



Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Computer Science as vertieft studiertes Fach (studied with a focus on the scientific discipline) with the degree "Erste Staatsprüfung für das Lehramt an Gymnasien"

, ,	of Mathematics and Computer Science of Computer Science	Examination regulations version: 2025 Examination regulations version: 2025								
Abbreviations used:	Course types: E = field trip, K = colloquium, O = conversatorium, P = placement/lab course, R = project, S = seminar, T = tutorial, İ = 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, $VL =$ prerequise	site(s)								
Conventions for the modules in this SFB:										

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

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

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

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

LASPO2015

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

??-???-2025 (2025-???)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration	(in semesters)	Method of grading		Module level				
	Courses		To be s	o be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessm	ent								
	Only after su completion of		ıl if appli	if applicable							
	Other prereq	juisites	if appli	if applicable							
	Participants on of places		ocati- if appli	if applicable							
	Additional in	nformati	on if appli	if applicable							
	Referred to i	n LPO I	if appli	able (examination r	egulations for teaching	g-degree programmes)					

Scientific Disciplin	e (92 EC	TS credi	ts)										
Compulsory Course	es (6o EC	CTS cred	its)										
10-I-GdP-172-m01	Fundan	nentals	of Progra	mming	nming								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2) -	V (2) + Ü (2)								
	Methoo	d 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 candi- date). creditable for bonus								
	Referred to in LPO I § 49 Nr. 1 b) § 69 Nr. 1 b)												
10-I-DB-152-m01	B-152-m01 Databases												
	ECTS	5	Duratio		1 semester	undergraduate							
	Course			V (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 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									
	Referre	d to in L	PO I	§ 49 Nr. 1 b) § 69 Nr. 1 b)									
10-I-SE-252-m01	Softwa	re Engin	eering										
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level					
	Course	s		V (2) + Ü (2)									
		d 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 candi- date). creditable for bonus									
	Referre	d to in L	PO I	§ 49 § 69	§ 49 Nr. 1 b) § 69 Nr. 1 b)								

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10-I-ADS-152-m01	Algorit	hms an	d data str	ucture	S							
	ECTS	10	Duratio	n	1 semester Method of grading numerical grade Modul level undergraduate							
	Course	S		V (4) ·	/ (4) + Ü (2)							
	Methoo	d of ass	essment	lf 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 candi- date). creditable for bonus							
	Referre	d to in l			§ 49 Nr. 1 a) § 69 Nr. 1 a)							
10-l-PP-191-m01	Practic	al Cours	se in Prog	rammi	ng							
	ECTS	10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)	·							
	Method of assessment			If ann of one date).								
	other prerequisites				ntended 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-SWP-252-m01	Practic	al cours	se in softv	vare								
	ECTS	10	Duratio	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-SE							
	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	LPO I	§ 69 I	Nr. 1 d)							

10-I-TI-242-m01	Theory	of Com	putation										
	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (4) ·	V (4) + Ü (2)								
	Methoo	d of ass	essment	lf 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 candi- date).								
					s de l Nr. 1 a) § 69 l Nr. 1 a)								
	Referre	ed to in l	LPO I										
10-l-Kl-252-m01	Artifici	Artificial Intelligence											
	ECTS	5	Duratio		1 semester	Method of grading	Modul level						
	Course	S			+ Ü (2) ıle taught in: Gerr	nan and/or English							
	Method of assessment			If ann of on date) Langu	If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus								
	Referred to in LPO I			§ 22 II Nr. 3 b) § 69 I Nr. 1 b)									
Compulsory Electi	ves (32 ECTS credits)												
Technical Comput	er Scienc	.e (10 EC	TS credit	s)									
10-l-BS-242-m01	Operat	ing Sys	tems										
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			V (2) + Ü (2)									
	Methoo	1 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 candi- date). Language of assessment: German and/or English creditable for bonus									
	Referre	d to in l	LPO I	§ 22	Nr. 3 b), § 69 N	lr. 1 c)							

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10-I-RAK-152-m01	Compu	iter Arch	nitecture									
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	:5		V (2) -	/ (2) + Ü (2)							
	Metho	d of ass	essment	writte 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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Referre	ed to in l	LPO I	§ 22	Nr. 3 b) Nr. 1 c): Rechneral	rchitektur						
10-I-RAL-252-m01	Digital	comput	ter syster	ns	·							
	ECTS 10 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).	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 candi- date). creditable for bonus							
	Referre	ed to in l	LPO I	§ 22 Nr. 3 b), § 69 Nr. 1 c)								
10-l-RIÜ-191-m01												
	ECTS 10 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (4) + Ü (2)								
	Method of assessment			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 candi- date). creditable for bonus							
	Referre	ed to in l	LPO I	§ 22 Nr. 3 b), § 69 Nr. 1 c)								

General Compulso	ry Electiv	es (22	ECTS crea	lits)							
10-I-RAK-152-m01	Comput	ter Arch	itecture								
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5		V (2)	+ Ü (2)						
	Method	l of ass	essment	lf 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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Referre	d to in l	PO I		§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur						
10-I-RAL-252-m01											
	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5		V (4)	+ Ü (2)						
	Referred		essment	of on date) credi	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 candi-						
			_								
10-I-RIÜ-191-m01	<u> </u>	10	Duratio	d Information Transmission on 1 semester Method of grading numerical grade Modul level undergraduate							
	Courses		Duration		+ Ü (2)		I numerical grade				
		Aethod 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 candi- date). creditable for bonus						
	Referre	d to in l	POI	§ 22 Nr. 3 b), § 69 Nr. 1 c)							
10-I-BS-242-m01	Operati	ng Sys	tems								
	ECTS	5	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5		V (2)	+ Ü (2)						
			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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in l	PO I	§ 22	Nr. 3 b), § 69 N	r. 1 c)	,				
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10-I-HWP-152-m01	Practic	al cours	e in hard	ware	are							
	ECTS	10	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (6)				•				
	Method	l of asse	essment			pprox. 3 to 10 project	assignments (approx. 250 hou	urs total) and p	resentation of results (approx. 10			
	D (minutes per project)							
		d to in L		§ 22 I	22 II Nr. 3 b)							
10-l-LOG-152-m01	Logic fo		1									
		5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course				$(2) + \ddot{U}(2)$							
	Method	1 01 8556	essment	lf 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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in L	PO I	§ 22	3 22 II Nr. 3 b)							
10-I-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry								
	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) +	+ Ü (2)							
	Methoo	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 candi- date). Language of assessment: German and/or English creditable for bonus								
	Referre	d to in L	PO I	§ 22	Nr. 3 b)							
10-I-ICG-152-m01	Interac	tive Con	nputer Gr	aphics								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) +	V (2) + Ü (2)							
	Method of assessment Referred to in LPO I			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 candi- date). Language of assessment: German and/or English creditable for bonus § 22 II Nr. 3 b)								
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10-I-APR-172-m01	Adva	anced	Progr	amming									
	ECTS	5 5		Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Cour	rses			V (2) ·	+ 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 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								
	Refe	rred t	o in LP	1 01	§ 22	l Nr. 3 b)							
10-I-KT-191-m01		-	ional (Complex	ity								
	ECTS	5 5		Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Cour	rses			V (2) ·	(2) + 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 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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
			o in LP		§ 22 Nr. 3 b)								
10-I-KD-191-m01		Ĩ		and Data Security									
	ECTS 5 Duration		4		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Cour		-		V (2) + Ü (2)								
			t asses		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 candi- date). Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus § 22 Il Nr. 3 b)								

