

## **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:  $\mathbf{E} = \text{field trip}$ ,  $\mathbf{K} = \text{colloquium}$ ,  $\mathbf{O} = \text{conversatorium}$ ,  $\mathbf{P} = \text{placement/lab course}$ ,  $\mathbf{R} = \text{project}$ ,  $\mathbf{S} = \text{seminar}$ ,  $\mathbf{T} = \text{tutorial}$ ,  $\ddot{\mathbf{U}} = \text{exercise}$ ,  $\mathbf{V} = \mathbf{V} = \mathbf{V}$ 

= 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)

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

Every module will be described using the following form:

Abbreviation	Module title	odule title											
	ECTS		Durati	ion	(in semesters)	Method of grading		Module level					
	Courses To be				cified in the form X	(y) with course type λ	Cabbreviated as specified abo	ve and number of we	ekly contact hours y				
	Method of assessment												

Only afte completi	successful if applicable n of	
Other pr	requisites if applicable	
Participa on of pla	its and allocati- if applicable	
Addition	l information if applicable	
Referred	o in LPO I if applicable (examination	regulations for teaching-degree programmes)

Summer Term 2019	(o ECTS	S credits	5)									
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numeric	al grade	Modul level	undergraduate			
	Course	!S	•	V (2)	$V(2) + \ddot{U}(2)$							
	Metho	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							
	Referre	ed to in I	LPO I		l Nr. 3b							
10-l-Gl-152-m01	Selecto	ed Basic	s of Com	outer S	ter Science							
	ECTS	5	Duration	า	1 semester	Method of grading numeric	al grade	Modul level	undergraduate			
	Course	!S	•	V (4)	+ Ü (2)							
			If announced by the lecturer at the beginning of the course, the written examination may be of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidate date).  Language of assessment: German and/or English creditable for bonus									
10-I-APR-172-m01			gramming					1	_			
	ECTS	5	Duration		1 semester	Method of grading   numeric	al grade	Modul level	undergraduate			
	Course	_			+ Ü (2)							
	Metho	d 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							
10-I-HWP-152-m01	Practic	al cours	se in hard	ware								
	ECTS	10	Duration	1	1 semester	Method of grading (not) su	ccessfully completed	Modul level	undergraduate			
	Course	25		P (6)								
	Method of assessment			portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
	Referre	ed to in I	LPO I	§ 22	I Nr. 3b							

10-I-SEC-191-m01	IT Secu	rity									
	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	S			+ Ü (2) lle taught in: Germa	nn and/or English					
	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						
10-I-PP-191-m01	Practica	al Cours	e in Prog	rammi	ng						
	ECTS	10	Duration	า		Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses	 S		P (6)	-						
	Method	l of asse	essment	if ann of on date)	oractical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).						
	other prerequisites				ntended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.						
10-I-PV-152-m01	Project	Presen	tation								
	ECTS	5	Duration	1	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							
	Referre	d to in L	.PO I	§ 22 II Nr. 3b							
10-I-SEM1-152-m01	Semina	r 1									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	S		S (2)							
	Method of assessment			pic fr	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 L	PO I	§ 22 l	l Nr. 3b						
10-I-SEM2-152-	Semina	r 2				,					
mo1	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	S	•	S (2)			•				
	Method of assessment			Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English							

10-I-SKS-191-m01	Control	Princi	ples of Mo	dern C	lern Communication Systems							
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) +	· Ü (2)			•				
	Method	l of ass		If anno of one date). Langua	vritten examination (approx. 60 to 120 minutes).  I 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).  anguage of assessment: German and/or English reditable for bonus							
10-I-SWP-152-m01	Practica	al cour	se in softw	/are								
	ECTS	10	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)			, , ,					
	Method	l of ass			ractical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (aprox. 10 minutes per group)							
	Module comple		essfully	10-l-PF	-l-PP, 10-l-ST							
	other prerequisites				addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore ghly recommended.							
	Referre	d to in	LPO I	§ 69 I	Nr. 1d							
Winter Term 2019 (	o ECTS o	redits)										
10-I-AGT-152-m01	Algorithmic Graph Theory											
	ECTS	<u> </u>			1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) +	· Ü (2)							
	Method of assessmer				ounced by the lect candidate each (a	urer at the beginning	of the course, the written exam or an oral examination in groups		replaced by an oral examination s (approx. 15 minutes per candi-			
	Referre	d to in	LPO I	§ 22	Nr. 3b	,						
10-l-Gl-152-m01	Selecte	d Basi	cs of Comp	outer S	cience							
	ECTS	5	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								

10-I-APR-172-m01	Advanc	ed Prog	gramming	5		,						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ Ü (2)							
	Method	d of ass	essment	If ann	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).							
				credit	Language of assessment: German and/or English creditable for bonus							
10-I-HWP-152-m01	Practic	al cours	se in hard	ware								
	ECTS	10	Duratio		1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate			
	Courses			P (6)								
	Method	d of ass	essment		ortfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 ninutes per project)							
	Referre	d to in I	LPO I	§ 22 l	l Nr. 3b							
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	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 candate). Language of assessment: German and/or English creditable for bonus								
10-I-PP-191-m01	Practic	al Cour	se in Prog	ramming								
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	d 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 prerequisites			Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.								

