

## **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"

Responsible: Faculty of Mathematics and Computer Science

Responsible: Institute of Computer Science

Examination regulations version: 2015

Examination regulations version: 2015

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

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB: ditable for bonus.

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

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:

#### LASP02015

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

### 08-Sep-2015 (2015-120)

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	Module title										
	ECTS		Duration	(in semesters)	Method of grading		Module level					
	Courses		To be spe	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 applica	if applicable								
	Other prereq	uisites	if applica	if applicable								
	Participants on of places		ocati- if applica	if applicable								
	Additional in	format	ion if applica	if applicable								
	Referred to in	n LPO I	if applica	ble (examination re	gulations for teaching	g-degree programmes)						

Scientific Disciplin	e (92 ECTS cro	edits)									
Compulsory Course	es (65 ECTS cr	redits)									
General Compulsor	y Courses (55	ECTS credi	ts)								
10-I-EinP-152-m01	Introduction	to Program	ming								
	ECTS 5	Duratio		1 semester Method of grading numerical grade Modul				undergraduate			
	Courses			$V(2) + \ddot{U}(2)$							
	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 candidate).  creditable for bonus								
	Referred to i	n LPO I	§ 49 l § 69 l	Nr. 1 b) Nr. 1 b)							
10-l-DB-152-m01	Databases										
	ECTS 5 Duration		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			+ Ü (2)							
	Method of a	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 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							
	Referred to i	n LPO I	§ 49   Nr. 1 b) § 69   Nr. 1 b)								
10-l-ST-152-m01	Software Te	chnology									
	ECTS 10	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (4) -	+ Ü (2)				_			
	Method of a		written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  creditable for bonus								
	Referred to i	n LPO I		Nr. 1 b) Nr. 1 b)							

10-I-ADS-152-m01	Algorit	hms and	d data str	ucture	 S				-			
	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	 S	•	V (4) -	+ Ü (2)							
	Method	d of asse		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 candi-							
				date).								
	Referred to in LPO I				§ 49   Nr. 1 a) § 69   Nr. 1 a)							
10-I-PP-152-m01	Practic	al Cours	e in Prog	rammi	ng							
	ECTS	10	Duration	ı		Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			P (6)	-							
	Method of assessment			If ann	vritten examination (approx. 60 to 120 minutes).  f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).							
	Referre	d to in L			Nr. 1 c) Nr. 1 d)							
10-I-SWP-152-m01	Practic	al cours	e in softw	vare								
	ECTS	10	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course			P (6)								
	Method of assessment				cal project (Compl 10 minutes per gro		are project in groups (approx. 3	oo hours per pe	erson) and final presentation (ap-			
	Modules successfully completed			10-I-PP, 10-I-ST								
	other prerequisites			In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.								
	Referre	d to in L	PO I	§ 69 l Nr. 1 d)								
10-I-TEl1-152-m01	Technic	cal Infor	matics I									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -	+ Ü (2)							
	Method of assessment			If ann of one date). Langu credit	ounced by the lect e candidate each (a uage of assessmen able for bonus	urer at the beginning approx. 20 minutes) o	of the course, the written exam r an oral examination in groups lish		replaced by an oral examination s (approx. 15 minutes per candi-			
	Referre	d to in L	PO I	§ 69 I	Nr. 1 c): Rechnern	etze und Betriebssyst	eme					

Theoretical Compu	ıter Scie	nce (10	ECTS cred	its)							
10-I-TIV-152-m01			formatics								
	ECTS	5	Duration	<u> </u>	1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course	!S		V (4)		·					
	Method	Method of assessment			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).						
	Referre	d to in	LPO I		Nr. 1 a) Nr. 1 a)						
10-I-TIT-152-m01	Tutoria	l Theor	etical Info	rmatio	:S		'				
	ECTS	5	Duratio	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course	!S		Ü (2)	,						
	Method of assessment			b) wri	a) completion of approx. 11 exercises with approx. 4 components each (50% to be completed correctly) or b) written examination (approx. 180 to 240 minutes)  Method of assessment to be selected by the candidate.						
	Referre	Referred to in LPO I			Nr. 1 a) Nr. 1 a)						
Compulsory Electiv	res (27 ECTS credits)										
Technical Compute	er Scienc	:e (5 EC	TS credits	)							
10-I-RAK-152-m01	Compu	iter Arc	hitecture								
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course	!S		V (2)	+ Ü (2)	·					
				If ann of one date) Langu	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus						
	Referre	ed to in	LPO I	§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur							