10-I-MSE-252-m01	Model-based	Systems E	Ingine	ering						
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level			
	Courses		V (2) ·	V (2) + 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 candi- date). creditable for bonus							
	Referred to in	LPO I	§ 22	3 22 Il Nr. 3 b)						
10-l-3D-152-m01	3D Point Cloud	l Processi		-						
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (2) ·	V (2) + Ü (2)						
	Method of ass	essment	If ann of one date). Langu	ounced by the lectu e candidate each (ap		of the course, the written exami r an oral examination in groups		eplaced by an oral examination (approx. 15 minutes per candi-		
	Referred to in	LPO I	§ 22	§ 22 Nr. 3 b)						
10-LURI=PHO-	Photogramme	tric Mach								
TO-232-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses		Modu	+ Ü (2) Ile taught in: Germai						
	Method of ass	essment	If ann of one date). Langu	ounced by the lectu e candidate each (ap		of the course, the written exami r an oral examination in groups		eplaced by an oral examination (approx. 15 minutes per candi-		
	Referred to in	LPO I	§ 22	l Nr. 3 b)						
10-I-RK-212-m01	Control Princi	oles of Mo	odern (Communication Syst	ems					
	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (2) ·	V (2) + Ü (2)						
	Method of ass	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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Referred to in	LPO I	§ 22	l Nr. 3 b)						

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10-I-SEM1-152-m01	Seminar - Sele	cted Topi	ics in Computer Science 1							
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	_	S (2)	(2)						
	Method of asse	essment	written elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to-							
				om the field of comp						
	Deferme dite in l		Language of assessment: German and/or English							
	Referred to in L	-	§ 22 I	§ 22 Nr. 3 b)						
10-I-PV-252-m01	Project Presen									
	ECTS 2	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses		S (3)							
	Method of asse	essment		ntation of a self-dev oprox. 10-15 minutes	reloped project analogous to a trade fair presentation	on for computer	science laypersons with discussi-			
					German and/or English					
				able for bonus	, 3					
	Referred to in L	PO I	§ 22	l Nr. 3 b)						
10-LU-	Autonomous N	obile Sy	stems							
RI=AMS-232-mo1	ECTS 10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (4) + Ü (2)							
			Module taught in: German and/or English							
	Method 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							
	Additional Info		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT, KI, ES, LR, GE							
	Referred to in L		§ 22 II Nr. 3 b)							
10-I=EA-252-m01	Exact Algorith			r						
	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level				
	Courses		$V(2) + \ddot{U}(2)$							
	Mathadafaaa		Module taught in: German and/or English							
	Method 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								
	Additional Info	rmation			dents of the Master's programme Informatik (Comp	uter Science 12	o ECTS credits). AT			
	Referred to in L			Nr. 3 b)						
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10-l=AG-232-m01	Compu	tationa	l Geometi	y						
	ECTS	5	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	s		V (2)	+ Ü (2)	·	•			
	Method	l of ass	essment			pprox. 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- date). Language of assessment: German and/or English creditable for bonus						
			_		ses available for s CI,GE,IN	tudents of the Master'	s programme Informati	k (Computer Science, 12)	o ECTS credits):	
		d to in L	-	-	II Nr. 3 b)					
10-I=APA-161-m01	Approx	imation	n Algorith	ms						
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		V (2)	+ 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						
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,IT,GE						
	Referred to in LPO I			§ 22 Nr. 3 b)						
10-I=AUT-212-m01	Automa	ata Theo	ory							
	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		V (2) + 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 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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus						
			rmation	Focu	ses available for s	tudents of the Master'	s programme Informati	k (Computer Science, 12	o ECTS credits): AT, IT, ES, HCI, GE	
	Referre	d to in L	POI	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, IT, ES, HCI, GE § 22 II Nr. 3 b)						

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10-I-AR-152-m01	Autom	ation an	d Control	l Technology								
	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 minute						
				If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination								
				of one date).	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-							
					Language of assessment: German and/or English							
					creditable for bonus							
	Referre	ed to in l	POI	§ 22	§ 22 II Nr. 3 b)							
10-I-LFS-172-m01	Introdu	uction to	Aviation	Syste	ms							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -	+ Ü (1)							
	Metho	d of ass	essment			prox. 60 to 120 minute						
				lf ann	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. 30 minutes).							
				creditable for bonus								
	Referre	ed to in I	PO I		§ 22 Nr. 3 b)							
10-I-RFS-172-m01	Introdu	uction to	Space S									
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -	+ Ü (1)	I		•	•			
	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. 30 minutes). creditable for bonus							
	Poforro	ed to in I	POI	§ 22 II Nr. 3 b)								
10-LURI-HWZ-252-			-	-		tals Avionics						
m01	ECTS	10	Duratio		ramming and Fundamentals Avionics 1 semester Method of grading numerical grade Modul level							
	Course		Duration		+ Ü (2) + P (2)		numencai giade	Modul level				
			essment			prov 120 minutos) 20	d practical examination	in form of approx 6 pr	ogramming exercises (approx. 4			
	Metho	u 01 ass	essment		each), weighted 1		i practical examination	i iii iuiiii ui appiux. o pi	ogramming exercises (approx. 4			
					able for bonus							
	Referred to in LPO I			§ 22	l Nr. 3 b)							

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10-I=TSD-232-m01	Telecor	nmunic	ation Sys	tems					,			
	ECTS	10	Duratior	ו	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (4) - Modu	+ Ü (2) le taught in: Germaı	n and/or English						
	Methoc	l of asse		lf ann of one date). Langu	ounced by the lectu e candidate each (ar	rox. 60 to 120 minute rer at the beginning o oprox. 20 minutes) or German and/or Engl	of the course, the writter r an oral examination in	en examination may be n n groups of 2 candidates	replaced by an oral examination 5 (approx. 15 minutes per candi-			
-	Additio	nal Info	rmation	Focus	ocuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): LR							
	Referre	d to in L	PO I	§ 22	l Nr. 3 b)							
10-I=RRS-232-m01	Remote	e Sensir	ıg									
	ECTS 5 Duratio			ו	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	5		V (2) - Modu	+ Ü (2) le taught in: Germaı	n and/or English						
	Methoc	l of asse		lf ann of one date). Langu	ounced by the lectu e candidate each (ap		of the course, the writte r an oral examination i		replaced by an oral examination 6 (approx. 15 minutes per candi-			
	Additio	nal Info	rmation	possi	ble majors for MA 12	20 Computer Science	:LR,IN					
	Referred to in LPO I			§ 22 II Nr. 3 b)								
		ng and :	Simulatio									
	ECTS	5	Duratior		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 candi- date). creditable for bonus							
	Referred to in LPO I			§ 22	l Nr. 3 b)							

