

## Annex SFB

### Studienfachbeschreibung (subject description, SFB) for the subject Computer Science as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Mathematics and Computer Science  
Responsible: Institute of Computer Science

Examination regulations version: 2017  
Examination regulations version: 2017

Abbreviations used: Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V** = lecture

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B/NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

Conventions for the modules in this SFB: Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Information on assessment procedures: Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with the general regulations governing the degree subject described in this module catalogue:

**ASPO2015**

associated official publications (FSB (subject-specific provisions)/SFB (list of modules)):

**09-Aug-2017 (2017-54)**

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

Every module will be described using the following form:

Abbreviation	Module title						
	ECTS		Duration	(in semesters)	Method of grading		Module level
	Courses		To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y				
	Method of assessment						
	Only after successful completion of		if applicable				
	Other prerequisites		if applicable				
	Participants and allocation of places		if applicable				
	Additional information		if applicable				
	Referred to in LPO I		if applicable (examination regulations for teaching-degree programmes)				

Compulsory Courses (115 ECTS credits)								
Computer Science (75 ECTS credits)								
10-I-GdP-172-m01	Fundamentals of Programming							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus					
	Referred to in LPO I		§ 49 I Nr. 1 b) § 69 I Nr. 1 b)					
10-I-ADS-152-m01	Algorithms and data structures							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus					
	Referred to in LPO I		§ 49 I Nr. 1 a) § 69 I Nr. 1 a)					
10-I-ST-152-m01	Software Technology							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus					
	Referred to in LPO I		§ 49 I Nr. 1 b) § 69 I Nr. 1 b)					

10-I-PP-152-m01	<b>Practical Course in Programming</b>							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (6)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).						
	Referred to in LPO I	§ 49 I Nr. 1 c) § 69 I Nr. 1 d)						
10-I-SWP-152-m01	<b>Practical course in software</b>							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (6)						
	Method of assessment	practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)						
	Modules successfully completed	10-I-PP, 10-I-ST						
	other prerequisites	In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.						
	Referred to in LPO I	§ 69 I Nr. 1 d)						
10-I-RAL-152-m01	<b>Digital computer systems</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus						
10-I-IÜ-152-m01	<b>Information Transmission</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus						
		Referred to in LPO I	§ 22 II Nr. 3 b)					

10-I-HWP-152-m01	Practical course in hardware							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (6)						
	Method of assessment	portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)						
	Referred to in LPO I	§ 22 II Nr. 3 b)						
Theoretical Informatics (10 ECTS credits)								
10-I-TIV-152-m01	Theoretical Informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).						
	Referred to in LPO I	§ 49 I Nr. 1 a) § 69 I Nr. 1 a)						
10-I-TIT-172-m01	Tutorial Theoretical Informatics							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	Ü (2)						
	Method of assessment	a) exercises (consisting in completion of approx. 11 home work exercise sheets, presentation of own solutions in the exercise groups as well as approx. 5 short assessments written in the exercise group) or b) written examination (approx. 180 to 240 minutes) Die Prüfungsart ist vom Prüfling festzulegen						
Mathematics (30 ECTS credits)								
10-I-LOG-152-m01	Logic for informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Referred to in LPO I	§ 22 II Nr. 3 b)						

10-M-INF1-152-m01	<b>Mathematics 1 for students in Computer Science</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-INF2-152-m01	<b>Mathematics 2 for students in Computer Science</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-I-AGT-152-m01	<b>Algorithmic Graph Theory</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

Compulsory Electives (35 ECTS credits)								
Computer Science (25 ECTS credits)								
10-I-ICG-152-m01	Interactive Computer Graphics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI					
10-I-DB-152-m01	Databases							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 49 I Nr. 1 b) § 69 I Nr. 1 b)					
10-I-WBS-152-m01	Knowledge-based Systems							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-DM-152-mo1	<b>Data Mining</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-APR-172-mo1	<b>Advanced Programming</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-KT-152-mo1	<b>Computational Complexity</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-KD-152-mo1	<b>Cryptography and Data Security</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-3D-152-m01	<b>3D Point Cloud Processing</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-BS-152-m01	<b>Operating Systems</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-RAK-152-m01	<b>Computer Architecture</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur					
10-I-RK-152-m01	<b>Computer Networks and Communication Systems</b>							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 b)					

