

Annex SFB

Studienfachbeschreibung (subject description, SFB) for Module studies (Bachelor) Computer Science

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 Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre-

modules in this SFB: ditable for bonus.

Information on Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the meassessment procedures: thod 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:

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

15-May-2019 (2019-36) 27-Jun-2019 (2019-41) 14-Nov-2019 (2019-52) 22-Jan-2020 (2020-13) o6-May-2020 (2020-39) 22-Jul-2020 (2020-57) 17-Dec-2020 (2020-110) 10-Mar-2021 (2021-17) 09-Jun-2021 (2021-58) 22-Dec-2021 (2021-85) 05-Jul-2022 (2022-52) 31-Jan-2023 (2022-86) 15-Jun-2023 (2023-58) 13-Dec-2023 (2023-107) 07-Aug-2024 (2024-82)

22-Jan-2025 (2025-1)

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:

Module title

Abbreviation

Appleviation	Module title		
Computer Science	(2019)	JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record MB 079 - - H 2019	page 2 / 41

ECTS	Di	ration	(in semesters)	Method of grading		Module level	
Courses		To be sp	ecified in the form)	K (y) with course type X	abbreviated as specified abo	ve and number of we	ekly contact hours y
Method of a	assessmen						
Only after s completion		if applic	able				
Other prere	quisites	if applic	able				
Participants on of places		iti- if applic	able				
Additional i	informatior	if applic	able				
Referred to	in LPO I	if applic	able (examination r	egulations for teaching	degree programmes)		

Summer Term 2019)										
10-l-AGT-152-m01	Algorit	thmic Gr	raph Theo	ry							
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	es		V (2)	+ Ü (2)	·					
	Metho	d of ass	essment	If ann of on date) Langu	anguage of assessment: German and/or English reditable for bonus						
	Referre	ed to in l	LPO I	§ 22 l	I Nr. 3 b)						
10-l-Gl-152-m01	Select	ed Basic	cs of Comp	puter S	Science						
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			V (4)	+ Ü (2)		*	•			
				of one date) Langu credit	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-APR-172-m01	Advan	nced Programming									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	2 S		V (2)	$V(2) + \ddot{U}(2)$						
	Method of assessment			If ann of on date) Langu	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 examin of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per codate). Language of assessment: German and/or English creditable for bonus						
	Referre	ed to in I	LPO I	§ 22 l	l Nr. 3 b)						
10-I-HWP-152-m01	Practio	cal cours	se in hard	ware							
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully com	pleted Modul level	undergraduate			
	Course	÷S	,	P (6)	•	,	,				
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)							

10-I-SEC-191-m01	IT Secu	rity						1					
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			V (2) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	If anr of on date) Lang	written examination (approx. 60 to 120 minutes). f 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-PP-191-m01	Practic	Practical Course in Programming											
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	(6)								
	Method	d of ass	essment	if anr	ractical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes) announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination f one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate).								
	other p	rerequi	sites		ded learning outo	comes of the following r	nodule are required: 10-I-GdP.	It is therefore st	rongly recommended to complete				
	Referred to in LPO I				§ 49 Nr. 1 c) § 69 Nr. 1 d)								
10-I-PV-152-m01	Project Presentation												
	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)		<u>.</u>							
	Method	d of ass	essment	ter so	oresentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compersonce at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English								
	Referre	d to in I	LPO I	§ 22 Nr. 3 b)									
10-I-SEM1-152-m01	Semina	ar - Sele	cted Topi	cs in (Computer Science	91							
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)	,		•						
	Method	d of ass	essment	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									
	Referre	d to in I	LPO I	§ 22	II Nr. 3 b)								

10-I-SEM2-152-	Semina	ar - Sele	cted Topi	cs in C	omputer Science 2							
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	·	S (2)	-			,				
	Method	d of ass	essment		Wrap-up report on tutoring activities (5 to 10 pages)							
					Language of assessment: German and/or English							
10-I-SKS-191-m01					ern Communication Systems							
	ECTS	8	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses				+ Ü (2)							
				If ann of on date) Langu credit	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 candilate). In an anguage of assessment: German and/or English reditable for bonus							
10-I-SWP-152-m01		al cours	se in softv	vare								
	ECTS 10 Duration				1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method	d of ass	essment		ical project (Comple 10 minutes per gro		are project in groups (approx. 3	oo hours per pe	erson) and final presentation (ap-			
	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 l Nr. 1 d)								
Winter Term 2019												
10-l-AGT-152-m01	Algorit	hmic Gı	aph Theo	ry								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	•	V (2)	+ Ü (2)	-	•	•				
				If ann of on date) Langu credit	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							
	Referre	d to in I	LPO I	§ 22 l	l Nr. 3 b)							