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10-LU-	Satel	ite Imag	e process	ing							
RI=SBV-232-mo1	ECTS	10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Cours	es	_		+ Ü (2) Ile taught in: Germa	n and/or English					
	Metho	od of ass	essment	lf 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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Refer	ed to in l	PO I	§ 22	I Nr. 3 b)						
10-l=QC-261-m01	Quan	tum Com	municatio	ons							
	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Cours				V (2) + Ü (2) Module taught in: German and/or English						
	Metho	od 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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): LR							
		ed to in l		PO I § 22 II Nr. 3 b)							
10-I=DRLIS-	· ·	o Reinforcement Learning for Intelligent Space Systems									
S-252-m01	ECTS 5 Duratio				1 semester	Method of grading numerical grade	Modul level	graduate			
	Cours	es	_	· · ·	V (2) + Ü (2) Module taught in: German and/or English						
	Metho	od of ass	essment	lf ann of one date). Langu	ounced by the lecture candidate each (a	prox. 60 to 120 minutes) urer at the beginning of the course, the writ pprox. 20 minutes) or an oral examination : German and/or English					

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10-I=BER-212-m01	Compu	tability	Theory						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Course	S		V (2)	+ Ü (2)		•		•
	Method	l of asse	essment	If anr of on date) Langu Asses	nounced by the lea e candidate each uage of assessme	(approx. 20 minutes) of nt: German and/or Eng	of the course, the writ r an oral examination lish	ten examination may be i in groups of 2 candidates and in the subsequent se	replaced by an oral examination 5 (approx. 15 minutes per candi- mester
	Additio	nal Info	rmation	Focus	ses available for s	tudents of the Master's	programme Informati	ik (Computer Science, 120	ECTS credits): AT,SE,IT,KI,GE
	Referre	d to in L	PO I	§ 22	II Nr. 3 b)				
10-I=DB2-242-m01	Databa	ses 2							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Course	S			+ Ü (2) ıle taught in: Gerr	nan and/or English			
	Method	1 01 8556	essment	lf anr of on date) Langu	nounced by the lea e candidate each		of the course, the writ r an oral examination		replaced by an oral examination (approx. 15 minutes per candi-
	Additio	nal Info	rmation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE, KI, HCI § 22 II Nr. 3 b)					
	Referre	d to in L	.PO I						
10-I=DDB-212-m01	Deduct	ive Data	abases						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses			V (2)	+ Ü (2)				
				If ann of on date) Langu credit	nounced by the le e candidate each uage of assessme table for bonus	(approx. 20 minutes) of nt: German and/or Eng	of the course, the writ r an oral examination lish	in groups of 2 candidates	replaced by an oral examination 6 (approx. 15 minutes per candi-
			rmation	Focus	ses available for s	tudents of the Master's	programme Informati	k (Computer Science, 120	ECTS credits): AT,SE,IT,KI
	Referre	d to in L	PO I	§ 22	ll Nr. 3 b)				

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10-I=LP-212-m01	Logic P	rogran	nming								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (2)	V (2) + Ü (2)						
	Methoo	d of ass	sessment	If ann 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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Additio	onal Infe	ormation	Focu	ses available for	students of the Master'	s programme Informatik	(Computer Science, 12	o ECTS credits): AT,SE,IT,KI		
	Referred to in LPO I			§ 22	II Nr. 3 b)						
10-I=ES-231-m01	Embed	ded Sy									
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			V (2) + Ü (2) Module taught in: German and/or English						
				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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,ES,LR,GE							
	Referre	d to in	LPO I	§ 22 II Nr. 3 b)							
10-I=V-	Virtual	Prototy	yping of E	mbede	ded Systems						
PES-232-m01	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (2) + Ü (2) Module taught in: German and/or English							
				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 candi- date). Language of assessment: German and/or English creditable for bonus							
			ormation	Focu	ses available for	students of the Master'	s programme Informatik	(Computer Science, 12	o ECTS credits): ES		
	Referre	d to in	LPO I	§ 22	§ 22 II Nr. 3 b)						

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10-l=SB-252-m01	System	s Benc	hmarking									
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) -	/ (2) + Ü (2)							
	Method of assessment			lf 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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info		Focus GE, IN		dents of the Master's	programme Informatik (Con	nputer Science, 12	o ECTS credits): SE, IT, ES, HCI,			
	Referre	d to in L	PO I	§ 22	I Nr. 3 b)							
10-I-TML-222-m01	Theory	of Mac	hine Learı	ning	ing							
	ECTS	ECTS 5 Duration			1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2) + Ü (2) Module taught in: German and/or English								
	Method of assessment			lf 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 date). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in L	PO I	§ 22	l Nr. 3 b)							
10-l-DL-222-m01	Deep L	earning										
	ECTS	5	Duratior	۱	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -	+ Ü (2)							
	Method of assessment			lf 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 candi-							
	Referred to in LPO I			§ 22 II Nr. 3 b)								

10-I-NLP-222-m01	Natural Langu	lage Proce	essing							
	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 ass	sessment		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 candi-						
			date).							
				Language of assessment: German and/or English						
				able for bonus						
	Referred to in	-	§ 22	l Nr. 3 b)						
10-I-CV-222-m01	Computer Vis				· · · · · · · · · · · · · · · · · · ·					
	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			+ Ü (2)						
			Module taught in: German and/or English							
	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 candi-							
				date).						
				Language of assessment: German and/or English						
			creditable for bonus							
	Referred to in		§ 22 Nr. 3 b)							
10-I=NLP-212-m01				anguage Processir						
	ECTS 5	Duratio	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			V (2) + Ü (2)						
	Method of as	sessment			rox. 60 to 120 minutes)					
					rer at the beginning of the course, the written exa					
			date).	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate)						
					: German and/or English					
			credit	able for bonus	-					
	Additional Inf	ormation	Focus	es available for stu	dents of the Master's programme Informatik (Com	puter Science, 12	o ECTS credits): AT,KI,HCI			
	Referred to in	LPO I	§ 22	Nr. 3 b)						