10-I-PV-152-m01	Project	Presen	tation				,					
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5		S (5)								
	Method	of asso	essment		presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of compu-							
				terso	ter 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		22 II Nr. 3b							
10-I-SEM1-152-m01				3 22								
10 1 32/11 132 11101		5	Duratio	 n	1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses		Baration	S (2)	1 Semester	method of Stading Hamehout Stade	modulitevel					
			essment	<u> </u>	en elaboration (ap	prox. 10 to 15 pages) and presentation (appro	ox. 30 to 45 minutes) wit	h subsequent discussion on a to-				
				pic fr	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						
	Referred to in LPO I § 22 II Nr. 3b											
10-I-SEM2-152-	Semina		1		ſ	1						
mo1		5	Duratio		1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses	_	_	S (2)								
	Method	of asso	essment			ring activities (5 to 10 pages)						
10-l-SKS-191-m01	Language of assessment: German and/or English  Control Principles of Modern Communication Systems											
10 1 3K3 191 11101	ECTS 8 Duration				1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses		Daration		+ Ü (2)	Method of glading humeneat glade	Modulievel	undergraduate				
		_	essment	` ''	written examination (approx. 60 to 120 minutes).							
	Method	01 433	essinent		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-							
					date).							
					Language of assessment: German and/or English creditable for bonus							
10-I-SWP-152-m01	Practica	al cours	e in softv	vare	1		1					
	ECTS	10	Duratio	n	1 semester	Method of grading (not) successfully cor	mpleted   Modul level	undergraduate				
	Courses	5		P (6)				-				
	Method	of asso	essment	pract	ical project (Comp	oletion of a larger software project in groups (a	approx. 300 hours per p	erson) and final presentation (ap-				
					10 minutes per gr	oup)						
	Module comple		essfully	10-l-F	PP, 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.							
					§ 69   Nr. 1d							

Summer Term 2020	o (o ECTS credits)							
10-I-SWP-152-m01	Practical course in softv	tware						
	ECTS 10 Duration	on 1 semester Method of grading (not) successfully completed Modul level undergradua	te					
	Courses	P (6)						
	Method of assessment	practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)						
	Modules successfully completed	10-I-PP, 10-I-ST						
	other prerequisites	In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this mohighly recommended.	odule is therefore					
	Referred to in LPO I	§ 69   Nr. 1d						
10-I-SKS-191-m01	Control Principles of Mo	Modern Communication Systems						
	ECTS 8 Duration	on 1 semester Method of grading numerical grade Modul level undergradua	te					
	Courses	V (4) + Ü (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 of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 m date).  Language of assessment: German and/or English creditable for bonus						
10-I-SEM2-152-	Seminar 2							
mo1	ECTS 5 Duration	on 1 semester Method of grading numerical grade Modul level undergradua	te					
	Courses	S (2)						
	Method of assessment	Wrap-up report on tutoring activities (5 to 10 pages) Language of assessment: German and/or English						
10-I-SEM1-152-m01	Seminar 1							
	ECTS 5 Duration	on 1 semester Method of grading numerical grade Modul level undergradua	te					
	Courses	S (2)						
	Method of assessment	written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English						
	Referred to in LPO I	§ 22 II Nr. 3b						
10-I-PV-152-m01	Project Presentation							
	ECTS 5 Duration	on 1 semester Method of grading numerical grade Modul level undergradua	te					
	Courses	S (5)						
	Method of assessment	presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total)  Language of assessment: German and/or English						
	Referred to in LPO I	§ 22 II Nr. 3b						
Computer Science (2019)		JMU Würzburg • generated 24-Feb-2024 • exam. reg. data record MB 079 - - H 20	page 9 / 34					

10-I-PP-191-m01	Practic	al Cours	se in Prog	rammi	ng			,			
	ECTS	10	Duration	1		Method of grading	(not) successfully completed	d Modul level	undergraduate		
	Course	S		P (6)				`			
	Method	d of asse	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	rerequis	sites		ntended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete his before.						
10-I-SEC-191-m01	IT Secu	rity									
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S			/ (2) + Ü (2) Module taught in: German and/or English						
	Method	d 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						
10-I-HWP-152-m01	Practical course in hardware										
			Duratio	<u> </u>	1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate		
	Course	S		P (6)	· (6)						
	Method	d 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)							
	Referre	d to in L	PO I	§ 22 II Nr. 3b							
10-I-APR-172-m01	Advanc	ed Prog	gramming	<u> </u>							
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2) -	+ Ü (2)						
	Method	d 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 examinatio of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cand date).  Language of assessment: German and/or English creditable for bonus							