10-I-GI-152-m01	<b>Selected Basics of Computer Science</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
<b>subsidiary subject (10 ECTS credits)</b>								
Students must select one of the minors offered and must achieve the required number of ECTS credits in this minor.								
<b>Mathematics (10 ECTS credits)</b>								
10-M-DI-Maf-152-m01	<b>Introduction to Discrete Mathematics for students of other subjects</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-NUM1af-152-m01	<b>Numerical Mathematics 1 for students of other subjects</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-STO-1af-152-m01	<b>Stochastics 1 for students of other subjects</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-ZT- Haf-152-mo1	Introduction Into Number Theory for students of other subjects							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-DGLaf-152- mo1	Ordinary Differential Equations for students of other subjects							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-OR- Saf-152-mo1	Operations Research for students of other subjects							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus					
Physics (10 ECTS credits)								
11-EFNF-152-mo1	Introduction to Physics for Students of other Disciplines							
	ECTS	7	Duration	2 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + V (3)					
	Method of assessment		written examination (60 to 120 minutes)					
	Additional Information		according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter d) and No. I 1st letter d) of annex 1 to the APOLmCh and No. 4 of annex 2 to the APOLmCh					

11-PFNF-152-m01	Laboratory Course Physics for Students of other Disciplines							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (4)						
	Method of assessment	a) practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (approx. 90 minutes). Each experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each be repeated once.						
	Participants and allocation of places	Only as part of pool of general transferable skills (ASQ): 10 places (lottery)						
	Additional Information	according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter d) and No. I 1st letter d) of annex 1 to the APOLmCh and No. 4 of annex 2 to the APOLmCh						
Economics (10 ECTS credits)								
12-NW-EBWL-152-m01	Introduction to Business Administration - Minor							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 minutes)						
	Participants and allocation of places	200 places (lottery)						
12-NW-EV-WL-152-m01	Introduction to Economics - Minor							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 minutes)						
	Participants and allocation of places	max. 200 places. Modules 12-NW-EBWL and 12-NW-EVWL are not open for students of the following subjects: Wirtschaftswissenschaft (Business Management and Economics) Bachelor's (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) Bachelor's (BSc with 180 ECTS credits) and Wirtschaftsmathematik (Mathematics for Economics) Bachelor's (BSc with 180 ECTS credits).						

12-ExtUR-G-152-m01	Financial Accounting							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes)					
	Participants and allocation of places		840 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated according to the following quotas: a) Quota 1 (50 % of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. b) Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. c) Quota 3 (25 % of places): lottery.					
12-IntUR-G-152-m01	Managerial Accounting							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes)					
	Participants and allocation of places		840 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated according to the following quotas: a) Quota 1 (50 % of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. b) Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. c) Quota 3 (25 % of places): lottery. (4) A waiting list will be maintained and places re-allocated by lot as they become available.					

12-BPL-G-152-m01	Supply, Production and Operations Management. An Introduction							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes)					
	Participants and allocation of places		620 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated according to the following quotas: a) Quota 1 (50 % of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. b) Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. c) Quota 3 (25 % of places): lottery. (4) A waiting list will be maintained and places re-allocated by lot as they become available.					
12-I&F-G-152-m01	Investment and Finance. An Introduction							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes)					
	Participants and allocation of places		620 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated according to the following quotas: a) Quota 1 (50 % of places): total number of ECTS credits already achieved in the respective degree subject; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. b) Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. c) Quota 3 (25 % of places): lottery. (4) A waiting list will be maintained and places re-allocated by lot as they become available.					

12-Ewiinf-G-152-m01	Introduction to Business Informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + T (2)						
	Method of assessment	a) written examination (approx. 60 minutes) or b) written examination consisting entirely or partly of multiple choice questions (approx. 60 minutes) Language of assessment: German and/or English creditable for bonus						
	Participants and allocation of places	840 places. (1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) Additional places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.						
12-GP-G-152-m01	Integrated Business Processes							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes); (weighted 2:1) creditable for bonus						
	Participants and allocation of places	15 places. (1) The number of places is not restricted for students of the Bachelor's degree subject Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits). (2) Additional places will be allocated to students of other subjects provided there is enough capacity. These additional places will be allocated by lot among all applicants irrespective of their subjects. (3) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (4) A waiting list will be maintained and places re-allocated by lot as they become available.						
12-FRBE-F-152-m01	Forward and Reverse Business Engineering							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes); (weighted 2:1) creditable for bonus						
	Participants and allocation of places	50 places. Should the number of applications exceed the number of available places, places will be allocated as follows: (1) Bachelor's students of Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) will be given preferential consideration. (2) The remaining places will be allocated to students of other subjects. (3) When places are allocated in accordance with (1) and (2) and the number of applications exceeds the number of available places, places will be allocated by lot among applicants from this group. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.						