10-I-RALV-152-m01	Digital	Digital computer systems											
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (4)				-					
	Method	d of asso	essment			rox. 60 to 120 minute							
					e candidate each (a				replaced by an oral examination s (approx. 15 minutes per candi-				
	other p	rerequi	sites		Simultaneous completion of module 10-I-RALT is recommended.								
		d to in L		§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur									
General Compulsor	y Electiv	ves (22	ECTS cred	its)									
10-I-RAK-152-m01	Compu	ter Arch	itecture										
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	-	V (2) -	+ 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 candidate).  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-RALV-152-m01	Digital computer systems												
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course			V (4)									
	Method of assessment			written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).									
	other p	rerequi	sites	Simultaneous completion of module 10-I-RALT is recommended.									
	Referre	d to in L	PO I	§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur									
10-I-RALT-152-m01	Tutoria	l Digita	l compute	r syste	ems								
	ECTS	5	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		Ü (2)									
				a) completion of approx. 11 exercises with approx. 4 components each (50% to be completed correctly) or b) written examination (approx. 180 to 240 minutes)  Method of assessment to be selected by the candidate.									
				§ 22	l Nr. 3 b)								

10-l-lÜ-152-m01	Information Transmission												
	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (4) ·	+ Ü (2)		<del>-</del>						
	Method	l of asse	essment	If ann of one date).	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).								
	Referre	d to in I	-PO I		I Nr. 3 b)								
10-I-HWP-152-m01	Practical course in hardware												
	ECTS 10 Duratio				1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		P (6)	•				-				
	Method of assessment				olio: completion of tes per project)	approx. 3 to 10 projec	t assignments (approx. 250 ho	urs total) and pi	resentation of results (approx. 10				
	Referre	d to in I	PO I	§ 22 l	§ 22 II Nr. 3 b)								
10-l-LOG-152-m01	Logic for informatics												
	ECTS 5 Duratio			ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			V (2) ·	+ 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 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								
	Referre	d to in I	PO I	§ 22    Nr. 3 b)									
10-I-AGT-152-m01	Algorit	hmic Gr	aph Theo	ry									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2) ·	+ Ü (2)	•		•					
	Method	l of asse	essment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus									
	Referre	d to in I	PO I	§ 22 l	I Nr. 3 b)								

10-l-lCG-152-m01	Interacti	ve Compute	er Gra	phics	,							
	ECTS !	5 Dur	ation	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		'	V (2) + Ü (2)								
	Method	of assessm		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								
				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								
	Referred	to in LPO I	1	§ 22 II Nr. 3 b)								
10-I-WBS-152-m01	Knowled	ge-based S	yster	ns			'					
	ECTS 4	5 Dur	ation	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		,	V (2) + Ü (2)			<u>^</u>					
	Method of assessment			vritten examination (approx. 60 to 120 minutes).  f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candilate).  late).  anguage of assessment: German and/or English reditable for bonus								
	Referred	to in LPO I	3	§ 22 II Nr. 3 b)			,					
10-l-DM-152-m01	Data Mir	Data Mining										
	ECTS 4	5 Dur	ation	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		'	V (2) + Ü (2)								
	Method	of assessm		If announced by the lo of one candidate each date).		of the course, the writ or an oral examination		replaced by an oral examination s (approx. 15 minutes per candi-				
	Referred	to in LPO I		§ 22 II Nr. 3 b)								
10-I-00P-152-m01	Object o	riented Pro	gramı	ming			,					
	ECTS 4	5 Dur	ation	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		'	V (2) + Ü (2)								
	Method of assessment			written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus								
	Referred to in LPO I			§ 22 II Nr. 3 b)								