10-l-Gl-152-m01	Selected Ba	sics of Com	puter S	cience							
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	•	V (4) ·	+ Ü (2)			•				
	Method of a	ssessment	If ann of one date). Langu	written examination (approx. 60 to 120 minutes). f 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-APR-172-m01	Advanced Pi	rogramming									
10-1-Al K-1/2-11101	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	Duratio	,	+ Ü (2)	Method of glading	numerical glade	Modulitevel	undergraduate			
	Method of a	ssessment	` '		ox. 60 to 120 minute	25).					
			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 i	n LPO I	§ 22 l	l Nr. 3 b)							
10-I-HWP-152-m01	Practical co	urse in hard	ware								
	ECTS 10	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses		P (6)	P (6)							
	Method of a	ssessment		olio: completion of a es per project)	pprox. 3 to 10 projec	t assignments (approx. 250 ho	urs total) and p	resentation of results (approx. 10			
	Referred to i	n LPO I	§ 22 l	l Nr. 3 b)							
10-I-SEC-191-m01	IT Security						'				
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			+ Ü (2)							
				Module taught in: German and/or English							
	Method of a	ssessment	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-PP-191-m01	Practical Course in Programming												
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	d Modul level	undergraduate				
	Course	S		P (6)	•								
	Method	l of ass	essment	if ann	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 p	rerequi	sites		ntended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete his before.								
	Referre	d to in l	-PO I		49 Nr. 1 c) 69 Nr. 1 d)								
10-I-PV-152-m01	Project	Presen	tation										
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method of assessment			ter sc	resentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu- er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English								
	Referre	d to in l	LPO I	§ 22 l	l Nr. 3 b)								
10-I-SEM1-152-m01	Seminar - Selected Topics in Computer Science 1												
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	5		S (2)	•								
	Method of assessment			pic fro	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 l	§ 22 Nr. 3 b)								
10-I-SEM2-152-	Semina	r - Sele	cted Topi	ics in C	s in Computer Science 2								
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	5		S (2)	•	•		'					
	Method	l of ass	essment		Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English								
10-I-SKS-191-m01	Control	Princip	oles of Mo	odern C	ommunication Sys	tems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (4) -	+ Ü (2)		•						
	Method of assessment			If ann of one date). Langu	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-SWP-152-m01	Practic	Practical course in software												
	ECTS	10	Duration	n	1 semester	Method of grading	(not) successfully complete	ed Modul level	undergraduate					
	Course	S		P (6)	(6)									
	Method	d of ass	essment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)									
	Module comple	es succe eted	essfully	10-I-P	P, 10-l-ST									
	other p	rerequi	sites		dition, the knowleds y recommended.	ge and skills acquire	d in module 10-I-ADS are req	uired. Prior attend	lance of this module is therefore					
	Referre	d to in l	LPO I	§ 69	Nr. 1 d)									
Summer Term 2020	5													
10-I-SWP-152-m01	Practic	al cours	se in softv	vare										
	ECTS	10	Duration	า	1 semester	Method of grading	(not) successfully complete	ed Modul level	undergraduate					
	Course	S		P (6)										
	Method	d of ass	essment		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-P	P, 10-l-ST									
	other p	rerequi	sites		n addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore nighly recommended.									
	Referre	d to in l	LPO I	§ 69 l	§ 69 l Nr. 1 d)									
10-I-SKS-191-m01	Control	l Princip	oles of Mc	odern Communication Systems										
	ECTS	8	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		V (4)	+ Ü (2)									
	Method of assessment			If ann of one date) Langu	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 examinatio 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-SEM2-152-	Semina	ar - Sele	cted Topi	cs in (Computer Science 2									
mo1	ECTS	5	Duration	ก	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		S (2)										
				Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English										

10-I-SEM1-152-m01	Semina	r - Sele	cted Topi	cs in C	omputer Science	1					
	ECTS	5	Duration	1	1 semester	Method of grading nu	ımerical grade	Modul level	undergraduate		
	Course	S	•	S (2)				-			
	Method	of asse	essment		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						
						nt: German and/or English					
	Referre	d to in L	.PO I	§ 22 l	§ 22 II Nr. 3 b)						
10-I-PV-152-m01	Project	Presen	tation								
	ECTS	5	Duration	1	1 semester	Method of grading nu	ımerical grade	Modul level	undergraduate		
	Course	S		S (5)							
	Method	l of asse	essment	ter sc	resentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu- er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English						
	Referre	d to in L	PO I	§ 22 l	22 II Nr. 3 b)						
10-I-PP-191-m01	Practical Course in Programming										
	ECTS 10 Duration		Duration	1		Method of grading (n	ot) successfully completed	Modul level	undergraduate		
	Course	S		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 p	rerequis	sites	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 Nr. 1 c) § 69 Nr. 1 d)							
10-I-SEC-191-m01	IT Secu	rity									
	ECTS	5	Duration	n	1 semester	Method of grading nu	ımerical grade	Modul level	undergraduate		
	Course	S			+ Ü (2) ıle taught in: Gern	nan and/or English					
	Method	l of asse	essment	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-HWP-152-m01	Practica	al cour	se in hard	ware	-							
	ECTS	10	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	5		P (6)		,						
	Method	l of ass	essment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)							
	Referre	d to in	LPO I	§ 22	§ 22 II Nr. 3 b)							
10-I-APR-172-m01	Advanc	ed Pros	gramming									
	ECTS 5 Duratio			า	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S		V (2)	+ Ü (2)			•				
	Method	l of ass	essment	If anr of on date) Lang	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							
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)							
10-l-Gl-152-m01	Selected Basics of Computer Science											
	ECTS	5	Duration	 1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S		V (4)	+ Ü (2)	•	•					
	Method	l of ass	essment	If anr of on date) Lang	ounced by the lec e candidate each (of the course, the written examor an oral examination in group		replaced by an oral examination s (approx. 15 minutes per candi-			
10-I-AGT-152-m01	Algorit	hmic G	raph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5		V (2)	+ Ü (2)			^				
	Method	l of ass	essment	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								
	Referre	d to in	LPO I	§ 22	I Nr. 3 b)							

