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: 2019

Examination regulations version: 2019

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)):

26-Jul-2018 (2018-55)

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 (125 ECTS credits)							

Computer Science (85 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-191-m01	**Practical Course in Programming**							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical examination (programming exercises, approx. 240 hours) and 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).					
	other prerequisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.					
	Referred to in LPO I		§ 49 I Nr. 1 c) § 69 I Nr. 1 d)					
10-I-SWP-152-m01	**Practical course in software**							
	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	**Digital computer systems**							
	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-RIÜ-191-m01	**Computer Networks and Information Transmission**							
	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), § 69 I Nr. 1 c)					

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-MCS-191-m01	**Introduction into Human-Computer Interaction**						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3) + Ü (1)					
	Method of assessment	written examination (approx. 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					
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-191-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	**Mathematics 1 for students in Computer Science**						
	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	**Mathematics 2 for students in Computer Science**						
	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	**Algorithmic Graph Theory**						
	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 (25 ECTS credits)

Computer Science (15 ECTS credits)

10-I-SEC-191-m01	**IT Security**						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English				
	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				

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-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-m01	**Data Mining**						
	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-m01	**Advanced 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). Language of assessment: German and/or English creditable for bonus				
	Referred to in LPO I		§ 22 II Nr. 3 b)				

10-I-KT-191-m01	**Computational Complexity**						
	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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus				
	Referred to in LPO I		§ 22 II Nr. 3 b)				
10-I-KD-191-m01	**Cryptography and Data Security**						
	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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus				
	Referred to in LPO I		§ 22 II Nr. 3 b)				
10-I-3D-152-m01	**3D Point Cloud Processing**						
	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-191-m01	**Operating Systems**						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: English				
	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				
10-I-RAK-152-m01	**Computer Architecture**						
	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-SKS-191-m01	**Control Principles of Modern Communication Systems**						
	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				
10-I-GI-152-m01	**Selected Basics of Computer Science**						
	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				

subsidiary subject
Students must select one of the minors offered and must achieve the required number of ECTS credits in this minor.

Mathematics

10-M-DI-Maf-152-m01	**Introduction to Discrete Mathematics 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-NUM1af-152-m01	**Numerical Mathematics 1 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-STO-1af-152-m01	**Stochastics 1 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-ZT-Haf-152-m01	**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-m01	**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-m01	**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								
11-EFNF-152-m01	**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

12-NW-EBWL-152-mo1	**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 allo-cation of places		200 places (lottery)				

12-NW-EV-WL-152-mo1	**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 allo-cation 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-mo1	**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 allo-cation 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

04-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)					
04-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

07-1A1TI-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)				
07-2A2GEN-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)				
07-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				
07-3A3OE-KO-152-m01	**Plant and Animal Ecology**						
	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	**Genes, Molecules, Technologies**						
	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

02-J1-171-m01	**Introduction to the German Legal System**						
	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	**Commercial and Business Law for Economists**						
	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

04-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					

04-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

03-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)				

03-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	**Tutor activity 2**						
	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	**Tutor activity 3**						
	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	**Seminar - Selected Topics in Computer Science 1**							
	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	**Seminar - Selected Topics in Computer Science 2**							
	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	**Project Presentation**							
	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	**Bachelor's Thesis Informatics**							
	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.					