10-l=STM-162-m01	NLP and Tex	t Mining								
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (2) ·	V (2) + Ü (2)						
	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 candi- date).						
				inguage of assessment: German and/or English						
	Additional Information		Focus	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, IT, HCI.						
	Referred to i	n LPO I	§ 22	l Nr. 3 b)						
10-I=M-	Multilingual	NLP								
NLP-232-m01	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (2) ·							
				le taught in: Germar						
	Method of a	ssessment			ox. 60 to 120 minutes) rer at the beginning of the course, the written exam	ination may be	replaced by an oral examination			
					pprox. 20 minutes) or an oral examination in groups					
			date).							
				Language of assessment: German and/or English creditable for bonus						
	Referred to i	n I PO I	§ 22 Nr. 3 b)							
10-I=NA-	Sustainable	-								
MO-232-mo1	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (2) ·				0			
	Method of a	ssessment	written examination (approx. 90 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 date).	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-						
				creditable for bonus						
	Additional Ir	formation	Focus	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IN						
	Referred to i	n LPO I	§ 22 II Nr. 3 b)							
10-l-luE-212-m01	Computer So	cience and	Ethics							
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses		V/S (2	-						
	Method of a	ssessment	a) wri	tten examination (ap	pprox. 60 to 120 minutes) or					
					ges) and presentation (30 to 45 minutes) with subs German and/or English	equent discuss	ion			
	Referred to i	n LPO I	ļ <u> </u>	I Nr. 3 b)	community of English					
			<u> </u>							

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10-Al=ML-242-m01	1 Machine Learning									
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (2) + Ü (2)						
				lle taught in: Germa						
		f assessment	lf 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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Referred t	o in LPO I	§ 22	l Nr. 3 b)						
10-I=MLN1-232-		Learning for N	etwork	S 1						
m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			/ (2) + Ü (2) Module taught in: English						
	Method of assessment		written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: English creditable for bonus							
	Additiona	l Information	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,IT,SE,KI,HCI,IN							
	Referred t	o in LPO I	§ 22 II Nr. 3 b)							
10-I=MLN2-232-	Machine	Learning for N	etwork	S 2						
m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses		V (2) + Ü (2) Module taught in: English							
	Method o	f 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 candi- date). Language of assessment: English creditable for bonus							
	Additiona	l Information	Focus	es available for stu	dents of the Master's	programme Informatik (Co	omputer Science, 12	o ECTS credits): AT,IT,SE,KI,HCI,IN		
	Referred t	o in LPO I	§ 22	l Nr. 3 b)						

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10-I-SNA-222-m01	Statistical Network Analysis									
	ECTS 5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			+ Ü (2)						
				le taught in: Germa	-					
	Method of ass	essment			prox. 60 to 120 minute					
			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).							
			Langu	Language of assessment: German and/or English						
			credit	able for bonus						
	Referred to in	_	-	l Nr. 3 b)						
10-l=lP-222-m01		sing and C	omput	tational Photograph	ny					
	ECTS 5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (2) + Ü (2) Module taught in: 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 candi- date). Language of assessment: English creditable for bonus							
	Referred to in	LPO I	§ 22 II Nr. 3 b)							
10-I=RLCD-	Reinforcement	t Learning	and C	omputational Decis	sion Making					
M-252-m01	ECTS 5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Additional Info	ormation	Focus	es available for stu	dents of the Master's	programme Informatik (Co	omputer Science, 12	o ECTS credits): IN		
	Referred to in	LPO I	§ 22	l Nr. 3 b)						

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10-I=MIR-252-m01	Music Information Retrieval									
	ECTS 5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (2) + Ü (2) Module taught in: German and/or English						
	Method of as	coccmont		a) written examination (approx. 60 to 120 minutes) or						
	Method of as	555551110111	b) ora	l examination of on	e candidate each (ap	prox. 20 minutes) or				
			c) ora	b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes)						
				anguage of assessment: German and/or English						
	Additional In	formation		reditable for bonus focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): GE						
	Referred to in			Nr. 3 b)						
10-I=OR-232-m01	Operations F		3221	ini. 3 <i>0)</i>						
	ECTS 5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	I	V (2) +	- + Ü (2)				10		
			Module taught in: German and/or English							
	Method of as	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 candi-							
			date).							
			Language of assessment: German and/or English creditable for bonus							
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IN							
	Referred to in		§ 22 Il Nr. 3 b)							
10-I=IR-242-m01	Information									
10 1-11 242 1101	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	Duration		n 1 semester Method of grading numerical grade Modul level graduate						
			Module taught in: German and/or English							
	Method of as	ssessment			rox. 60 to 120 minute					
								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							
	Additional In	formation		es available for stud HCI, GE	dents of the Master's	programme Informatik (Compu	iter Science, 120	o ECIS credits):		
	Referred to in	1 LPO I	§ 22	Nr. 3 b)						

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10-I=KT2-212-m01	Comput	tationa	l Complex	city II					
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S		V (2) ·	+ Ü (2)			·	
	Method	l of ass	essment	lf ann of one date). Langu Asses	ounced by the lectu e candidate each (a uage of assessment	pprox. 20 minutes) of German and/or Eng	of the course, the writte r an oral examination in ish		replaced by an oral examination 6 (approx. 15 minutes per candi- emester
	Additio	nal Info	rmation			dents of the Master's	programme Informatik	k (Computer Science, 120	ECTS credits): AT, SE, IT, ES
	Referre	d to in l	-	§ 22 Nr. 3 b)					
10-I=LVS-232-m01	Perform	nance E	valuation	of Dis	tributed Systems				
	ECTS 5 Duration				1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S		V (2) ·	+ Ü (2)	·		·	
				lf ann of one date). Langu	ounced by the lectu e candidate each (a		of the course, the writter r an oral examination in		replaced by an oral examination 5 (approx. 15 minutes per candi-
	Additio	nal Info	ormation	Focus AT,IT,		dents of the Master's	programme Informatik	k (Computer Science, 120	o ECTS credits):
	Referre	d to in l	LPO I	§ 22	I Nr. 3 b)				
10-AI=IAI-242-m01									
	ECTS 5 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	S		V (2) · Modu	+ Ü (2) Ile taught in: Germa	n and/or English			
			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 candi- date). Language of assessment: German and/or English creditable for bonus					
	Referre	d to in l	LPO I	§ 22	l Nr. 3 b)				