Winter Term 2020												
10-I-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S		V (2) ·	+ Ü (2)	·		•				
	Method	d of asso	essment	If ann of one date). Langu	anguage of assessment: German and/or English reditable for bonus							
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-l-Gl-152-m01	Selecto	ed Basic	s of Com	outer S	er Science							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			V (4) ·	+ Ü (2)			•				
				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-APR-172-m01	Advan	ed Prog	gramming	nming								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S		V (2) ·	$V(2) + \ddot{U}(2)$							
				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 examina of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cadate). Language of assessment: German and/or English creditable for bonus								
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-I-HWP-152-m01	Practic	al cours	e in hard	ware	1		,					
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully comp	oleted Modul level	undergraduate				
	Course	S		P (6)		, , ,		-				
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
	Referre	d to in L	PO I	§ 22 l	Nr. 3 b)							

10-I-SEC-191-m01	IT Secu	rity										
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) ıle taught in: Germ	nan and/or English		,				
	Method	d of ass	essment	If ann of on date) Langu	vritten examination (approx. 60 to 120 minutes). f 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 candilate). anguage of assessment: German and/or English reditable for bonus							
10-I-LRLA-172-m01	Aerospace Laboratory											
İ	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2)	+ P (2)	•		•				
	Method	d of ass	of assessment Completion of approx. 6 practical exercises (approx. 4 hours each)									
10-I-PLR-172-m01	Practic	al work	work Space Technology									
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (2)	(2)							
	Method	d of ass	essment	repor	t (5 to 10 pages) a	nd presentation (appro	ox. 15 minutes) on practical wor	k				
10-I-PP-191-m01	Practical Course in Programming											
	ECTS	10	Duratio	,		Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method	d of ass	essment	if ann	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 p	rerequi	sites		ded learning outco	omes of the following r	nodule are required: 10-I-GdP. I	t is therefore st	rongly recommended to complete			
	Referre	d to in I	LPO I		Nr. 1 c) Nr. 1 d)							
10-I-PV-152-m01	Project	Presen	tation	,								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		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								
	Referre	d to in I	LPO I	§ 22 II Nr. 3 b)								

10-I-SEM1-152-m01	Semina	r - Sele	cted Topi	cs in C	omputer Science 1							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)								
	Method	d of ass	essment	pic fro	written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent pic from the field of computer science Language of assessment: German and/or English							
	Referre			_	3 22 II Nr. 3 b)							
10-I-SEM2-152-	Semina	ir - Sele	cted Topi	cs in C	omputer Science 2		·					
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)	-							
	Method	d of ass	essment			g activities (5 to 10 pages) German and/or English						
10-I-SWP-152-m01	Practic	al cours	course in software									
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	S		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-l-P	P, 10-l-ST							
	other p	rerequi	sites	In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in l	PO I	§ 69 I	Nr. 1 d)							
10-I-SKS-191-m01	Control	Princip	les of Mo	dern C	Communication Syst	ems	'					
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		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								

Summer Term 202:	1											
10-l-AGT-152-m01	Algorit	thmic Gr	raph Theo	ry								
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	25	`	V (2)	+ Ü (2)	·						
	Referred to in LPO I			If ann of on date) Langu	vritten examination (approx. 60 to 120 minutes). f 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							
	Referre	ed to in I	LPO I	§ 22 l	I Nr. 3 b)							
10-l-Gl-152-m01	Select	ed Basic	s of Com	puter S	Science							
	ECTS 5 Duratio		1	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			V (4)	+ Ü (2)			•				
				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-APR-172-m01	Advan	ced Prog	gramming	<u> </u>								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	V (2) + Ü (2)							
	Method of assessment			If ann of on date) Langu	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 date). Language of assessment: German and/or English creditable for bonus							
	Referre	ed to in l	LPO I	§ 22 l	I Nr. 3 b)							
10-I-HWP-152-m01	Practio	cal cours	se in hard	ware								
	ECTS	10	Duration	<u> </u>	1 semester	Method of grading (not) successfully comp	oleted Modul level	undergraduate				
	Course	25		P (6)								
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
				§ 22 II Nr. 3 b)								

10-I-SEC-191-m01	IT Secu	rity				,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			V (2) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory										
	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2)	+ P (2)								
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)								
10-I-HMR-152-m01	Practical Measurement and Control System Engineering												
	ECTS 8 Duration			n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)									
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)				
10-I-PLR-172-m01	Practical work Space Technology												
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (2)									
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work									
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming									
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	P (6)								
	Method	d of ass	essment	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 p				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 Nr. 1 c) § 69 Nr. 1 d)									

10-I-PV-152-m01	Project	Presen	itation			,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method	d of ass	essment						sons with a knowledge of compu-				
					er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English								
	Doforro	d to in	L DO I			: German and/or Eng	11511						
40 CEM4 452 mo4	Referred to in LPO I § 22 II Nr. 3 b) Seminar - Selected Topics in Computer Science 1												
10-1-3E/W1-152-11101 		5 5ele	Duration		1 semester	undergraduate							
	Course		Duration	S (2)	1 Semester	Method of grading	Humencal grade	Modul level	undergraduate				
			occmont	` `	on alaboration (ann	2rox 40 to 45 pages) 2	nd procentation (appro	ov ao to (5 minutos) wit	n subsequent discussion on a to-				
	Method of assessment				om the field of com		na presentation (appro	30 to 45 minutes) wit	i subsequent discussion on a to-				
						t: German and/or Eng	lish						
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)								
10-I-SEM2-152-	Semina	ar - Sele	cted Topi	ics in (Computer Science 2	2							
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)	•								
	Method	d of ass	essment		Wrap-up report on tutoring activities (5 to 10 pages)								
			,		uage of assessmen	t: German and/or Eng	lish	,					
10-I-SWP-152-m01	Practical course in software ECTS 10 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate												
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully co	mpleted Modul level	undergraduate				
	Course			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.									
	Referre	d to in	LPO I	§ 69	§ 69 Nr. 1 d)								
10-I-SKS-191-m01	Contro	l Princi	oles of Mo	odern (Communication Sys	stems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	V (4)	+ Ü (2)	•	•	•					
	Metho	d of ass	essment			prox. 60 to 120 minut		,					
		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).								
				/		t: German and/or Eng	lish						

