use techniques of scientific work and good scientific practice.					
4	Teaching and Learning Methods Bachelor's Thesis					
5	Module Entry Requirements 100 CP successfully passed; Recommendation: Bachelor Seminar					
6	Mode of End-Of-Module Examination Written test 12 weeks					
7	Prerequisites for Awarding of Credit Points Passing the module examination					
8	Other Programmes that Use the Module Bachelor of Science Wirtschaftsinformatik: Bachelor Thesis Information Systems					

	Bachelor of Science Wirtschaftsinformatik (ab WS24/25): Bachelor Thesis Information Systems
9	Module Manager Geschäftsführende*r Direktor*in Kölner Institut für Wirtschaftsinformatik
10	Miscellaneous Bachelor's theses at the Cologne Institute for Information Systems are assigned in a central assigning procedure. In the first step, the Bachelor's thesis module is assigned to students via KLIPS. This allocation takes place in the 1st allocation phase through the submission of prioritised allocation requests. In the case of KLIPS, prioritized requests for the Bachelor's thesis modules offered by the various examiners must be submitted. As a rule, there will be no enrolment in the 2nd phase or in the allocation of remaining places. Subsequently, each student is allocated a place for a Bachelor's thesis, taking into account the available capacities. After the allocation to the examiners, the students give preferences for concrete Bachelor's thesis topics. This is usually done about three weeks before the respective start date via a survey in ILIAS. Further information on the assigning procedure can be found in the course descriptions in KLIPS or on the website of the Cologne Institute for Information Systems. The Bachelor's thesis can be written in German or English. It is strongly recommended that you complete the Bachelor seminar before writing your Bachelor's thesis, as the Bachelor seminar teaches basic skills for scientific work and especially for writing a scientific paper. Please note that the Cologne Institute for Information Systems (CIIS) offers Bachelor's theses in every semester. Each semester you can start working on your bachelor's thesis at a fixed starting time (in November in winter semesters and in May in summer semesters).