Linguistics (10 ECTS credits)								
o4-DtLABA-BM-SW-152-m01	Level One Module German Linguistics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + S (2) + T (1)						
	Method of assessment	written examination (approx. 75 minutes)						
	Referred to in LPO I	§ 43 I Nr. 2 b) § 63 I Nr. 2 b)						
o4-DtLABA-AM-SW1-152-m01	Level Two Module Grammatical Structures of German							
	ECTS	5	Duration		Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (1) + S (2) + T (1)						
	Method of assessment	written examination (approx. 75 minutes)						
	Referred to in LPO I	§ 43 I Nr. 2 b) § 63 I Nr. 2 b)						
Biology (10 ECTS credits)								
o7-1A1TI-152-m01	Evolution and the Animal Kingdom							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (3)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 41 I Nr. 1 (4 ECTS credits) and § 41 I Nr. 4 (1 ECTS credits) § 61 I Nr. 1 (4 ECTS credits) and § 61 I Nr. 4 (1 ECTS credits)						
o7-2A2GEN-V-152-m01	Genetics, Neurobiology, Behaviour							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3)						
	Method of assessment	written examination (approx. 60 to 90 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 61 I Nr. 2 (2 ECTS credits) § 61 I Nr. 3 (1 ECTS credits) § 61 I Nr. 4 (1 ECTS credits)						
o7-M-BST-152-m01	Mathematical Biology and Biostatistics							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
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07-3A3OE-KO-152-m01	<b>Plant and Animal Ecology</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 90 minutes) creditable for bonus					
	Referred to in LPO I		§ 61 I Nr. 4					
07-3A3GEM-T-152-m01	<b>Genes, Molecules, Technologies</b>							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4)					
	Method of assessment		written examination (approx. 90 minutes) creditable for bonus					
Law (10 ECTS credits)								
02-J1-171-m01	<b>Introduction to the German Legal System</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4)					
	Method of assessment		written examination (approx. 120 minutes)					
	Participants and allocation of places		max. 80 places. Students applying after not having successfully completed assessment in the past two semesters will be given preferential consideration. The remaining places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available. Places on all courses of the module with a restricted number of places will be allocated in the same procedure.					
02-G&Hre-G-161-m01	<b>Commercial and Business Law for Economists</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (2)					
	Method of assessment		written examination (approx. 120 minutes) Assessment offered: Usually once a year, summer semester					
	Participants and allocation of places		There are no restrictions with regard to available places for students of Rechtswissenschaft (Law) as well as Bachelor's students with the minor Privatrecht (Private Law). A total of 20 places will be allocated to students of other subjects. 10 of these will be allocated to students of the Master's degree programme Economics. Should the number of available places exceed the number of applications, the remaining places may be allocated to students of other subjects. Should there be more than 10 applications, the remaining places will be allocated as follows: Students applying after not having successfully completed assessment in past years will be given preferential consideration. The remaining places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available.					

Geography (10 ECTS credits)								
o4-Geo-FER-NE-152-m01	Introduction to Geographical Remote Sensing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 66 I Nr. 2					
o4-Geo-FER-NA-152-m01	Applications of Remote Sensing in Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
Medicine (10 ECTS credits)								
o3-M-MT-152-m01	Practical Course in medical terminology							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	unknown
	Courses		P (o)					
	Method of assessment		written examination (approx. 60 to 90 minutes)					
o3-M-IM-152-m01	Internal Medicine							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	unknown
	Courses		V (o)					
	Method of assessment		oral examination (one candidate each: approx. 15 minutes, or groups of up to 3 candidates: approx. 10 minutes per candidate) Assessment will usually have reference to one of the sub-specialities of internal medicine, e. g. cardiology, pulmonology, nephrology, endocrinology, oncology, gastroenterology, rheumatology, infectious disease.					
Key Skills Area (20 ECTS credits)								
General Key Skills (5 ECTS credits)								
In addition to the modules listed below, students may also take modules offered by JMU as part of the pool of general transferable skills (ASQ).								
General Key Skills (subject-specific)								
10-I-TUT1-152-m01	Tutor activity 1							
	ECTS	2	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		T (2)					
	Method of assessment		Wrap-up report on tutoring activities (5 to 10 pages)					
	Referred to in LPO I		§ 22 II Nr. 2 f) § 22 II Nr. 3 f)					

10-I-TUT2-152-m01	<b>Tutor activity 2</b>							
	ECTS	2	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		T (2)					
	Method of assessment		Wrap-up report on tutoring activities (5 to 10 pages)					
	Referred to in LPO I		§ 22 II Nr. 2 f) § 22 II Nr. 3 f)					
10-I-TUT3-152-m01	<b>Tutor activity 3</b>							
	ECTS	2	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		T (2)					
	Method of assessment		Wrap-up report on tutoring activities (5 to 10 pages)					
Subject-specific Key Skills (15 ECTS credits)								
10-I-SEM1-152-m01	<b>Seminar - Selected Topics in Computer Science 1</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
10-I-SEM2-152-m01	<b>Seminar - Selected Topics in Computer Science 2</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English					
10-I-PV-152-m01	<b>Project Presentation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (5)					
	Method of assessment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 b)					
Thesis (10 ECTS credits)								
10-I-BA-152-m01	<b>Bachelor's Thesis Informatics</b>							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		No courses assigned to module					
	Method of assessment		Bachelor's thesis (approx. 50 to 100 pages) Language of assessment: German and/or English					
	Additional Information		Time to complete: 10 weeks.					