Winter Term 2021												
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	!S		V (2)	+ Ü (2)	·		•				
	Referred to in LPO I			If ann of one date) Langu	ritten examination (approx. 60 to 120 minutes). Fannounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate). anguage of assessment: German and/or English reditable for bonus							
	Referre	ed to in l	_PO I	§ 22 l	l Nr. 3 b)							
10-l-Gl-152-m01	Selecte	ed Basic	s of Com	outer S	cience							
	ECTS 5 Duratio		1	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses Method of assessment			V (4)	+ Ü (2)		•	•				
				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-APR-172-m01	Advand	ced Prog	gramming									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	25		V (2)	$V(2) + \ddot{U}(2)$							
	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 exami of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per date). Language of assessment: German and/or English creditable for bonus								
	Referre	ed to in I	_PO I	§ 22 l	l Nr. 3 b)							
10-I-HWP-152-m01	Practic	al cours	e in hard	ware	1		,					
	ECTS	10	Duration	า	1 semester	Method of grading (not) successfully comp	oleted Modul level	undergraduate				
	Course	25		P (6)								
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
				§ 22 l	Nr. 3 b)							

10-I-SEC-191-m01	IT Secu	rity				,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			V (2) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory										
	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2)	+ P (2)								
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)								
10-I-HMR-152-m01	Practical Measurement and Control System Engineering												
	ECTS 8 Duration			n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)									
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)				
10-I-PLR-172-m01	Practical work Space Technology												
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (2)									
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work									
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming									
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	P (6)								
	Method	d of ass	essment	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 p				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 Nr. 1 c) § 69 Nr. 1 d)									

10-I-PV-152-m01	Project	Presen	itation			,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method	d of ass	essment						sons with a knowledge of compu-				
					er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English								
	Doforro	d to in	L DO I			: German and/or Eng	11511						
40 CEM4 452 mo4	Referred to in LPO I § 22 II Nr. 3 b) Seminar - Selected Topics in Computer Science 1												
10-1-3E/W1-152-11101 		5 5ele	Duration		1 semester	undergraduate							
	Course		Duration	S (2)	1 Semester	Method of grading	Humencal grade	Modul level	undergraduate				
			occmont	` `	on alaboration (ann	2rox 40 to 45 pages) 2	nd procentation (appro	ov ao to (5 minutos) wit	n subsequent discussion on a to-				
	Method of assessment				om the field of com		na presentation (appro	30 to 45 minutes) wit	i subsequent discussion on a to-				
						t: German and/or Eng	lish						
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)				-				
10-I-SEM2-152-	Semina	ar - Sele	cted Topi	ics in (Computer Science 2	2							
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)	•								
	Method	d of ass	essment		Wrap-up report on tutoring activities (5 to 10 pages)								
			,		uage of assessmen	t: German and/or Eng	lish	,					
10-I-SWP-152-m01	Practical course in software ECTS 10 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate												
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully co	mpleted Modul level	undergraduate				
	Course			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.									
	Referre	d to in	LPO I	§ 69	§ 69 Nr. 1 d)								
10-I-SKS-191-m01	Contro	l Princi	oles of Mo	odern (Communication Sys	stems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	V (4)	+ Ü (2)	•	•	•					
	Method	d of ass	essment			prox. 60 to 120 minut		,					
		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).								
				/		t: German and/or Eng	lish						

Summer Term 2022	2											
10-l-AGT-152-m01	Algorith	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S	`	V (2) ·	+ Ü (2)							
	Method	l of asse	essment	If ann of one date). Langu	written examination (approx. 60 to 120 minutes). f 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							
	Referre	d to in L	-PO I	§ 22 l	l Nr. 3 b)							
10-l-Gl-152-m01	Selecte	d Basic	s of Comp	outer S	cience							
ļ	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			V (4) ·	+ Ü (2)		•					
			,	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-APR-172-m01	Advanc	ed Prog	ramming	•								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		V (2) ·	$V(2) + \ddot{U}(2)$							
	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 ca date). Language of assessment: German and/or English creditable for bonus								
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-I-HWP-152-m01	Practica	al cours	e in hard	ware								
	ECTS	10	Duration	า	1 semester	Method of grading (not) successfully comp	oleted Modul level	undergraduate				
	Courses	S		P (6)								
	Method	l of asse	essment	portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
				§ 22 II Nr. 3 b)								

10-I-SEC-191-m01	IT Secu	rity				,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			V (2) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory										
	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2)	+ P (2)								
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)								
10-I-HMR-152-m01	Practical Measurement and Control System Engineering												
	ECTS 8 Duration			n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)									
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)				
10-I-PLR-172-m01	Practical work Space Technology												
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (2)									
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work									
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming									
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	P (6)								
	Method	d of ass	essment	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 p				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 Nr. 1 c) § 69 Nr. 1 d)									