10-l-KT-152-m01	Computation	onal Complex	city									
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (2)	+ Ü (2)	·							
	Method of	assessment	writte	written examination (approx. 60 to 120 minutes).								
			If anr	If 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								
	Referred to	in LPO I	§ 22 l	II Nr. 3 b)								
10-I-KD-152-m01		hy and Data	Securi	ity								
	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (2)	+ Ü (2)								
	Method of a	assessment	If anr of on date) Lang	ritten examination (approx. 60 to 120 minutes). fannounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate).  anguage of assessment: German and/or English reditable for bonus								
	Referred to	in LPO I	§ 22 l	II Nr. 3 b)			_					
10-l-3D-152-mo1	3D Point Cloud Processing											
	ECTS 5	Duratio	n	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses	•	V (2)	+ Ü (2)		•						
	Method of a	assessment	If anr of on date) Langi	nounced by the lec e candidate each (	oprox. 60 to 120 minutes). turer at the beginning of the course, the written e (approx. 20 minutes) or an oral examination in gr nt: German and/or English							
	Referred to	in LPO I	§ 22 l	II Nr. 3 b)								
10-l-RK-152-m01	Computer N	letworks and	Comr	nunication Systen	ns							
	ECTS 8	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (4)	+ Ü (2)								
	Method of a	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 examinatio of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus								
	Referred to	in LPO I	§ 22	II Nr. 3 b)								

10-I-SEM1-152-m01	Semina	ar - Sele	ected Topi	cs in C	omputer Science	1						
	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S	•	S (2)			•					
	Method	d of ass	essment	pic fr	vritten elaboration (approx. 10 to 15 pages) and presentation (approx. 30 to 45 minutes) with subsequent discussion on a to- bic from the field of computer science anguage of assessment: German and/or English							
	Referre	d to in	LPO I	§ 22 l	§ 22 II Nr. 3 b)							
10-I-PV-152-m01	Project	Preser	ntation		,		,					
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	:S		S (5)		·	*					
	Method of assessment			ter sc	ience at a trade f	ect developed by the candidate analogous to a pr air as well as discussion (approx. 10 to 15 minute ent: German and/or English		sons with a knowledge of compu-				
	Referre	d to in	LPO I	§ 22 l	§ 22 II Nr. 3 b)							
10-l=AA-152-m01	Advanced Automation											
	ECTS 8 Duratio			n	1 semester	Method of grading   numerical grade	Modul level	graduate				
	Course	:S		V (4)	+ Ü (2)							
	Method of assessment				n examination (a able for bonus	pprox. 60 to 120 minutes)						
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT,IS,ES,LR,GE								
	Referred to in LPO I			§ 22 II Nr. 3 b)								
10-l=A-	Algorit	hms fo	r Geograp	hic Inf	ormation System	s	'					
GIS-152-m01	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	:S		V (2)	+ Ü (2)		<u>^</u>					
	Method	d of ass	essment	If ann of on date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in	LPO I	§ 22 l	l Nr. 3 b)							

10-l=AG-152-m01	Compu	tational	l Geometr	<del></del>				"					
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)	+ Ü (2)			•	-				
	Method	d of asso	essment	written examination (approx. 60 to 120 minutes).									
				If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination									
				of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).									
					Language of assessment: German and/or English								
					creditable for bonus								
	Referre	d to in L	LPO I	§ 22 l	I Nr. 3 b)								
10-I=APA-152-m01	Approx	imation	n Algorith	ms									
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)	+ Ü (2)								
	Method of assessment			If ann of on date) Langu	rritten 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 fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate).  anguage of assessment: German and/or English reditable for bonus								
	Referre	d to in L	LPO I	§ 22 l	I Nr. 3 b)								
10-l=AUT-152-m01	Automata Theory												
	ECTS	5	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)	+ Ü (2)			•					
	Method of assessment			If ann of on date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral 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								
	Referre	d to in L	LPO I	§ 22 II Nr. 3 b)									
10-l=AVS-152-m01	Avionio	s Syste	ems										
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)	V (2) + Ü (2)								
	Method	d of asso	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-l=BER-152-m01	Compu	tability	Theory									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) ·	+ Ü (2)			,				
	Method	d of asso	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								
				date). Langu	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candilate).  anguage of assessment: German and/or English reditable for bonus							
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-l=CB-152-m01	Compil	er Cons	truction									
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) ·	+ Ü (2)			-	-			
	Method of assessment			If ann of one date). Langu credit	vritten examination (approx. 60 to 120 minutes).  f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candilate).  anguage of assessment: German and/or English reditable for bonus							
	Referre	d to in L	PO I	§ 22 l	l Nr. 3 b)							
10-l=EL-152-m01	E-Learning											
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) ·	+ 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 date). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in L	PO I	§ 22 II Nr. 3 b)								
10-l=ES-152-m01	Embed	ded Sys	tems									
	ECTS	8	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	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								
	Referred to in LPO I			§ 22 I	l Nr. 3 b)							