10-l-Gl-152-m01	Selecte	d Basic	s of Comp	uter Science								
	ECTS	5	Duration	1 semest	er	Method of grading nu	ımerical grade	Modul level	undergraduate			
	Courses	5		V (4) + Ü (2)				*				
	Method	l of ass		If announced by of one candidat date). Language of ass	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-AGT-152-m01	Algorith	nmic Gı	raph Theoi									
		5	Duration	<u> </u>	er	Method of grading Inc	ımerical grade	Modul level	undergraduate			
	Courses	5		V (2) + Ü (2)								
	Method	l of ass	essment	written examina If announced by of one candidat date). Language of ass	written examination (approx. 60 to 120 minutes). Tannounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination from candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Tately.  Tale of the course, the written examination may be replaced by an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Tale of the course, the written examination may be replaced by an oral examination may be replaced by an oral examination from a candidate (approx. 15 minutes) and are cardidates (approx. 15 minutes) are candidates (approx. 15 minutes) are candidates).							
	Referred to in LPO I § 22 II Nr. 3b											
Winter Term 2020	(o ECTS c	redits)										
10-I-AGT-152-m01	Algorith	nmic Gı	aph Theo	ry								
	ECTS	5	Duration	1 semest	er	Method of grading nu	ımerical grade	Modul level	undergraduate			
	Courses	5		V (2) + Ü (2)				·				
	Method	l of ass		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	d to in I	LPO I	§ 22 II Nr. 3b								
10-l-Gl-152-m01	Selecte	d Basic	s of Comp	uter Science								
	ECTS	5	Duration	1 semest	er	Method of grading nu	ımerical grade	Modul level	undergraduate			
	Courses	5		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-APR-172-m01	Advanc	ed Prog	gramming					-			
	ECTS	5	Duratio	n	1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course	S		V (2) ·	+ Ü (2)						
	Method	d of ass	essment	If ann of one date). Langu	Language of assessment: German and/or English creditable for bonus						
11111/5	<b>5</b> 11										
10-I-HWP-152-m01	Practical course in hardware  ECTS 10 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate							<del> </del>			
			Duratio		1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course			P (6)							
	Method	d of ass	essment		ortfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 inutes per project)						
	Referre	d to in I	PO I	§ 22 l	22 II Nr. 3b						
10-I-SEC-191-m01	IT Security										
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) le taught in: Germa	n and/or English					
	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 examin of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per c date). 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) ·	V (2) + P (2)						
	Method	d of ass	essment	Comp	letion of approx. 6 p	oractical exercises (approx. 4 hours each)					
10-I-PLR-172-m01	Practic	al work	Space Te	chnolo	gy		'				
	ECTS	4	Duratio	n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course	S		P (2)							
	Method	d of ass	essment	repor	t (5 to 10 pages) and	presentation (approx. 15 minutes) on practical wo	rk				

10-I-PP-191-m01	Practic	al Cour	se in Prog	ramm	amming								
	ECTS	10	Duratio	n		Method of grading	g (not) successfully comp	oleted   Modul le	evel	undergraduate			
	Course	S		P (6)				*					
	Method	d of ass	essment	if anr	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.								
10-I-PV-152-m01	Project Presentation												
	ECTS	5	Duratio	n	1 semester	Method of grading	g numerical grade	Modul le	evel	undergraduate			
	Course	S		S (5)				-					
			essment	ter so	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								
	Referred to in LPO I § 22 II Nr. 3b												
10-I-SEM1-152-m01		r 1											
	ECTS	5	Duration	n	1 semester	Method of grading	g numerical grade	Modul le	evel	undergraduate			
	Course	S	,	S (2)									
	Method of assessment			pic fr	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	3 22 II Nr. 3b								
10-I-SEM2-152-	Seminar 2												
mo1	ECTS	5	Duratio	n	1 semester	Method of grading	g numerical grade	Modul le	evel	undergraduate			
	Course			S (2)	I.	,							
	Method	d of ass	essment			ring activities (5 to 10 nt: German and/or En							
10-I-SWP-152-m01	Practic	al cours	se in softv	vare	'	'		'	"				
	ECTS	10	Duratio	n	1 semester	Method of grading	g (not) successfully comp	oleted   Modul le	evel	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 comple		essfully		PP, 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				y recommended. I Nr. 1d								

10-I-SKS-191-m01	Contro	l Princip	les of Mo	dern C	Communication Sys	tems		,				
	ECTS	8	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) ·	+ Ü (2)			•				
	Method	d of asso	essment		vritten examination (approx. 60 to 120 minutes).							
				of one date). Langu	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 candilate).  anguage of assessment: German and/or English reditable for bonus							
Summer Term 202:	ı (o ECTS	credits	s)									
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2) ·	+ Ü (2)			•	•			
	method of assessment			If ann of one 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	Referred to in LPO I		§ 22 l	l Nr. 3b							
10-l-Gl-152-m01		ed Basic	s of Com	puter S	cience							
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course		_	. 12	+ Ü (2)							
	Method of assessment			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 replated of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes).  Language of assessment: German and/or English creditable for bonus								
10-I-APR-172-m01	Advanc	ed Prog	ramming									
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2) ·	+ Ü (2)							
	Method of assessment			written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cadate). Language of assessment: German and/or English creditable for bonus								

10-I-HWP-152-m01	1 Practical course in hardware										
	ECTS 1	10 [	Ouration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses			P (6)							
	Method o	of assess			olio: completion of a es per project)	approx. 3 to 10 projec	t assignments (approx. 250 ho	ours total) and p	resentation of results (approx. 10		
	Referred	to in LPC	Οl	§ 22 l	l Nr. 3b						
10-I-SEC-191-m01	IT Security										
	ECTS 5	5 [	Ouration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses				+ Ü (2) le taught in: Germa	n and/or English					
	Method o	of assess		If ann of one date).	tten examination (approx. 60 to 120 minutes). Innounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candite). Inguage of assessment: German and/or English ditable for bonus						
10-I-LRLA-172-m01	Aerospac	ce Labor	atory								
	ECTS 6 Duratio			1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (2) -	+ P (2)						
	Method o	of assess	sment	Comp	letion of approx. 6	practical exercises (a	pprox. 4 hours each)				
10-I-HMR-152-m01	Practical Measurement and Control System Engineering										
	ECTS 8	3 [	Ouration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses	Courses			P (6)						
	Method o	of assess	sment	project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)							
10-I-PLR-172-m01	Practical	work Sp	oace Te	chnology							
	ECTS 4	4 C	Ouration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses			P (2)							
	Method o	of assess	sment	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work							
10-I-PP-191-m01	Practical	Course	in Prog	rammi	ng			,			
	ECTS 1	10 [	Ouration			Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses			P (6)	,						
	Method o	of assess		practical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).							
	other prerequisites			Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.							