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		F=3==+7 J=

10-I=ML-212-m01	Mather	matical	Logic												
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate						
	Course	S		V (2) ·	+ Ü (2)										
	Method	d of ass	essment		written examination (approx. 60 to 120 minutes).										
				of one date) Langu Asses	e candidate each (a Jage of assessment	approx. 20 minutes) o t: German and/or Eng	r an oral examination lish		e replaced by an oral examination tes (approx. 15 minutes per candi- semester						
			ormation	AT,SE	,KI,ES	idents of the Master's	programme Informat	ik (Computer Science, 1	20 ECTS credits):						
			in LPO I § 22 II Nr. 3 b) ormatics Duration 1 semester Method of grading numerical grade Modul level graduate V (2) + Ü (2) V(2) + Ü (2) Vitten 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 compared by the lecture of the course of th												
10-I=MI-212-m01		-							level graduate						
		5	Duratio			Method of grading	numerical grade	Modul level	graduate						
	Course														
				of one date). Langu	e candidate each (a		r an oral examination								
	Additional Information Referred to in LPO I														
					I Nr. 3 b)										
10-I=PM-252-m01		sional P	roject Ma		ient		•								
	ECTS	5	Duratio	-	1 semester	Method of grading	numerical grade	Modul level	graduate						
	Courses			V (4)											
	Methoo	1 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 candi- date). Language of assessment: German and/or English creditable for bonus											
	other p	orerequi	sites	We re	commend complet	ing module 10-I=PRJA	K in parallel.								
	Additio	onal Info	ormation	Focus HCI, G		Idents of the Master's	programme Informat	ik (Computer Science, 1	20 ECTS credits): SE, IT, KI, ES, LR,						
	Referre	ed to in L	LPO I	§ 22	l Nr. 3 b)										

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10-LU-	Roboti	CS 1			_						
RI=R01-232-m01	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	1	Nodul level	graduate		
	Course	S			V (2) + Ü (2) Module taught in: German and/or English						
	Methoo	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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Additic	onal Info	ormation	Focu	ses available for s	students of the Master's programme Inforr	matik (Compute	r Science, 12	o ECTS credits): KI, ES, LR, HCI, GE		
	Referre	ed to in l	LPO I	§ 22	II Nr. 3 b)						
10-LU-	Roboti	CS 2									
RI=RO2-232-mo1	ECTS	10	Duration	n	1 semester	Method of grading numerical grade	1	Nodul level	graduate		
	Course	!S			+ Ü (2) + P (1) ule taught in: Gerr	man and/or English					
	Method	u or 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 candi- date). Language of assessment: German and/or English creditable for bonus Foreverse surgibula for students of the Master's programme informatily (Computer Science, 100 FCTS predits). VI, FS, LP, UCL, CF,						
	Additional Information Referred to in LPO I			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): KI, ES, LR, HCI, GE							
				§ 22 Nr. 3 b)							
10-l=ST-232-m01	Discret	te Event	nt Simulation								
	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	1	Nodul level	graduate		
	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 candi- date). Language of assessment: German and/or English creditable for bonus							
	Additio	onal Info	ormation		ses available for s ES,GE,IN	students of the Master's programme Inforr	matik (Compute	r Science, 12	o ECTS credits):		
	Referre	ed to in l	LPO I	§ 22	II Nr. 3 b)						
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10-l=El1-232-m01	Energ	y Inform	atics 1								
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate			
	Cours	ses			+ Ü (2)						
					le taught in: Germa						
			essment	lf ann of one date) Langu	ounced by the lectu e candidate each (a	prox. 60 to 120 minutes) arer at the beginning of the course, the written exan pprox. 20 minutes) or an oral examination in group : German and/or English					
				Focus	es available for stu	dents of the Master's programme Informatik (Comp	outer Science, 12	o ECTS credits): IN			
		red to in		§ 22	§ 22 II Nr. 3 b)						
10-I=SAR-161-m01	Softw	are Arch	itecture								
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Cours	ses		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 per date). Language of assessment: German and/or English creditable for bonus									
	Addit	ional Inf	ormation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,IT,ES							
	Refer	red to in	LPO I	§ 22 II Nr. 3 b)							
10-LURI=S- SA-232-m01	Space	ecraft Sy	stem Anal	ysis							
	ECTS	10	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses V (4) + Ü (2) Module taught in: English										
	Module taught in: English Method of assessment written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: English creditable for bonus										
	Addit	ional Inf	ormation			dents of the Master's programme Informatik (Comp	outer Science, 12	o ECTS credits): ES, LR			
	Refer	red to in	LPO I	§ 22	l Nr. 3 b)						

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10-l=VG-161-m01	Visualiz	ation o	of Graphs							
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses			V (2)	+ 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 candi- date). Language of assessment: German and/or English creditable for bonus						
	Additior	nal Info	ormation			udents of the Master's	s programme Informat	tik (Computer Science, 12	o ECTS credits):	
	Referred	l to in I	LPO I	§ 22 II Nr. 3 b)						
10-I=SEC-252-m01	Introduction to IT Security ECTS 5 Duration 1 semester Method of grading numerical grade Modul level graduate Courses V (2) + Ü (2) Module taught in: English Module taught in: English 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: English									
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses					sh		·		
		01 455		If ann of on date) Lang	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).					
	Additional Information Referred to in LPO I				Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SEC, IN					
					II Nr. 3 b)					
10-l=SSS-232-m01	no1 Security of Software Systems									
	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses			V (2) + Ü (2) Module taught in: English						
	Method	of ass	essment	lf ann of on date) Lang	nounced by the led e candidate each	(approx. 20 minutes) o	of the course, the wri		replaced by an oral examination s (approx. 15 minutes per candi-	
	م ما ما نه : م	1 1		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,KI,LR, HCI, ES, SEC,IN						
	Addition	ial Info	ormation			udents of the Master's	s programme Informat	tik (Computer Science, 12	o ECIS credits): SE,KI,LR, HCI, ES,	

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10-I=AKA-232-m01	Selecte	ed Topic	s in Algoi	rithms									
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	s		V (2) ·	+ Ü (2)	•		•					
	Method	d of asse	essment	a) wri	tten examination (a	pprox. 60 to 120 minu	utes) or						
								es) and subsequ	ent discussion on the topic) or				
				c) oral examination of one candidate each (approx. 20 minutes) or									
					d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English								
				creditable for bonus									
	Additio	nal Info	rmation		es available for stu	dents of the Master's	programme Informatik (Comp	uter Science, 120	p ECTS credits):				
				AT									
	Referred to in LPO I				l Nr. 3 b)								
10-I=AKT-232-m01	Selecte	ed Topic	s in Theo	ry									
	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2) ·	+ Ü (2)								
	Method	d of asse	essment			pprox. 60 to 120 minu							
				b) project work (report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) or									
				c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate)									
				Language of assessment: German and/or English									
				creditable for bonus									
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits):									
				AT									
	Referred to in LPO I			§ 22 II Nr. 3 b)									
10-I=AK- SE-232-m01	Selected Topics in Software Engineering												
	ECTS 5 Duration		ı	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (2) + Ü (2)									
	Method	d of asse	essment	a) written examination (approx. 60 to 120 minutes) or									
				b) project work (report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) or									
				c) oral examination of one candidate each (approx. 20 minutes) or									
				d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English									
					able for bonus		1311						
	Additio	nal Info	rmation			dents of the Master's	programme Informatik (Comp	uter Science. 120	ECTS credits): SE.				
		d to in L			I Nr. 3 b)		, <u> </u>	, -					