10-I=PA-152-m01	Analysis an	d Design of	Programs								
	ECTS 5	Duratio	1 semester	Method of grading num	nerical grade	Modul level	graduate				
	Courses		V (2) + Ü (2)			`					
	Method of a	ssessment	written examination (approx. 60 to 120 minutes).								
			of one candidate each date).	Language of assessment: German and/or English creditable for bonus							
	Referred to i	n LPO I	§ 22 II Nr. 3 b)								
10-l=IR-152-m01	Information	Retrieval									
	ECTS 5	Duratio	1 semester	Method of grading num	nerical grade	Modul level	graduate				
	Courses		V (2) + Ü (2)			,					
			If announced by the le of one candidate each date).	Language of assessment: German and/or English							
	Referred to i	n LPO I	§ 22 II Nr. 3 b)								
10-l=KT2-152-m01	Computational Complexity II										
	ECTS 5	Duratio	1 semester	Method of grading   num	nerical grade	Modul level	graduate				
	Courses		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 in groups of 2 candidates (approx. 15 minutes date).  Language of assessment: German and/or English creditable for bonus								
	Referred to i	n LPO I	§ 22    Nr. 3 b)								
10-l=Kl1-152-m01	Artificial Int	elligence I									
	ECTS 5	Duratio	1 semester	Method of grading num	nerical grade	Modul level	graduate				
	Courses		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 candidate).  Language of assessment: German and/or English creditable for bonus								
	Referred to i	n LPO I	§ 22 II Nr. 3 b)								

10-l=Kl2-152-m01	Artifici	Artificial Intelligence 2											
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)	/ (2) + Ü (2)								
	Method	d of ass	essment			prox. 60 to 120 minut		·					
				If anr	ounced by the lect	turer at the beginning	of the course, the write	tten examination may be	replaced by an oral examination				
				of on date)	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-								
						nt: German and/or Eng	lish						
					Language of assessment: German and/or English creditable for bonus								
	Referre	d to in I	LPO I	§ 22 l	II Nr. 3 b)								
10-l=LVS-152-m01	Perforr	nance E	valuation	of Dis	tributed Systems			,					
	ECTS	8	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (4)	+ Ü (2)								
	Method	d of ass	essment	If anr of on date) Lang	nounced by the lect e candidate each (	prox. 60 to 120 minut turer at the beginning approx. 20 minutes) o nt: German and/or Eng	of the course, the writer an oral examination	tten examination may be in groups of 2 candidate	replaced by an oral examination s (approx. 15 minutes per candi-				
	Referre	d to in I	LPO I	§ 22 l	II Nr. 3 b)				_				
10-l=ML-152-m01	Mathe	Mathematical 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).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus									
	Referre	d to in I	LPO I	§ 22 l	II Nr. 3 b)			·					
10-l=Ml-152-m01	Medica	al Inforn	natics										
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (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 candidate).  Language of assessment: German and/or English creditable for bonus								
				creur	table for bollus								

10-I=PEB-152-m01	Perform	nance Er	ngineerin	ng & Benchmarking of Computer Systems							
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	5		V (2) +	· Ü (2)	•			•		
				If anno of one date). Langu credit	Language of assessment: German and/or English creditable for bonus						
10-I=PM-152-m01	Referred to in LPO I § 22 II Nr. 3 b)  Professional Project Management										
10-1=PM-152-11101		5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	5		V (2)							
	Method	of asse		written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	other prerequisites			Simul	taneous completion	on of module 10-I=PRJ	is recommended.				
	Referred	d to in L	PO I	§ 22 II Nr. 3 b)							
10-I=RAM-152-m01	Computer Arithmetic										
	ECTS	5	Duration	1 semester Method of grading numerical grade				Modul level	graduate		
	Courses	5		V (2) +	· Ü (2)						
	Method	of asse		written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Referred	d to in L	PO I	§ 22 II Nr. 3 b)							
10-I=RO1-152-m01	Robotic										
	ECTS	8	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (4) +							
	Method of assessment				n examination (ap able for bonus	prox. 60 to 90 minutes	<u> </u>				
	Additional Information			Focus IS,ES,		udents of the Master's	programme Informatik (C	omputer Science, 120	ECTS credits):		
	Referred to in LPO I			§ 22	Nr. 3 b)						