10-I-PV-152-m01	Project	Presen	tation										
	ECTS	5	Duration	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-								
					ter 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 l	PO I		22 II Nr. 3b								
10-I-SEM1-152-m01				3	,~								
		5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		S (2)			<del>-</del>						
	Method of assessment			pic fro	om the field of com			to 45 minutes) wit	h subsequent discussion on a to-				
	Referred to in LPO I				 I Nr. 3b	, ,							
10-I-SEM2-152-	Semina	ar 2						-					
mo1	ECTS	5	Duration	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-SWP-152-m01	Practical course in software												
	ECTS	10	Duratio	n	1 semester	Method of grading	(not) successfully complete	ed 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		essfully	10-l-P	10-I-PP, 10-I-ST								
	other p	rerequi	sites		dition, the knowled recommended.	lge and skills acquired	d in module 10-I-ADS are req	uired. Prior attend	ance of this module is therefore				
	Referre	d to in l	PO I	§ 69 l	Nr. 1d								
10-I-SKS-191-m01	Contro	l Princip	les of Mo	dern (	Communication Sys	stems							
	ECTS	8	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S			+ Ü (2)								
	Method			If ann of one date) Langu	ounced by the lect e candidate each (a		of the course, the written ex- r an oral examination in grou		replaced by an oral examination s (approx. 15 minutes per candi-				

Winter Term 2021 (	o ECTS	credits)										
10-l-AGT-152-m01	Algorit	thmic Gr	aph Theo	ry								
	ECTS	5	Duration	n	1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Course	es		V (2)	(2) + Ü (2)							
	Method of assessment			writte	ritten examination (approx. 60 to 120 minutes).							
					nnounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral exa ne candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes p							
				of on date)		approx. 20 minutes) or an oral examination in g	roups of 2 candidate	s (approx. 15 minutes per candi-				
				Langi	uage of assessmen table for bonus							
	Referre	ed to in l	PO I	§ 22	II Nr. 3b							
10-l-Gl-152-m01	Select	ed Basic	s of Com	puter S	Science							
	ECTS 5 Duratio			n	1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Course	es	•	V (4)	+ Ü (2)	·						
				date) Langi	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	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es		V (2)	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 exam of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes pe date). Language of assessment: German and/or English creditable for bonus								
10-I-HWP-152-m01	Practio	al cours	se in hard	ware			,					
	ECTS	10	Duration	n	1 semester	Method of grading (not) successfully compl	eted Modul level	undergraduate				
	Course	es		P (6)	•	·		•				
	Method of assessment		essment	portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)								
	Referre	ed to in I	PO I	§ 22	II Nr. 3b							

10-I-SEC-191-m01	IT Security	,										
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses			+ Ü (2)								
				le taught in: Germ								
	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 candilate).								
			date)									
				uage of assessmen able for bonus	t: German and/or Englis	sh						
12 LLDLA	A - #	Labauataus	crean	able for bonus								
10-I-LRLA-172-m01				1	Mathada fawadina l	ani ani ani ana da	Madulland	Lundameraduata				
	ECTS 6	Duratio		1 semester	Method of grading r	numericai grade	Modul level	undergraduate				
	Courses		<u> </u>	+ P (2)	·			_				
I IIMD				mpletion of approx. 6 practical exercises (approx. 4 hours each)  Control System Engineering								
10-I-HMR-152-m01	ECTS 8			<del>, , , , , , , , , , , , , , , , , , , </del>		(n nt) nnnnnfr.llnnnnlnt.nl	Madulland	Lundameraduata				
		Duratio		1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)	(6) roject with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)								
1 21 2					n (approx. 15 minutes) a	ind written elaboration (appro	ox. 12 to 15 page	es) 				
10-I-PLR-172-m01		vork Space Te		<u> </u>		( ) ( )	T.,	<del>, , , , , , , , , , , , , , , , , , , </del>				
	ECTS 4	Duratio	,,	1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (2)	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work								
1.00					d presentation (approx.	. 15 minutes) on practical worl	<u>K</u>					
10-I-PP-191-m01		Course in Prog										
	ECTS 10	Duratio			Method of grading (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)									
	Method of	assessment	practi	ical examination (p	orogramming exercises, a	approx. 240 hours) and writte	n examination	(approx. 60 to 120 minutes). replaced by an oral examination				
								s (approx. 15 minutes per candi-				
			date)					Copper of Samuel Control of the Cont				
	other prere	equisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.									
10-I-PV-152-m01	Project Pre	esentation					1					
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses	,	S (5)	•			-					
	Method of	assessment	presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total)  Language of assessment: German and/or English									
	Referred to	in LPO I	§ 22 l	l Nr. 3b								