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10-l=AGE-232-m01	Selected To	pics in Gam	es Engi	ineering				
<u> </u>	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) ·	+ Ü (2)				0
	Method of a	ssessment	b) pro	ject work (report	(approx. 60 to 120 min (approx. 20 pages) wit one candidate each (ap	h presentation (30 to	45 minutes) and subsequ	uent discussion on the topic) or
			d) ora Langu	l examination in	groups of up to 3 candi ent: German and/or Eng	dates (approx. 15 mir		
	Additional In	nformation	Focus	ses available for s	tudents of the Master's	s programme Informa	tik (Computer Science, 12	o ECTS credits): GE.
	Referred to i	n LPO I	§ 22	l Nr. 3 b)				
10-I=A-	Selected To	pics in IT Se	curity					
KITS-232-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses			+ Ü (2) Ile taught in: Engl	ish			
			b) pro c) ora d) ora Langu credit	pject work (report l examination of o l examination in lage of assessme able for bonus	one candidate each (ar groups of up to 3 candi ent: English	h presentation (30 to prox. 20 minutes) or dates (approx. 15 mir	nutes per candidate)	uent discussion on the topic) or
	Additional Ir	nformation	Focus ES, SI		tudents of the Master's	s programme Informa	tik (Computer Science, 12	o ECTS credits): SE, KI, LR, HCI,
	Referred to i	n LPO I	§ 22	l Nr. 3 b)				
10-I=AKIT-232-m01	Selected To	pics in Inter	net Teo	chnologies				
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) ·					
	Method of a	ssessment	b) pro c) ora d) ora Langu	oject work (report l examination of al examination in g	(approx. 60 to 120 min (approx. 20 pages) wit one candidate each (ap groups of up to 3 candi ent: German and/or Eng	h presentation (30 to pprox. 20 minutes) or dates (approx. 15 mir		uent discussion on the topic) or
			credit	able for bonus				
	Additional In	nformation			tudents of the Master's	programme Informa	tik (Computer Science, 12	o ECTS credits): IT.

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10-I=A-	Selecte	d Topic	s in Intel	igent S	Systems				
KIS-232-m01	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate
	Course	S		V (2) +	- Ü (2)			•	-
	Methoo	l of ass	essment	b) pro c) oral d) oral Langu	ject work (report (a l examination of on l examination in gro	e candidate each (ap	n presentation (30 to 45 n prox. 20 minutes) or dates (approx. 15 minutes		ent discussion on the topic) or
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's	programme Informatik (0	Computer Science, 12	o ECTS credits): KI
	Referre	d to in ^r	LPO I	§ 22	Nr. 3 b)				
10-I=A-	Selecte	d Topic	s in Embe	edded S	Systems				
KES-232-m01	ECTS	5	Duration	۱ I	1 semester	Method of grading	numerical grade	Modul level	graduate
	Course	S		V (2) +	- Ü (2)			·	
				c) oral d) oral Langu	examination of on l examination in gro	e candidate each (ap	prox. 20 minutes) or dates (approx. 15 minutes		ent discussion on the topic) or
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's	programme Informatik (0	Computer Science, 12	o ECTS credits): ES.
	Referre	d to in l	LPO I	§ 22	Nr. 3 b)				
10-I=AKL-	Selecte	d Topic	s in Aero	space E	Ingineering				
R-232-m01	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate
								Modulicvel	graduale
	Course	S		V (2) +	- Ü (2)			Modulievel	graduate
			essment	a) writ b) pro c) oral d) ora Langu	ten examination (a ject work (report (a examination of on l examination in gro	pprox. 60 to 120 min pprox. 20 pages) with e candidate each (ap	n presentation (30 to 45 n prox. 20 minutes) or dates (approx. 15 minutes	ninutes) and subsequ	ent discussion on the topic) or
	Method	d of ass		a) writ b) pro c) oral d) ora Langu credita	ten examination (a ject work (report (a examination of on l examination in gro age of assessment able for bonus	pprox. 60 to 120 min pprox. 20 pages) with e candidate each (ap oups of up to 3 candid : German and/or Eng	n presentation (30 to 45 n prox. 20 minutes) or dates (approx. 15 minutes	ninutes) and subsequ s per candidate)	ent discussion on the topic) or

10-I=AKH-	Selecte	ed Topic	cs in HCI								
Cl-232-m01	ECTS	5	Duration	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	s		V (2) + Ü/S (2)		•					
	Methoo	d of ass	essment	 b) project work (repor c) oral examination of d) oral examination in 	a) written examination (approx. 60 to 120 minutes) or b) project work (report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English						
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI.							
	Referre	d to in l	LPO I	§ 22 Nr. 3 b)							
10-I=AKDS-232-	Selecte	ed Topic	cs in Data	Science							
m01	ECTS	5	Duration	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) + Ü (2) Module taught in: Ger	man and/or English						
	Method of assessment			 b) project work (report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) of c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus 							
	Additio	nal Info	ormation	Focuses available for	students of the Master's	programme Informatik	(Computer Science, 12	o ECTS credits): Kl			
	Referre	d to in l	LPO I	§ 22 II Nr. 3 b)							
10-I=A-	Selecte	ed Topic	s in Auto	nomous Mobile System	ns						
KAMS-232-m01	ECTS	5	Duration	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) + Ü (2) Module taught in: Ger	man and/or English						
	Method	d of ass	essment	 a) written examination (approx. 60 to 120 minutes) or b) project work (report (approx. 20 pages) with presentation (30 to 45 minutes) and subsequent discussion on the topic) o c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus 							
	Additio	nallafa					/				
	Additio	matimic	ormation	Focuses available for	students of the Master's	programme Informatik	(Computer Science, 12	o ECTS credits): LR, ES, KI.			