10-l=RO2-152-mo1	Robotic	S 2										
		8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	;		V (4)	V (4) + Ü (2)							
	Method	of ass	essment	written examination (approx. 60 to 90 minutes)								
				creditable for bonus								
				Focus	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): IT, ES, LR							
	Referred				II Nr. 3 b)							
10-I=ST-152-m01	Discrete Event Simulation											
	ECTS	8	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	5		V (4)	+ Ü (2)							
	Method	of ass	essment			orox. 60 to 120 minut						
									replaced by an oral examination			
				date)		ipprox. 20 minutes) o	r an oral examination i	n groups of 2 candidates	s (approx. 15 minutes per candi-			
					Language of assessment: German and/or English							
					creditable for bonus							
	Referred	d to in L	LPO I	§ 22	II Nr. 3 b)							
10-l=SSD-152-m01	Spacecr	raft Sys	stem Desi	gn								
	ECTS	8	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i		V (4)	V (4) + Ü (2)							
	Method	of ass	essment	written examination (approx. 60 to 120 minutes) creditable for bonus								
	Addition	nal Info	rmation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): ES, LR								
	Referred			§ 22 II Nr. 3 b)								
10-l=VG-152-m01			of Graphs		ii ivi. 3 b)							
10-1-10-152-11101		5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		Duration		+ Ü (2)	Method of grading	Thumeneat grade	Modulitevel	graduate			
			occmont	` '		arov 60 to 120 minut	oc)		_			
	Method of assessment							en examination may be i	replaced by an oral examination			
					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 I	PO I		II Nr. 3 b)							
	Kelenet	ווו טוו נ		3 2 2								

10-l=A-	Selected 1	Topics in Algo	rithms and Theory									
KAT-152-mo1	ECTS 5	Duration	1 semester	Method of grading numerica	l grade Modul lev	vel graduate						
	Courses	,	V (2) + Ü (2)			,						
	Method of	fassessment		pprox. 60 to 120 minutes).								
			If announced by the le	cturer at the beginning of the cour	se, the written examination may	be replaced by an oral examination						
			date).	(approx. 20 minutes) or an oral ex	amination in groups of 2 candid	dates (approx. 15 minutes per candi-						
			Language of assessme	ent: German and/or English								
			creditable for bonus									
	Referred to		§ 22 II Nr. 3 b)									
10-I=AK-	Selected Topics in Software Engineering											
SE-152-m01	ECTS 5	Duration		Method of grading   numerica	l grade Modul lev	vel graduate						
	Courses		V (2) + Ü (2)									
	Method of	assessment	written examination (a	pprox. 60 to 120 minutes).								
			If announced by the le	cturer at the beginning of the cours	se, the written examination may	be replaced by an oral examination dates (approx. 15 minutes per candi-						
			date).	(approx. 20 illinutes) of all oral ex	animation in groups of 2 candid	dates (approx. 15 illillutes per candi-						
			Language of assessment: German and/or English									
			creditable for bonus									
	Referred to	o in LPO I	§ 22 II Nr. 3 b)									
10-l=AKIT-152-m01	Selected Topics in Internet Technologies											
	ECTS 5	Duration		Method of grading   numerica	l grade Modul lev	vel graduate						
	Courses		V (2) + Ü (2)									
	Method of	fassessment		pprox. 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 assessme	ent: German and/or English								
			creditable for bonus									
	Referred to		§ 22 II Nr. 3 b)									
10-I=AKIS-152-m01			ligent Systems									
	ECTS 5	Duration		Method of grading   numerica	l grade Modul lev	/el graduate						
	Courses		V (2) + Ü (2)									
	Method of	fassessment		written examination (approx. 60 to 120 minutes).								
						be replaced by an oral examination dates (approx. 15 minutes per candi-						
			date).	(approx. 20 illinutes) of all oral ex	animation in groups of 2 candid	dates (approx. 15 minutes per candi-						
			Language of assessme	ent: German and/or English								
			creditable for bonus	creditable for bonus								
	Referred to	o in LPO I	§ 22 II Nr. 3 b)									