10-I-SEM1-152-m01	Semina	ar 1					.,					
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	s S	•	S (2)		·	•					
	Method of assessment			pic fro	ritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- c from the field of computer science inguage of assessment: German and/or English							
	Referre	d to in l	PO I	§ 22 l	22 II Nr. 3b							
10-I-SEM2-152-	Semina	ar 2										
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)								
					rap-up report on tutoring activities (5 to 10 pages) inguage of assessment: German and/or English							
10-I-SWP-152-m01	Practic	al cours	e in softv	vare								
	ECTS 10 Duratio		Duration	า	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Courses			P (6)	*							
	Method of assessment				practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)							
	Modules successfully completed			10-I-PP, 10-I-ST								
	other prerequisites			In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in l	PO I	§ 69 l Nr. 1d								
10-I-SKS-191-m01	Contro	l Princip	oles of Mo	dern C	Communication Sy	stems						
	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 2022	2 (o ECT:	S credit	s)									
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	2	Modul level	undergraduate			
	Course	es	•	V (2)	+ Ü (2)			•				
	Metho	d of ass	essment	If anr	tten examination (approx. 60 to 120 minutes). .nnounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examinati one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cand							
				date) Lang credi	uage of assessmen table for bonus							
		ed to in I		_	II Nr. 3b			,				
10-l-Gl-152-m01			s of Com		•							
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	e	Modul level	undergraduate			
	Course	_	_	1.17	+ Ü (2)	prox. 60 to 120 minutes).						
				of on date) Lang credi	f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minuted date).  Language of assessment: German and/or English creditable for bonus							
10-I-APR-172-m01			gramming									
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	<u>e</u>	Modul level	undergraduate			
	Course	es .		V (2)	/ (2) + Ü (2)							
	Method of assessment			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 cadate). Language of assessment: German and/or English creditable for bonus							
10-I-HWP-152-m01	Practic	al cours	se in hard	ware								
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfu	lly completed	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 II Nr. 3b								

10-I-SEC-191-m01	IT Security	,										
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses			+ Ü (2)								
				le taught in: Germ								
	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 candilate).								
			date)									
				uage of assessmen able for bonus	t: German and/or Englis	sh						
12 LLDLA	A - #	Labauataus	crean	able for bonus								
10-I-LRLA-172-m01				1	Mathada fawadina l	ani ani ani ana da	Madulland	Lundameraduata				
	ECTS 6	Duratio		1 semester	Method of grading r	numericai grade	Modul level	undergraduate				
	Courses		<u> </u>	+ P (2)	·			_				
				mpletion of approx. 6 practical exercises (approx. 4 hours each)  Control System Engineering								
10-I-HMR-152-m01	ECTS 8			<del>, , , , , , , , , , , , , , , , , , , </del>		(n nt) nnnnnfr.llnnnnlnt.nl	Madulland	Lundameraduata				
		Duratio		1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)	(6) roject with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)								
1 21 2					n (approx. 15 minutes) a	ind written elaboration (appro	ox. 12 to 15 page	es) 				
10-I-PLR-172-m01		vork Space Te		<u> </u>		( ) ( )	T.,	<del>, , , , , , , , , , , , , , , , , , , </del>				
	ECTS 4	Duratio	,,	1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (2)	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work								
1.00					d presentation (approx.	. 15 minutes) on practical worl	<u>K</u>					
10-I-PP-191-m01		Course in Prog										
	ECTS 10	Duratio			Method of grading (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)									
	Method of	assessment	practi	ical examination (p	orogramming exercises, a	approx. 240 hours) and writte	n examination	(approx. 60 to 120 minutes). replaced by an oral examination				
								s (approx. 15 minutes per candi-				
			date)					Copper of Samuel Control of the Cont				
	other prere	equisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.									
10-I-PV-152-m01	Project Pre	esentation					1					
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses	,	S (5)	•			-					
	Method of	assessment	presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total)  Language of assessment: German and/or English									
	Referred to	in LPO I	§ 22 l	l Nr. 3b								

10-I-SEM1-152-m01	Semina	ar 1					-					
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)	•	·						
	Method of assessment			pic fro	itten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- c from the field of computer science nguage of assessment: German and/or English							
	Referre	d to in l	_PO I	§ 22 l	2 II Nr. 3b							
10-I-SEM2-152-	Semina	ar 2										
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)								
	Method of assessment					ng activities (5 to 10 pages) : German and/or English						
10-I-SWP-152-m01	Practic	al cours	se in softv	vare								
	ECTS	ECTS 10 Duration		n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Courses			P (6)								
	Method of assessment				practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)							
	Modules successfully completed			10-I-P	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 l	PO I	§ 69 I	Nr. 1d							
10-I-SKS-191-m01	Contro	l Princip	oles of Mo	dern (	Communication Sys	tems						
	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 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 2022 (	o ECTS	credits)											
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry									
	ECTS	5	Duratio	1	1 semester	Method of grading numerical grade	e	Modul level	undergraduate				
	Course	s S	•	V (2) ·	+ Ü (2)	·		•					
	Method	d of ass	essment		ritten 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 one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-								
				If ann									
				date).	•	s (approx. 15 minutes per candi-							
					guage of assessment: German and/or English								
					itable for bonus								
	Referre	d to in I	LPO I	§ 22 l	l Nr. 3b								
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	e	Modul level	undergraduate				
	Course	S		V (4) ·	+ Ü (2)			,					
	Method	d of ass	essment		ritten 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)								
				date).	late). anguage of assessment: German and/or English								
					able for bonus								
10-I-APR-172-m01	Advanc	ed Prog	gramming					1					
	ECTS	5	Duratio	1	1 semester	Method of grading   numerical grade	e	Modul level	undergraduate				
	Course	S		V (2) -	+ Ü (2)								
	Method	d of ass	essment		written examination (approx. 60 to 120 minutes).								
						urer at the beginning of the course, the							
					of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidates)								
					date). Language of assessment: German and/or English								
					able for bonus	t. German ana/or English							
10-I-HWP-152-m01	Practic	al cours	se in hard	ware									
	ECTS	10	Duratio	<u> </u>	1 semester	Method of grading (not) successfu	lly completed	Modul level	undergraduate				
	Course	S							•				
				portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10									
	Method of dissessment			minut	minutes per project)								
	Referred to in LPO I			§ 22 l	l Nr. 3b								