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10-I=AK-	Selected Topic	cs in Com	puter S	Science and Sustair	nability			
NA-232-m01	ECTS 5	Duratio	n	1 semester	Method of grading nun	nerical grade	Modul level	graduate
	Courses			+ Ü (2) ıle taught in: Germa	in and/or English			
	Method of ass	essment	b) pro c) ora d) ora Langi	oject work (report (a al examination of on al examination in gr	approx. 60 to 120 minutes) pprox. 20 pages) with pre le candidate each (approx oups of up to 3 candidates :: German and/or English	sentation (30 to 45 minut . 20 minutes) or	•	ient discussion on the topic) or
	Additional Info	ormation	Focus	ses available for stu	dents of the Master's prog	gramme Informatik (Comp	outer Science, 12	o ECTS credits): IN
	Referred to in I	LPO I	§ 22	ll Nr. 3 b)				
10-I=AKII-232-m01	Selected Topic	cs in Com	puter S	Science				
	ECTS 5	Duratio	n	1 semester	Method of grading nun	nerical grade	Modul level	graduate
	Courses		V (2)	+ Ü/S (2)				
	Method of ass	essment	b) pro c) ora d) ora Langu	oject work (report (a al examination of on al examination in gr	approx. 60 to 120 minutes) approx. 20 pages) with pre le candidate each (approx oups of up to 3 candidates : German and/or English	sentation (30 to 45 minut . 20 minutes) or		ent discussion on the topic) or
	Referred to in I	LPO I	§ 22	II Nr. 3 b)				
10-HCI=M-	Multimodal Us	ser Interfa	ices					
MUI-161-m01	ECTS 5	Duratio		1 semester	Method of grading nun	nerical grade	Modul level	graduate
	Courses		V (2)	+ Ü (2)				
	Method of ass	essment	Langi		esults (approx. 40 minutes :: German and/or English	5)		
	Additional Info		Focus	ses available for stu	dents of the Master's prog	gramme Informatik (Comp	outer Science, 12	o ECTS credits): HCI,GE.
	Referred to in I	_	-	ll Nr. 3 b)				
10-I-MCS-242-m01				puter Interaction				
	ECTS 5	Duratio		1 semester	Method of grading nun	nerical grade	Modul level	undergraduate
	Courses			+ Ü (1)				
	Method of ass Referred to in I		b) pre c) ora Langu credit	esentation (30 to 60 al examination of on	approx. 120 minutes) or o minutes) or ie candidate each (30 to 6 :: German and/or English	o minutes)		

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10-HCl=3DUI-161-	3D User l	nterfac	es						
m01	ECTS 5		Duratior	า	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses			V (2) +	+ Ü (2)				
	Method o	of asses	sment			sults (approx. 30 mii			
					age of assessment: able for bonus	: German and/or Eng	lish		
	Additiona	al Inforn	nation	Focus	es available for stu	dents of the Master's	programme Informatik	(Computer Science, 120	ECTS credits): HCI,GE.
	Referred t	to in LP	01	§ 22	Nr. 3 b)				
10-HCI=M-	Machine	Learnin	ng (for U	ser Int	erfaces)				
LUI-161-m01	ECTS 5	I	Duratior	ו	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses			V (2) +	+ Ü (2)				
	Method o	of asses	sment			sults (approx. 40 mi			
					age of assessment: able for bonus	: German and/or Eng	lish		
	Additiona	al Inforn	nation	Focus	es available for stu	dents of the Master's	programme Informatik	(Computer Science, 120	ECTS credits): HCI,GE.
	Referred t			-	Nr. 3 b)				
10-HCI=RIS-182-	Real-Time	e Intera	ctive Sy	stems					
m01	ECTS 5	I	Duratior		1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses			V (2) +	- Ü (2)				
	Method o	of asses	sment	If ann of one date). Langu	ounced by the lectu e candidate each (a		of the course, the writte r an oral examination ir		replaced by an oral examination 6 (approx. 15 minutes per candi-
	Additiona	al Inforn	nation				programme Informatik bject-specific provisior	(Computer Science, 120 ns).	ECTS credits): HCI.
	Referred t	to in LP	01	§ 22	Nr. 3 b)				
10-MK-Dig-	Digital m	edia 1							
Med1-212-m01	ECTS 5		Duratior		1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses			V (2) +					
				b) ora Langu credit	l examination of on age of assessment: able for bonus	pprox. 50 minutes) o e candidate each (ap : German and/or Eng	pprox. 20 minutes) lish		
	Additiona	al Inforn	nation	Instea	d of an exercise, a	tutorial with 2 SWS c	an be offered.		
	Referred t	to in LP	01	§ 22	Nr. 3 b)				

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10-MK-Dig-	Digital	media :	2					
Med2-212-m01	ECTS	10	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate
	Course	:S		V (2) -	+ Ü (2)			
	Metho	d of asso	essment	b) ora Langu	l examination of on	pprox. 100 minutes) or e candidate each (approx. 30 minutes) : German and/or English		
	Referre	ed to in L	PO I	§ 22	l Nr. 3 b)			
Teaching (10 ECTS	credits)							
Compulsory Course	es (10 EC	CTS cred	its)					
10-I-DDI1-152-m01	Compu	iter Scie	nce Educa	ation 1	(incl. Practical Cou	rse in the Application of Computer Science System	s form an Educa	tional Point of View)
	ECTS	6	Duration	า	2 semester	Method of grading numerical grade	Modul level	undergraduate
	Course	:S		V (2) +	+ Ü (2) + P (2)		î	
	Metho	d of ass	essment	lf ann of one date).	ounced by the lectu candidate each (a	rox. 60 to 120 minutes). Frer at the beginning of the course, the written exam pprox. 20 minutes) or an oral examination in groups		
	Referre	ed to in L	.PO I	§ 49 § 69				
10-I-DDI2-GY-152-	Compu	iter Scie	nce Educa	ation 2				
m01	ECTS	4	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate
	Course	s			+ Ü (2)			
	Metho	d of ass	essment	If ann of one date).	ounced by the lecture candidate each (a	rox. 60 to 120 minutes). Frer at the beginning of the course, the written exam pprox. 20 minutes) or an oral examination in groups		
	Referre	ed to in L	PO I	§691	Nr. 2 and § 69 Nr.	1 c): Rechnerarchitektur		
Paper (4 ECTS cred		ching d		naciu	m must somplote o	practical training in didactics and toaching method	ology (studionh	a daitan dag fash didaktigahag

Students studying for a teaching degree Gymnasium must complete a practical training in didactics and teaching methodology (studienbegleitendes fachdidaktisches Praktikum) which refers to one of the subjects they selected as vertieft studiertes Fach (subject studied with a focus on the scientific discipline) pursuant to Section 34 Subsection 1 No. 4 LPO I (examination regulations for teaching-degree programmes). The obligatory accompanying tutorial is offered by the respective subject. The ECTS

credits obtained are counted in the subject Erziehungswissenschaften pursuant to Section 10 Subsection 3 LASPO (general academic and examination regulations for teaching-degree programms).