10-l=A-	Selected Top	ics in Embe	edded Systems									
KES-152-m01	ECTS 5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses	·	V (2) + Ü (2)	$(2) + \ddot{U}(2)$								
	Method of as	sessment		approx. 60 to 120 minute								
			If announced by the le	ecturer at the beginning o	f the course, the writter	n examination may be	replaced by an oral examination					
			of one candidate each	i (approx. 20 minutes) or	an oral examination in	groups of 2 candidates	s (approx. 15 minutes per candi-					
				anguage of assessment: German and/or English								
			creditable for bonus									
	Referred to in	LPO I	§ 22 II Nr. 3 b)	22 II Nr. 3 b)								
10-I=AKL-	Selected Topics in Aerospace Engineering											
R-152-m01	ECTS 5	Duration		Method of grading	numerical grade	Modul level	graduate					
	Courses		V (2) + Ü (2)									
	Method of as	sessment	If announced by the le of one candidate each 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 candidate).								
			Language of assessment: German and/or English creditable for bonus									
	Referred to in		§ 22 II Nr. 3 b)									
10-I=AKH-	Selected Topics in HCI											
Cl-152-m01	ECTS 5	Duration		Method of grading	numerical grade	Modul level	graduate					
	Courses		V (2) + Ü (2)									
	Method of as	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									
	Referred to in	LPO I	§ 22 II Nr. 3 b)									
10-l=AKII-152-m01	Selected Top	ics in Comp	outer Science									
	ECTS 5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		V (2) + Ü (2)									
	Method of as	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									
	Referred to in	LPO I	§ 22 II Nr. 3 b)									

06-HCI=BS-152-	Multim	odal U	ser Interfa	ces								
mo1	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	:S	·	V (2)	$V(2) + \ddot{U}(2)$							
	Method	d of ass	sessment		presentation of project results							
						nt: German and/or English						
	Referre	d to in	I DO I		reditable for bonus							
o6-HCI=Ein-				-	II Nr. 3 b)		<u> </u>					
6-nCi=Ein-   f-152-m01			Duration		puter Interaction	Mathad of avading numarical avada	Modulloval	are due to				
1, 1,201	Course	5	Duration		1 semester + Ü (2)	Method of grading   numerical grade	Modul level	graduate				
			· · · · · · · · · · · · · · · · · · ·			voculto						
	Method	u or ass	sessment		entation of project	results nt: German and/or English						
					table for bonus	na derman and, or English						
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)		,					
06-HCl=IS-152-	3D User Interfaces											
mo1	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	:S		V (2)	+ Ü (2)	•	•					
	Method	d of ass	essment		ntation of project		,					
					Language of assessment: German and/or English creditable for bonus							
] 	Referre	٠.: معاد	1001		§ 22 II Nr. 3 b)							
ac HCL CT				_								
06-HCl=ST-152- mo1	Real-Time Interactive Systems											
	ECTS Course	5	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate				
		_			V (2) + Ü (2) written examination (approx. 60 to 120 minutes)							
	Method	u oi ass	sessment	Language of assessment: German and/or English								
					creditable for bonus							
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)							
o6-MK-	Compu	ter Sci	ence in Me	edia 1								
MedInf1-152-mo1	ECTS	6	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S		V (2)	+ Ü (2)	·						
	Method	d of ass	sessment			(approx. 60 minutes) or						
					b) oral examination (approx. 20 minutes) or							
					m paper (approx.							
					d) portfolio (approx. 20 pages) Language of assessment: German and/or English							
					creditable for bonus							
	Referre	d to in	LPO I	§ 22	II Nr. 3 b)							

o6-MK-	Compu	ter Scie	nce in Me	dia 2							
MedInf2-152-mo1	ECTS	6	Duratio	1	1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course	S	•	V (2) -	+ T (2)	·					
	Method	d of ass	essment	a) written examination (approx. 60 minutes) or b) oral examination (approx. 20 minutes) or c) term paper (approx. 20 pages) or d) portfolio (approx. 20 pages) Language of assessment: German and/or English creditable for bonus							
	Referre	d to in l	_PO I	§ 22 l	l Nr. 3 b)						
10-I=SA-152-m01	Aerosp	ace Ser	ninar								
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses		S (2)								
	Method of assessment			Semir	nar paper (approx. 2	o pages)					
		d to in l			l Nr. 3 b)						
10-I-REP-152-m01	Exam Tutorial for the German Staatsexamen										
	ECTS 4 Duratio			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    Nr. 2 f) § 22    Nr. 3 b)							
10-l=DDB-152-m01	1 Deductive Databases										
	ECTS	8	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	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						
	Referre	d to in l	_PO I	§ 22 l	l Nr. 3 b)		_				