10-I-SEC-191-m01	IT Security	,										
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses			+ Ü (2)								
				le taught in: Germ								
	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 candilate).								
			date)									
				uage of assessmen able for bonus	t: German and/or Englis	sh						
12 LLDLA	A - #	Labauataus	crean	able for bonus								
10-I-LRLA-172-m01				1	Mathada fawadina l	ani ani ani ana da	Madulland	Lundameraduata				
	ECTS 6	Duratio		1 semester	Method of grading r	numericai grade	Modul level	undergraduate				
	Courses		<u> </u>	+ P (2)	·			_				
				mpletion of approx. 6 practical exercises (approx. 4 hours each)  Control System Engineering								
10-I-HMR-152-m01	ECTS 8			<del>, , , , , , , , , , , , , , , , , , , </del>		(n nt) nnnnnfr.llnnnnlnt.nl	Madulland	Lundameraduata				
		Duratio		1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)	(6) roject with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)								
1 21 2					n (approx. 15 minutes) a	ind written elaboration (appro	ox. 12 to 15 page	es) 				
10-I-PLR-172-m01		vork Space Te		<u> </u>		( ) ( )	T.,	<del>, , , , , , , , , , , , , , , , , , , </del>				
	ECTS 4	Duratio	,,	1 semester	Method of grading   (	not) successfully completed	Modul level	undergraduate				
	Courses		P (2)	report (5 to 10 pages) and presentation (approx. 15 minutes) on practical work								
1.00					d presentation (approx.	. 15 minutes) on practical worl	<u>K</u>					
10-I-PP-191-m01		Course in Prog										
	ECTS 10	Duratio			Method of grading (	not) successfully completed	Modul level	undergraduate				
	Courses		P (6)									
	Method of	assessment	practi	ical examination (p	orogramming exercises, a	approx. 240 hours) and writte	n examination	(approx. 60 to 120 minutes). replaced by an oral examination				
								s (approx. 15 minutes per candi-				
			date)					Copper of Samuel Control of the Cont				
	other prere	equisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.									
10-I-PV-152-m01	Project Pre	esentation					1					
	ECTS 5	Duratio	n	1 semester	Method of grading   r	numerical grade	Modul level	undergraduate				
	Courses	,	S (5)	•			-					
	Method of	assessment	presentation of a project developed by the candidate analogous to a presentation for laypersons with a knowledge of computer science at a trade fair as well as discussion (approx. 10 to 15 minutes total)  Language of assessment: German and/or English									
	Referred to	in LPO I	§ 22 l	l Nr. 3b								

10-I-SEM1-152-m01	Semina	ar 1					.,					
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	s S	•	S (2)		·	•					
	Method of assessment			pic fro	ritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- c from the field of computer science inguage of assessment: German and/or English							
	Referre	d to in l	PO I	§ 22 l	22 II Nr. 3b							
10-I-SEM2-152-	Semina	ar 2										
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)								
					rap-up report on tutoring activities (5 to 10 pages) inguage of assessment: German and/or English							
10-I-SWP-152-m01	Practic	al cours	e in softv	vare								
	ECTS 10 Duratio		Duration	า	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Courses			P (6)	*							
	Method of assessment				practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)							
	Modules successfully completed			10-I-PP, 10-I-ST								
	other prerequisites			In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in l	PO I	§ 69 l Nr. 1d								
10-I-SKS-191-m01	Contro	l Princip	oles of Mo	dern C	Communication Sy	stems						
	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 2023	3 (o ECTS credi	ts)									
10-l-AGT-152-m01	Algorithmic G	raph Theo	ory								
	ECTS 5	Duratio	n 1 sem	ester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	`	V (2) + Ü (2)								
	Method of ass	sessment	If announce of one cand date). Language of	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 examinat of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Referred to in	LPO I	§ 22 II Nr. 3k	)							
10-I-APR-172-m01	Advanced Pro	gramming	5								
	ECTS 5	Duratio	n 1 sem	ester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) + Ü (2)		,						
			If announce of one cand date). Language of creditable fo	Language of assessment: German and/or English creditable for bonus							
10-l-Gl-152-m01	Selected Basics of Computer Science										
	ECTS 5	Duratio	n 1 sem	ester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (4) + Ü (2)								
	Method of ass	sessment	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	Practical Mea	surement	and Control S	System Eng	gineering						
	ECTS 8	Duratio	n 1 sem	ester	Method of grading	(not) successfully cor	mpleted   Modul level	undergraduate			
	Courses		P (6)		•						
	Method of ass	sessment	project with	presentation	on (approx. 15 minutes)	and written elaboration	on (approx. 12 to 15 pag	es)			
10-I-HWP-152-m01	Practical cour	se in hard	ware								
	ECTS 10	Duratio	n 1 sem	ester	Method of grading	(not) successfully cor	mpleted   Modul level	undergraduate			
	Courses		P (6)		•	·					
	Method of ass	sessment	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		§ 22 II Nr. 3k		· ·						