10-I-PV-152-m01	Project	Presen	itation			,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method	d of ass	essment						sons with a knowledge of compu-				
					er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) anguage of assessment: German and/or English								
	Doforro	d to in	L DO I			: German and/or Eng	11511						
40 CEM4 452 mo4	Referred to in LPO I § 22 II Nr. 3 b) Seminar - Selected Topics in Computer Science 1												
10-1-3E/W1-152-11101 		5 5ele	Duration		1 semester	undergraduate							
	Course		Duration	S (2)	1 Semester	Method of grading	Humencal grade	Modul level	undergraduate				
			occmont	` `	on alaboration (ann	2rox 40 to 45 pages) 2	nd procentation (appro	ov ao to (5 minutos) wit	n subsequent discussion on a to-				
	Method of assessment				om the field of com		na presentation (appro	30 to 45 minutes) wit	i subsequent discussion on a to-				
						t: German and/or Eng	lish						
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)								
10-I-SEM2-152-	Semina	ar - Sele	cted Topi	ics in (Computer Science 2	2							
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)									
	Method	d of ass	essment		Wrap-up report on tutoring activities (5 to 10 pages)								
			,		uage of assessmen	t: German and/or Eng	lish	,					
10-I-SWP-152-m01	Practical course in software ECTS 10 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate												
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully co	mpleted Modul level	undergraduate				
	Course			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.									
	Referre	d to in	LPO I	§ 69	§ 69 Nr. 1 d)								
10-I-SKS-191-m01	Contro	l Princi	oles of Mo	odern (Communication Sys	stems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	V (4)	+ Ü (2)	•	•	•	•				
	Metho	d of ass	essment			prox. 60 to 120 minut		,					
		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).								
				/		t: German and/or Eng	lish						

Winter Term 2022												
10-l-AGT-152-m01	Algorit	thmic G	raph Theo	ry								
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	+ Ü (2)	·						
	Metho	d of ass	essment	If ann of on date) Langu	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 candilate). anguage of assessment: German and/or English reditable for bonus							
	Referre	ed to in I	LPO I	§ 22 l	I Nr. 3 b)							
10-l-Gl-152-m01	Select	ed Basio	cs of Comp	puter S	Science							
	ECTS 5 Duratio		1	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses Method of assessment			V (4)	+ Ü (2)		•	•				
				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-APR-172-m01	Advan	ced Prog	gramming	<u> </u>								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	$V(2) + \ddot{U}(2)$							
	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 exof one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes date). Language of assessment: German and/or English creditable for bonus								
	Referre	ed to in I	LPO I	§ 22 l	l Nr. 3 b)							
10-I-HWP-152-m01	Practio	al cours	se in hard	ware								
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully con	npleted Modul level	undergraduate				
	Course	es	,	P (6)								
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
				minu	tes per project)							

10-I-SEC-191-m01	IT Secu	rity				,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			V (2) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory										
	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2)	+ P (2)								
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)								
10-I-HMR-152-m01	Practical Measurement and Control System Engineering												
	ECTS 8 Duration			n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)									
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)				
10-I-PLR-172-m01	Practical work Space Technology												
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (2)									
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work									
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming									
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	P (6)								
	Method	d of ass	essment	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 p				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 Nr. 1 c) § 69 Nr. 1 d)									

10-I-PV-152-m01	Project	Presen	itation			,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method	d of ass	essment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu-								
					er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English								
	Doforro	d to in	L DO I		anguage of assessment: German and/or English 22 II Nr. 3 b)								
40 CEM4 452 mo4		Referred to in LPO I § 22 II Nr. 3 b) Seminar - Selected Topics in Computer Science 1											
10-1-3E/W1-152-11101 		5 5ele	Duration				Modul level	undergraduate					
	Course		Duration	S (2)	1 Semester	Method of grading	Humencal grade	Modul level	undergraduate				
			essment	` `	on alaboration (ann	2rox 40 to 45 pages) 2	nd procentation (appro	ov ao to (5 minutos) wit	n subsequent discussion on a to-				
	Method	J 01 dSS	essillelli		om the field of com		na presentation (appro	30 to 45 minutes) wit	i subsequent discussion on a to-				
						t: German and/or Eng	lish						
	Referred to in LPO I			§ 22	II Nr. 3 b)								
10-I-SEM2-152-	Seminar - Selected Topics in Computer Science 2												
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)									
	Method	d of ass	essment			ing activities (5 to 10 p							
			,		uage of assessmen	t: German and/or Eng	lish	,					
10-I-SWP-152-m01	Practical course in software												
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully co	mpleted Modul level	undergraduate				
	Course			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)								
	Module		essfully	10-l-F	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.								
	Referre	d to in	LPO I	§ 69	§ 69 Nr. 1 d)								
10-I-SKS-191-m01	Contro	l Princi	oles of Mo	odern (Communication Sys	stems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	V (4)	+ Ü (2)	•	•	•	•				
	Method	d of ass	essment			prox. 60 to 120 minut		,					
		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 candi-											
				of on date)		approx. 20 minutes) o	r an oral examination i	in groups of 2 candidate	s (approx. 15 minutes per candi-				
				/		t: German and/or Eng	lish						