10-I-SBFD-GY-152- mo1 Practical Training in Classroom Teaching in Computer Science Education including Theory (German Gymnasium) ECTS 4 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate Courses P (o) + S (2) Method of assessment Written elaboration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examinati for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as placement school. Referred to in LPO I § 34 1 Nr. 4 Freier Bereich (general as well as subject-specific electives) Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) Tereier Bereich (general as well as subject-specific electives) "Freier Bereich (general as well as subject-specific electives) "Freier Bereich (general as well as subject-specific electives) - subject specific "Freier Bereich (general as well as subject-specific electives) - subject specific "Freier Bereich (general as well as subject-specific electives) - subject specific 10-I-REP-152-mo1 Exa	specified by on 9 LASPO (ge- dules from the
Image: Courses P (o) + S (2) Method of assessment Written elaboration of teaching practice (15 to 20 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examination for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as placement school. Referred to in LPO I § 34 l 1 Nr. 4 Freier Bereich (general as well as subject-specific electives) Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) (Section reral academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any modurates below. Freier Bereich - interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmung: "Freien Bereich im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) - subject specific) 10-I-REP-152-m01 Exam Tutorial for the German Statsexamen ECTS 4 Duration 2 semester Method of assessment One exercise per area covered in the state examination Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 b)	specified by on 9 LASPO (ge- dules from the
Method of assessment Written elaboration of teaching practice (15 to 20 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examinati for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as placement school. Referred to in LPO I § 34 I Nr. 4 Freier Bereich (general as well as subject-specific electives) Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) (Section areas below. Freier Bereich - interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmung "Freien Bereich "im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) subject specific) 10-I-REP-152-moil Exam Tutorial for the German Staatsexamen ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2) Method of assessment One exercise per area covered in the state examination % 2 2 11 Nr. 2 f) § 2 2 11 Nr. 3 b)	specified by on 9 LASPO (ge- dules from the
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Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) (Section neral academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any modareas below. Freier Bereich interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmung" "Freier Bereich" im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) subject specific) 10-I-REP-152-m01 Exam Tutorial for the German Staatsexamen ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2)	dules from the
neral academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any more areas below. Freier Bereich interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmung" "Freier Bereich" im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) subject specific) 10-I-REP-152-mo1 Exam Tutorial for the German Staatsexamen ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2) Method of assessment One exercise per area covered in the state examination Referred to in LPO 1 § 22 II Nr. 2 fl § 22 II Nr. 3 b) § 22 II Nr. 3 b)	dules from the
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"Freien Bereich" im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) subject specific) 10-I-REP-152-m01 Exam Tutorial for the German Staatsexamen ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2) U U U Method of assessment One exercise per area covered in the state examination U U Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 b) § 22 II Nr. 3 b) U U	gen für den
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10-I-REP-152-mo1 Exam Tutorial for the German Staatsexamen ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2) Method of assessment One exercise per area covered in the state examination Referred to in LPO I § 22 II Nr. 2 fl § 22 II Nr. 3 b)	
ECTS 4 Duration 2 semester Method of grading (not) successfully completed Modul level undergraduate Courses Ü (2) Method of assessment One exercise per area covered in the state examination Referred to in LPO I § 22 II Nr. 2 fl § 22 II Nr. 3 b)	
Courses Ü (2) Method of assessment One exercise per area covered in the state examination Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 b)	
Method of assessment One exercise per area covered in the state examination Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 b)	
Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 b)	
§ 22 II Nr. 3 b)	
ECTS 4 Duration 1 semester Method of grading numerical grade Modul level undergraduate Courses S (2)	
Method of assessment written elaboration (approx. 20 pages) and presentation including discussion (approx. 45 to 60 minutes) on a	topic from the
field of computer science didactics	opic nom the
Assessment offered: Only in the semester in which the course is offered	
Referred to in LPO I § 22 II Nr. 2 f)	
§ 22 II Nr. 3 f)	
10-I-DV-152-mo1 Advanced Topics of Computer Science Education	
ECTS 4 Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate	
Courses S (2)	
Method of assessment talk (approx. 30 minutes) or practical assignment (exercise) with examination talk (approx. 15 minutes)	
Assessment offered: Only in the semester in which the course is offered	
Referred to in LPO I § 22 II Nr. 2 f)	
§ 22 Nr. 2 f), § 22 Nr. 3 f)	

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10-I-DRO-152-m01	Robotics in Education (practical course)								
	ECTS 4 Duration		n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate	
	Courses	•	Ü (2)						
	Method of ass	essment				pupils) with examination talk	(approx. 15 mi	nutes)	
		_			in the semester in w	nich the course is offered			
	Referred to in I	_PO I		Nr. 2 f)					
	Durational Com	6	-	I Nr. 3 f)					
10-I-DPR-152-m01			<u> </u>	Science Education					
	ECTS 4	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate	
	Courses		Ü (2)					_	
	Method of ass	essment			examination talk (ap in the semester in wl	prox. 15 minutes) nich the course is offered			
	Referred to in I	POI		Nr. 2 f) Nr. 3 f)					
10-I-DPP-152-m01	Hands-on Com	nuter Sci		1 111. 3 1)					
10-1-077-152-11101	ECTS 6	Duration		2 semester	Mothod of grading	(not) successfully completed	Modul level	undergraduate	
	Courses	Duratio					Modul level	undergraduate	
			$\ddot{U}(2) + S(2)$						
	Method of ass	essment	practical assignment (preparing and delivering a school lab session) with examination talk (approx. 15 minutes) Assessment offered: Only in the semester in which the course is offered						
	Referred to in LPO I		§ 22 II Nr. 2 f) § 22 II Nr. 3 f)						
10-I-TUT1-152-m01	Tutor activity 1								
	ECTS 2 Duration		n		Method of grading	(not) successfully completed	Modul level	undergraduate	
	Courses		T (2)						
	Method of assessment		Wrap-up report on tutoring activities (5 to 10 pages)						
	Referred to in LPO I		§ 22 II Nr. 2 f)						
			§ 22 Nr. 3 f)						
10-I-TUT2-152-m01	Tutor activity 2								
	ECTS 2	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate	
	Courses		T (2)		· · · · · ·				
	Method of ass	essment	Wrap-up report on tutoring activities (5 to 10 pages)						
	Referred to in LPO I		§ 22 Nr. 2 f)						
			§ 22 Nr. 3 f)						
Paper (10 ECTS cree		t (thosis)	in acco	rdanco with the prov	visions of Sostion 20	IDO I (ovamination regulation	fortosching d	ograa programmac) is a proroqui	

Preparation of a written Hausarbeit (thesis) in accordance with the provisions of Section 29 LPO I (examination regulations for teaching-degree programmes) is a prerequisite for teaching degree students to be admitted to the Erste Staatsprüfung (First State Examination). In accordance with the provisions of Section 29 LPO I, students studying for a teaching degree Gymnasium may write this thesis in one of the subjects they selected as vertieft studiertes Fach (subject studied with a focus on the scientific dis-

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cipline) or in the subject Erziehungswissenschaften (Educational Science). Pursuant to Section 29 Subsection 1 Sentence 2 LPO I, students may also choose to write an interdisciplinary thesis.

10-I-HA-GY-152-	Thesis	Thesis Computer Science (Teaching Degree at the German Gymnasium)							
m01	ECTS	10	Duration			Method of grading	numerical grade	Modul level	undergraduate
	Course	S		No courses assigned to module					
	Metho	d of asse		hours) Langua		German; exceptions) I (examination regulations for pursuant to Section 29 Subsec		
	Referre	d to in L	.PO I	§ 29					

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