10-I-LRLA-172-m01	Aerospace Lab	oratory											
	ECTS 6	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		V (2) -	P (2)	•								
	Method of assessment   Completion of approx. 6 practical exercises (approx. 4 hours each)												
10-I-PLR-172-m01	Practical work Space Technology												
	ECTS 4	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses		P (2)										
	Method of ass	essment	report	(5 to 10 pages) and	presentation (appro	x. 15 minutes) on practical wor	k						
10-l-PP-191-m01	Practical Course in Programming												
	ECTS 10	Duration	n		Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses		P (6)										
	Method 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 prerequi	sites		Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.									
10-I-PV-152-m01	Project Presentation												
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		S (5)										
	Method of ass	essment	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 I	PO I	§ 22 II Nr. 3b										
10-I-SEC-191-m01	IT Security		'										
	ECTS 5	Duration	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 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-SEM1-152-m01	Semina	ar 1			1	,						
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			S (2)	(2)							
	Method of assessment			pic fro	ritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- ic from the field of computer science anguage of assessment: German and/or English							
	Referre	d to in I	LPO I	§ 22 l	2 II Nr. 3b							
10-I-SEM2-152-	Semina	ar 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			ing activities (5 to 10 p nt: German and/or Eng						
10-I-SKS-191-m01	Control Principles of Modern Communication Systems											
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	Courses			+ Ü (2)				•			
	Method of assessment			If ann of one date).	ounced by the lec e candidate each (	turer at the beginning (	of the course, the written exami r an oral examination in groups		replaced by an oral examination s (approx. 15 minutes per candi-			
10-I-SWP-152-m01	Practic	Practical course in software										
	ECTS	10	Duration	1	1 semester	Method of grading	(not) successfully completed	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-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 I	LPO I	§ 69 I	Nr. 1d							

Winter Term 2022	(o ECTS	credits)										
10-l-AGT-152-m01	Algorit	thmic Gi	aph Theo	ry								
	ECTS	ECTS 5 Duration			1 semester	Method of grading numeri	cal grade	Modul level	undergraduate			
	Course	es	•	V (2)	+ Ü (2)	·		•				
	Method of assessment			If anr of on date) Lange	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		l Nr. 3b							
10-l-Gl-152-m01	Selected Basics of Computer Science											
	ECTS	5	Duration	1	1 semester	Method of grading numeri	cal 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	Advanced Programming											
	ECTS	5	Duration		1 semester	Method of grading   numeri	cal grade	Modul level	undergraduate			
	Course		_		$V(2) + \ddot{U}(2)$							
	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								
10-I-HWP-152-m01	Practio	al cours	e in hard	ware	vare							
	ECTS	10	Duration	1	1 semester	Method of grading (not) su	ccessfully completed	Modul level	undergraduate			
	Course	25		P (6)								
	Metho	d 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	ed to in I	PO I	§ 22	l Nr. 3b							

10-I-SEC-191-m01	IT Security												
	ECTS 5	Duratio	n	1 semester	Method of grading numerica	al grade	Modul level	undergraduate					
	Courses	<del></del>		V (2) + Ü (2)									
				Module taught in: German and/or English									
	Method of	assessment			orox. 60 to 120 minutes).	raa tha writtan ayami	nation may be	ronloand by an aral avamination					
								replaced by an oral examination s (approx. 15 minutes per candi-					
			date)	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	Acrospaso	Laboratory	crean	lable for bollus									
10-1-LKLA-1/2-11101	ECTS 6	Duratio		1 semester	Method of grading numerica	al grado	Modul level	undergraduate					
	Courses	Duratio		+ P (2)	Method of grading   numerica	il graue	Modul level	undergraduate					
		accoccmont	` ` ′		practical evercises (approx. 4 h	ours oach)							
10-I-HMR-152-m01		Method of assessment   Completion of approx. 6 practical exercises (approx. 4 hours each)  Practical Measurement and Control System Engineering											
10-1-11/01/-152-11101	ECTS 8	Duratio		1 semester	Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	Duratio	P (6)	1 Jeniester	Method of glading (1101) suc	cessially completed	Modulievel	undergraduate					
		assessment	` `	project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)									
10-I-PLR-172-m01	Practical work Space Technology												
1011121117211101	ECTS 4	Duratio		1 semester	Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	2 4.44.0	P (2)	1 2 2 3 11 2 3 1	memer or grading (new suc								
	Method of	assessment		t (5 to 10 pages) an	d presentation (approx. 15 minu	ıtes) on practical worl	<u> </u>						
10-I-PP-191-m01	Practical Course in Programming												
	ECTS 10	Duratio	n		Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	,	P (6)	•			•						
	Method of	assessment	pract	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 prere	auisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete										
	ound, prond	94.5.05		this before.									
10-I-PV-152-m01	Project Pre	sentation											
	ECTS 5	Duratio	n	1 semester	Method of grading numerica	al grade	Modul level	undergraduate					
	Courses		S (5)										
	Method of	assessment						sons with a knowledge of compu-					
					as well as discussion (approx. : German and/or English	10 to 15 minutes total	l)						
	Referred to	in I PO I		II Nr. 3b	German and/or english								
	Kelelleu to	111 61	3 22 1										