Summer Term 2023	3											
10-I-AGT-152-m01	Algorit	thmic Gr	aph Theo	ry								
	ECTS	5	Duratio	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	/ (2) + Ü (2)							
	Metho	d of ass	essment		written examination (approx. 60 to 120 minutes).							
				of on date) Lang	f 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							
	Referre	ed to in I	_PO I	§ 22	II Nr. 3 b)							
10-I-APR-172-m01	Advand	ced Prog	gramming	5								
	ECTS	5	Duratio	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	+ Ü (2)							
				of on date) Lang credi	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							
		ed to in I		_	§ 22 II Nr. 3 b) uter Science							
10-l-Gl-152-m01						Mathada famadina la manada da mada	NA11 11	Lundamur de ete				
	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Method of assessment			$V(4) + \ddot{U}(2)$ 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-HMR-152-m01	Practic	al Meas	urement	and C	ontrol System Engir	neering						
	ECTS	8	Duratio	1	1 semester	Method of grading (not) successfully	completed Modul level	undergraduate				
	Course	es	•	P (6)	•	<u>'</u>	•					
	Metho	d of ass	essment	proje	ct with presentation	n (approx. 15 minutes) and written elabora	ation (approx. 12 to 15 pa	ges)				

10-l-HWP-152-m01	Practical cours	e in hard	ware				,				
	ECTS 10	Duratio	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate			
	Courses	•	P (6)	P (6)							
	Method of asse	essment		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 L	PO I	§ 22 l	22 II Nr. 3 b)							
10-I-LRLA-172-m01	Aerospace Lab	oratory					,				
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) -	- P (2)							
	Method of asse	essment	Comp	letion of approx. 6 p	oractical exercises (a	pprox. 4 hours each)					
10-I-PLR-172-m01	Practical work	Space Te	chnolo	gy							
	ECTS 4	Duratio	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate			
	Courses		P (2)	(2)							
	Method of assessment report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work										
10-l-PP-191-m01	Practical Course in Programming										
	ECTS 10	Duratio	n		Method of grading	(not) successfully complete	d Modul level	undergraduate			
	Courses		P (6)								
	Method of asse	essment	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 prerequis	sites	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 Nr. 1 c) § 69 Nr. 1 d)								
10-I-PV-152-m01	Project Presen	tation									
	ECTS 5	Duratio	n	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 L	PO I	§ 22 l	Nr. 3 b)							

10-I-SEC-191-m01	IT Secu	rity										
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S	·		V (2) + Ü (2) Module taught in: German and/or English							
	Method of assessment			If ann of on date) Langu	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-SEM1-152-m01	Seminar - Selected Topics in Computer Science 1											
	ECTS 5 Duration			<u> </u>	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		S (2)			•					
	Method	l of ass	essment	pic fr	written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- pic from the field of computer science Language of assessment: German and/or English							
	Referre	d to in l	PO I	§ 22 l	§ 22 Nr. 3 b)							
10-I-SEM2-152-	Semina	r - Sele	cted Topi	cs in Computer Science 2								
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		S (2)								
	Method	l of ass	essment	Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English								
10-I-SKS-191-m01	Control	Princip	oles of Mo	dern (Communication Syst	tems						
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		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-SWP-152-m01	Practica	Practical course in software										
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully co	ompleted Modul level	undergraduate				
	Courses	5		P (6)								
	Method	l of asse	essment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)							
	Module comple		ssfully	10-l-P	10-I-PP, 10-I-ST							
	other pi	rerequis	sites	In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in L	.PO I	§ 69 I	Nr. 1 d)							
Winter Term 2023												
10-I-AGT-152-m01	Algorith	nmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5		V (2) -	+ Ü (2)							
				If ann of one date).	vritten examination (approx. 60 to 120 minutes). f 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							
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-l-Gl-152-m01	Selecte	d Basics of Computer Science										
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5		V (4) -	+ Ü (2)							
	Method	l of asse	essment	If ann of one date).	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 date). Language of assessment: German and/or English creditable for bonus							
10-I-APR-172-m01	Advanc	ed Prog	ramming									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5		V (2) -	+ Ü (2)							
	Method	l of asse	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									
	Referre	d to in L	.PO I	§ 22 l	l Nr. 3 b)							
Computer Science (2019)						JMU Würzburg ● genera	ted 19-Apr-2025 • exam. reg. data r	ecord MB 079 - - H 2019 page 30 / 41				

10-I-HWP-152-m01	Practical course in hardware											
	ECTS 10	Duratio	n	1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate				
	Courses		P (6)									
	Method of	fassessment	1 '	olio: completion of a tes per project)	approx. 3 to 10 proje	ct assignments (approx. 250 h	ours total) and p	resentation of results (approx. 10				
	Referred t	o in LPO I		§ 22 II Nr. 3 b)								
10-I-SEC-191-m01	IT Security											
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			V (2) + Ü (2) Module taught in: German and/or English								
	Method of	fassessment	If ann of on date) Lange	rritten examination (approx. 60 to 120 minutes). announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate). anguage of assessment: German and/or English reditable for bonus								
10-I-LRLA-172-m01	Aerospace	e Laboratory										
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	,	V (2)	+ P (2)								
	Method of	fassessment	Comp	oletion of approx. 6	practical exercises (a	pprox. 4 hours each)						
10-I-HMR-152-m01	Practical Measurement and Control System Engineering											
	ECTS 8	Duratio	n	1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate				
	Courses		P (6)									
	Method of	fassessment	proje	ct with presentation	ı (approx. 15 minutes) and written elaboration (app	rox. 12 to 15 pag	es)				
10-I-PLR-172-m01	Practical v	work Space Te	Space Technology									
	ECTS 4	Duratio	n	1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate				
	Courses		P (2)									
	Method of	fassessment	repor	t (5 to 10 pages) and	d presentation (appr	ox. 15 minutes) on practical wo	ork					
10-I-PP-191-m01	Practical (Course in Prog	gramm	ing	_							
	ECTS 10	Duratio	n		Method of grading	(not) successfully completed	d Modul level	undergraduate				
	Courses		P (6)									
	Method of	fassessment	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 prer	equisites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.								
	Referred to	o in LPO I	§ 49 Nr. 1 c) § 69 Nr. 1 d)									
Computer Science (2019)			•			JMU Würzburg • generated 19-Apr-2	2025 • exam. reg. data r	record MB 079 - - H 2019 page 31 / 41				