#### **Teaching (10 ECTS credits)** Compulsory Courses (10 ECTS credits) Computer Science Education 1 (incl. Practical Course in the Application of Computer Science Systems form an Educational Point of View) 10-l-DDl1-152-m01 **ECTS** 6 Duration 2 semester Method of grading | numerical grade Modul level undergraduate $V(2) + \ddot{U}(2) + P(2)$ Courses Method of assessment written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus Referred to in LPO I § 49 l Nr. 2 § 69 I Nr. 2 Computer Science Education 2 10-I-DDI2-GY-152mo1 **ECTS** Duration Method of grading | numerical grade Modul level 1 semester undergraduate $V(2) + \ddot{U}(2)$ Courses Method of assessment | written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus § 69 I Nr. 2 and § 69 I Nr. 1 c): Rechnerarchitektur Referred to in LPO I Intership in school (4 ECTS credits) 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). Practical Training in Classroom Teaching in Computer Science Education including Theory (German Gymnasium) 10-I-SBFD-GY-152mo1 Method of grading (not) successfully completed **ECTS** Duration 1 semester Modul level undergraduate P(0) + S(2)Courses 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 regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as specified by

#### Freier Bereich (general as well as subject-specific electives) (0-15 ECTS credits)

Referred to in LPO L

placement school.

§ 34 | 1 Nr. 4

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 9 LASPO (general academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any modules from the areas below.

Freier Bereich -- interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmungen für den "Freien Bereich" im Rahmen des Studiums für ein Lehramt". Computer Science (Freier Bereich (general as well as subject-specific electives) -- subject specific) 10-I-TUT1-152-m01 **Tutor activity 1** ECTS 2 Duration Method of grading (not) successfully completed Modul level undergraduate T (2) Courses Wrap-up report on tutoring activities (5 to 10 pages) Method of assessment Referred to in LPO I § 22 II Nr. 2 f) § 22 II Nr. 3 f) 10-I-TUT2-152-mo1 Tutor activity 2 ECTS Method of grading (not) successfully completed Duration Modul level undergraduate T(2) Courses Method of assessment Wrap-up report on tutoring activities (5 to 10 pages) § 22 | Nr. 2 f) Referred to in LPO I § 22 II Nr. 3 f) 10-I-DS-152-m01 **Seminar Computer Science Education** ECTS Duration Method of grading | numerical grade Modul level undergraduate 4 1 semester 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 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 Method of grading (not) successfully completed 1 semester Modul level undergraduate Courses S (2) Method of assessment a) talk (approx. 30 minutes) or b) 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) 10-I-DRO-152-mo1 Robotics in Education (practical course) **ECTS** 1 semester Method of grading (not) successfully completed Modul level 4 Duration undergraduate Courses Ü (2) practical assignment (supervision of a group of pupils) with examination talk (approx. 15 minutes) Method of assessment 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) LA Gymnasien Computer Science (2015) JMU Würzburg • generated 23-Okt-2025 • exam. reg. data record L5|079|-|-|H|2015 page 22 / 23

10-I-DPR-152-m01	Practic	al Cours	e on Com	Computer Science Education							
	ECTS 4 Duratio		Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	ourses		Ü (2)				-			
	Method	d of asse		practical assignment with examination talk (approx. 15 minutes) Assessment offered: Only in the semester in which the course is offered							
	Referre				§ 22    Nr. 2 f) § 22    Nr. 3 f)						
10-I-DPP-152-m01	Hands-	on Com	puter Sci	ence							
	ECTS	6	Duration	1	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	S		Ü (2) + S (2)							
	Method of assessment			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							
				§ 22 II Nr. 2 f) § 22 II Nr. 3 f)							

#### Hausarbeit (thesis) (10 ECTS credits)

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 discipline) 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 Computer Science (Teaching Degree at the German Gymnasium)									
mo1	ECTS	10	Duration	1		Method of grading	numerical grade	Modul level	undergraduate	
	Course	S		Νο coι	o courses assigned to module					
	Method	d of asso		hours) Langua	•	German; exceptions	_		e programmes) (250 to 300 amination regulations for tea-	
	Referre	d to in L	-P0 I	§ 29						