10-I-SEM1-152-m01	Semina	ar 1					.,					
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			S (2)	5 (2)							
	Method of assessment			pic fro	vritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- oic from the field of computer science anguage of assessment: German and/or English							
	Referre	d to in l	PO I	§ 22 l	22 II Nr. 3b							
10-I-SEM2-152-	Semina	ar 2										
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		S (2)								
	Method of assessment					ing activities (5 to 10 pages) nt: German and/or English						
10-I-SWP-152-m01	Practical course in software											
	ECTS 10 Duratio			า	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Courses			P (6)	· /							
	Method of assessment			practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)								
	Modules successfully completed			10-I-PP, 10-I-ST								
	other prerequisites			In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in l	PO I	§ 69 I	Nr. 1d							
10-I-SKS-191-m01	Contro	l Princip	oles of Mo	dern C	Communication Sy	stems						
	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	4 (o ECT:	S credit	s)									
10-l-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS	5	Duration	า	1 semester	Method of grading numerical	al grade	Modul level	undergraduate			
	Course	es	•	V (2)	+ Ü (2)	•		•				
	Metho	d of ass	essment	If anr	ritten 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 candi-							
		ed to in I		_	I Nr. 3b							
10-l-Gl-152-m01			s of Com		Science							
	ECTS	5	Duration		1 semester	Method of grading   numerical	al grade	Modul level	undergraduate			
	Course			٠,,,	+ Ü (2)	prox. 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-APR-172-m01	Advanced Programming											
	ECTS	5	Duration		1 semester	Method of grading   numerical	al grade	Modul level	undergraduate			
	Course	_			$V(2) + \ddot{U}(2)$							
	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								
10-I-HWP-152-m01	Practic	al cours	se in hard	ware								
	ECTS	10	Duration	1	1 semester	Method of grading (not) suc	cessfully completed	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)							
	Referre	ed to in I	LPO I	§ 22	l Nr. 3b		-					

10-I-SEC-191-m01	IT Security												
	ECTS 5	Duratio	n	1 semester	Method of grading numerica	al grade	Modul level	undergraduate					
	Courses	<del></del>		V (2) + Ü (2)									
				Module taught in: German and/or English									
	Method of	assessment			orox. 60 to 120 minutes).	raa tha writtan ayami	nation may be	ronloand by an aral avamination					
								replaced by an oral examination s (approx. 15 minutes per candi-					
			date)	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	Acrospaso	Laboratory	crean	lable for bollus									
10-1-LKLA-1/2-11101	ECTS 6	Duratio		1 semester	Method of grading numerica	al grado	Modul level	undergraduate					
	Courses	Duratio		+ P (2)	Method of grading   numerica	il graue	Modul level	undergraduate					
		accoccmont	` ` ′		practical evercises (approx. 4 h	ours oach)							
10-I-HMR-152-m01		Method of assessment   Completion of approx. 6 practical exercises (approx. 4 hours each)  Practical Measurement and Control System Engineering											
10-1-11/01/-152-11101	ECTS 8	Duratio		1 semester	Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	Duratio	P (6)	1 Jeniester	Method of glading (1101) suc	cessially completed	Modulievel	undergraduate					
		assessment	` `	project with presentation (approx. 15 minutes) and written elaboration (approx. 12 to 15 pages)									
10-I-PLR-172-m01	Practical work Space Technology												
1011121117211101	ECTS 4	Duratio		1 semester	Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	2 4.44.0	P (2)	1 2 2 3 11 2 3 1	memer or grading (new suc								
	Method of	assessment		t (5 to 10 pages) an	d presentation (approx. 15 minu	ıtes) on practical worl	<u> </u>						
10-I-PP-191-m01	Practical Course in Programming												
	ECTS 10	Duratio	n		Method of grading (not) suc	cessfully completed	Modul level	undergraduate					
	Courses	,	P (6)	•			•						
	Method of	assessment	pract	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 prere	auisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete										
	ound, prond	94.5.05		this before.									
10-I-PV-152-m01	Project Pre	sentation											
	ECTS 5	Duratio	n	1 semester	Method of grading numerica	al grade	Modul level	undergraduate					
	Courses		S (5)										
	Method of	assessment						sons with a knowledge of compu-					
					as well as discussion (approx. : German and/or English	10 to 15 minutes total	l)						
	Referred to	in I PO I		II Nr. 3b	German and/or english								
	Kelelleu to	111 61	3 22 1										

10-I-SEM1-152-m01	Semina	ar 1					-				
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			S (2)	(2)						
	Method of assessment			pic fro	ritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- ic from the field of computer science anguage of assessment: German and/or English						
	Referre	d to in l	_PO I	§ 22 l	22 II Nr. 3b						
10-I-SEM2-152-	Semina	ar 2									
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		S (2)							
	Method of assessment					ng activities (5 to 10 pages) : German and/or English					
10-I-SWP-152-m01	Practical course in software										
	ECTS	CTS 10 Duration		n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Courses			P (6)	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 I	PO I	§ 69 l	§ 69   Nr. 1d						
10-I-SKS-191-m01	Contro	l Princip	oles of Mo	dern (	Communication Sys	tems	'				
	ECTS	8	Duration	1	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						