10-I-PV-152-m01	Project	Presen	itation			,							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (5)									
	Method	d of ass	essment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu-								
					er science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English								
	Doforro	d to in	L DO I		anguage of assessment: German and/or English 22 II Nr. 3 b)								
40 CEM4 452 mo4		Referred to in LPO I § 22 II Nr. 3 b) Seminar - Selected Topics in Computer Science 1											
10-1-3E/W1-152-11101 		5 5ele	Duration				Modul level	undergraduate					
	Course		Duration	S (2)	1 Semester	Method of grading	Humencal grade	Modul level	undergraduate				
			essment	` `	on alaboration (ann	2rox 40 to 45 pages) 2	nd procentation (appro	ov ao to (5 minutos) wit	n subsequent discussion on a to-				
	Method	J 01 dSS	essillelli		om the field of com		na presentation (appro	30 to 45 minutes) wit	i subsequent discussion on a to-				
						t: German and/or Eng	lish						
	Referred to in LPO I			§ 22	II Nr. 3 b)				-				
10-I-SEM2-152-	Seminar - Selected Topics in Computer Science 2												
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)	•								
	Method	d of ass	essment			ing activities (5 to 10 p							
			,		uage of assessmen	t: German and/or Eng	lish	,					
10-I-SWP-152-m01	Practical course in software												
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully co	mpleted Modul level	undergraduate				
	Course			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)								
	Module		essfully	10-l-F	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.								
	Referre	d to in	LPO I	§ 69	§ 69 Nr. 1 d)								
10-I-SKS-191-m01	Contro	l Princi	oles of Mo	odern (Communication Sys	stems		,					
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	V (4)	+ Ü (2)	•	•	•	•				
	Metho	d of ass	essment			prox. 60 to 120 minut		,					
		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 candi-											
				of on date)		approx. 20 minutes) o	r an oral examination i	in groups of 2 candidate	s (approx. 15 minutes per candi-				
				/		t: German and/or Eng	lish						

Summer Term 202	4										
10-l-AGT-152-m01	Algorit	thmic Gi	raph Theo	ry							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	es		V (2)	+ Ü (2)	·	•	•			
	Metho	d of ass	essment	If ann of on date) Langu	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						
	Referre	ed to in I	LPO I	§ 22 l	I Nr. 3 b)						
10-l-Gl-152-m01	Select	ed Basic	s of Com	puter S	Science		'				
	ECTS 5 Duratio		Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			V (4)	+ Ü (2)		•	•			
				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-APR-172-m01	Advan	ced Prog	gramming	<u> </u>							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	es		$V(2) + \ddot{U}(2)$							
	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 examina of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per caldate). Language of assessment: German and/or English creditable for bonus							
	Referre	ed to in I	LPO I	§ 22 II Nr. 3 b)							
10-I-HWP-152-m01	Practio	cal cours	se in hard	ware							
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully com	pleted Modul level	undergraduate			
	Course	es	1	P (6)	•	,	,				
				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)							

10-I-SEC-191-m01	IT Secu	rity				,						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) ıle taught in: Germa	an and/or English		,				
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory									
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ P (2)							
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)							
10-I-HMR-152-m01	Practical Measurement and Control System Engineering											
	ECTS	8	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)			
10-I-PLR-172-m01	Practical work Space Technology											
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (2)								
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work								
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming								
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method	d of ass	essment	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 p			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 Nr. 1 c) § 69 Nr. 1 d)								

10-I-PV-152-m01	Project	Project Presentation											
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	S		S (5)									
	Method	of ass	essment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu-								
				ter sc	rer science at a trade fair as well as discussion (approx. 10 to 15 minutes total) Language of assessment: German and/or English								
	Referre	d to in I	PO I		3 22 II Nr. 3 b)								
10-I-SEM1-152-m01													
10 1 3EWI 132 11101		5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		Baration	S (2)	13011103101	method of grading	Hamerical Stade	modul tevel	and engineered				
			essment	· · ·	n elaboration (app	rox. 10 to 15 pages) a	nd presentation (approx. 30 to	45 minutes) wit	h subsequent discussion on a to-				
				pic fro	om the field of com	puter science		13					
	Referred to in LPO I					: German and/or Eng	lish						
					l Nr. 3 b)								
10-I-SEM2-152-					omputer Science 2	-							
mo1		5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		_	S (2)									
	Method of assessment			Wrap Langı	-up report on tutori lage of assessment	ng activities (5 to 10 p t: German and/or Eng	ages) lish						
10-I-SWP-152-m01	Practical course in software												
	ECTS	10	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Courses	S		P (6)			•	•					
	Method	of ass	essment	practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)									
	Module comple		essfully	10-l-P	P, 10-l-ST								
	other p	rerequi	sites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is there highly recommended.								
	Referre	d to in l	PO I	§ 69	Nr. 1 d)								
10-I-SKS-191-m01	Control	Princip	oles of Mo	dern (Communication Sys	stems							
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	S	-	V (4)	+ Ü (2)			•					
	Method	of ass	essment	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									

Winter Term 2024												
10-l-AGT-152-m01	Algorith	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		V (2)	+ Ü (2)							
	Method	l of asse	essment	If ann of one date) Langu	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							
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-l-Gl-152-m01	Selecte	d Basic	s of Com	puter S	cience		'	,				
	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			V (4)	+ Ü (2)		•					
				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-APR-172-m01	Advanced Programming											
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	S		V (2)	$V(2) + \ddot{U}(2)$							
	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								
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)		1					
10-I-HWP-152-m01	Practica	al cours	e in hard	ware								
	ECTS	10	Duration	n	1 semester	Method of grading (not) successfully of	completed Modul level	undergraduate				
	Courses	S		P (6)				-				
	Method	l of asse	essment	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 l	l Nr. 3 b)							

10-I-SEC-191-m01	IT Secu	rity				,						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) ıle taught in: Germa	an and/or English		,				
	Method	d of ass	essment	If ann of on date) Langu	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-LRLA-172-m01	Aerosp	ace Lab	oratory									
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ P (2)							
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)							
10-I-HMR-152-m01	Practical Measurement and Control System Engineering											
	ECTS	8	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method of assessment			proje	ct with presentatio	n (approx. 15 minutes)	and written elaboration (appro	ox. 12 to 15 page	es)			
10-I-PLR-172-m01	Practical work Space Technology											
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (2)								
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work								
10-l-PP-191-m01	Practic	al Cours	se in Prog	ramming								
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)								
	Method	d of ass	essment	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 p			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 Nr. 1 c) § 69 Nr. 1 d)								

10-I-PV-152-m01	Project Presentation											
	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			S (5)	S (5)							
	Method	d of ass	essment	presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu-								
					ter science at a trade fair as well as discussion (approx. 10 to 15 minutes total)							
	Referred to in LPO I				Language of assessment: German and/or English § 22 II Nr. 3 b)							
10-I-SEM1-152-m01						1						
10 3EWI 152 11101	ECTS 5 Duration				1 semester Method of grading numerical grade Modul level undergraduate							
	Course		Daration	S (2)	Tacinester	Method of Stading	numerical glade	Modulitevel	undergraduate			
					n elaboration (app	prox. 10 to 15 pages) a	nd presentation (approx. 30	to 45 minutes) wit	h subsequent discussion on a to-			
				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								
					§ 22 II Nr. 3 b)							
10-I-SEM2-152-					omputer Science 2							
mo1		5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course		_	` '	S (2)							
	Method	d of ass	essment	Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English								
10-I-SWP-152-m01	Practical course in software											
	ECTS	10	Duration	1	1 semester	Method of grading	(not) successfully complet	ted Modul level	undergraduate			
	Course	S	•	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)								
	Module	es succe eted	essfully	10-l-P	P, 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.								
	Referre	d to in I	PO I	§ 69 l	Nr. 1 d)							
10-I-SKS-242-m01	Control Principles of Modern Communication Systems											
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		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								

Summer Term 202	5											
10-l-AGT-152-m01	Algorithmic Graph Theory											
	ECTS 5 Duration			n 1 semester		Method of grading numerical grade	Modul level	undergraduate				
	Course	25	•	V (2) ·	(2) + Ü (2)							
	Method	d of ass	essment	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								
	Referre	ed to in I	_PO I	§ 22 l	§ 22 II Nr. 3 b)							
10-l-Gl-152-m01	Selecte	ed Basic	s of Com	outer S	uter Science							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (4) ·	+ Ü (2)		•					
		,		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-APR-172-m01	Advanc	ced Prog										
	ECTS 5 Duratio			1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Course	es.		$V(2) + \ddot{U}(2)$								
	Metho	d of ass	essment	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								
	Referre	d to in I	PO I	§ 22 II Nr. 3 b)								
10-I-HWP-152-m01	Practic	al cours	se in hard	ware								
	ECTS	10	Duration	ı	1 semester	Method of grading (not) successfully com	pleted Modul level	undergraduate				
	Courses			P (6)								
				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 l	§ 22 II Nr. 3 b)							

10-I-SEC-191-m01	IT Security													
	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		V (2) + Ü (2) Module taught in: German and/or English										
	Method	d of ass	essment	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-LRLA-172-m01	Aerospace Laboratory													
	ECTS 6 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		V (2)	V (2) + P (2)									
	Method	d of ass	essment	Comp	Completion of approx. 6 practical exercises (approx. 4 hours each)									
10-I-HMR-152-m01	Practic	al Meas	urement	and Control System Engineering										
	ECTS	8	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Course	S		P (6)										
	Method	of ass	essment	project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)										
10-I-PLR-172-m01	Practical work Space Technology													
	ECTS	4	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Course	S		P (2)										
	Method	d of ass	essment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work										
10-l-PP-191-m01	Practical Course in Programming													
	ECTS	10	Duratio	1		Method of grading	(not) successfully completed	Modul level	undergraduate					
	Course	S		P (6)										
	Method	d of ass	essment	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 p			Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.										
	Referre	d to in l	LPO I	§ 49 Nr. 1 c) § 69 Nr. 1 d)										

10-I-SEM1-152-m01	Seminar - Selected Topics in Computer Science 1										
	ECTS 5 Duration		1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			S (2)	S (2)						
	Method	d of ass	essment	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							
	Referre	d to in I	_PO I	§ 22 Nr. 3 b)							
10-I-SEM2-152-	Semina	ar - Sele	cted Topi	cs in Computer Science 2							
mo1	ECTS 5 Dura		Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			S (2)							
	Method	d of ass	essment	Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English							
10-I-SKS-242-m01	Control Principles of Modern Communication Systems										
	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2) + Ü (2)							
	Method	d of ass	essment	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							