

Subdivided Module Catalogue for the Subject

Computer Science

as Unterrichtsfach with the degree "Erste Staatsprüfung für das Lehramt an Realschulen"

> Examination regulations version: 2012 Responsible: Institute of Computer Science

JMU Würzburg • generated 26-Aug-2024 • exam. reg. data record L3|079|-|-|H|2012

Abbreviations used

UNIVERSITÄT

WÜRZBURG

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

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

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

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

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

Conventions

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Notes

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 the 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:

LASPO2009

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

25-Oct-2012 (2012-171)

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.

LA Realschulen Co	nputer Science	(2012)
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The subject is divided into

Abbroviation	Modulo titlo	ECTS	ECTS Method of		
ADDIEVIACION	Module litte	credits	grading	page	
Scientific Discipline (60 l	ECTS credits)				
Compulsory Courses (6	o ECTS credits)				
10-I-ADS-102-m01	Algorithm and data structures	10	NUM	4	
10-I-TI-102-m01	Theoretical informatics	10	NUM	19	
10-I-REP-RS-121-m01	Review Course in Informatics for the Staatsexamen (Realschu- le)	5	B/NB	15	
10-I-ST-102-m01	Software Technology	10	NUM	16	
10-I-DB-102-m01	Databases	5	NUM	5	
10-I-PP-102-m01	Practical Course in Programming	10	B/NB	14	
10-I-SWP-102-m01	Practical course in software	10	B/NB	18	
Teaching (12 ECTS credit	s)				
10-I-DI1-092-mo1 Didactics of Informatics 1 (inc. Practical Course in the Application of Informatics Systems from a Didactical Point of View)		6	NUM	7	
10-I-Dl2R-092-m01	Didactics of Informatics 2 for the "Realschule"	6	NUM	8	
Teaching degree students mu ject-specific electives) (Sectio To achieve the required numl Freier Bereich interdisciplir nex "Ergänzende Bestimmun	ust take modules worth a total of 15 ECTS credits in the area Freie on 9 LASPO (general academic and examination regulations for t ber of ECTS credits, students may take any modules from the are hary: The interdisciplinary additional offer for a teaching degree of gen für den "Freien Bereich" im Rahmen des Studiums für ein Le	er Bereich (eaching-d as below. can be four hramt".	(general as well egree programr nd in the respec	l as sub- nes)). ctive An-	
(Erojor Borojch (general as w	vall as subject-specific electives) subject specific)				
10-I-DS-092-m01	Seminar Didactics of Informatics	4	NUM	11	
10-I-DV-092-m01	Advanced Topics of Didactic of Informatics	4	NUM	12	
10-I-DP-092-m01	Practical Course in Didactics of Informatics	4	B/NB	9	
10-I-DPP-092-m01	Advanced Practical Course in Didactics of Informatics	8	NUM	10	
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 Realschule may write this thesis in one of the subjects they selected as Unterrichtsfach (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-RS-122-m01	Thesis Informatics (Realschule)	10	NUM	13	

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	data record Lehramt Realschulen Informatik - 2012	1

Module title				Abbreviation	
Algorit	Algorithm and data structures 10-I-ADS-102-m01				10-I-ADS-102-m01
Module	e coord	inator		Module offered by	
Dean o	f Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS Method of grading		Only after succ. com	npl. of module(s)		
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	Admission prerequi	site to assessment: o	exercises (type and scope to be
			announced by the le	ecturer at the beginn	ing of the course).
Conten	its				
Design ta type	and ar s, lists,	nalysis of algorithms, recu , trees, graphs, basic grap	ursion vs. iteration, so oh algorithms, progra	ort and search metho mming in Java.	ods, data structures, abstract da-
Intend	ed lear	ning outcomes		<u> </u>	
The stu studen prograi	idents ts are f ms. The	are able to independently amiliar with the basic par students are able to est	/ design algorithms a radigms of the desigr imate the run-time be	s well as to precisely n of algorithms and a ehaviour of algorithm	y describe and analyse them. The are able to apply them in practical ns and to prove their correctness.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V + Ü (I	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
Metho ster, in	d of as format	sessment (type, scope, la ion on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
tion da aminat tion of examir	te, the ion in § one ca nation i	written examination can groups. A 80 to 90 minute ndidate each, a 30 minut n groups of 3.	be replaced by an ora e written examination e (approx.) oral exam	al examination of on i is equivalent to a 20 ination in groups of	e candidate each or an oral ex- o minute (approx.) oral examina- 2 and a 40 minute (approx.) oral
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
§ 49 (1 § 69 (1	§ 49 (1) 1. a) Informatik Theoretische Informatik, Algorithmen und Datenstrukturen § 69 (1) 1. a) Informatik Theoretische Informatik, Algorithmen und Datenstrukturen				
Module appears in					
Bachelor' degree (1 major) Computer Science (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Economathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Master's degree (1 major) Digital Humanities (2011) First state examination for the teaching degree Bealschule Computer Science (2012)					
First st	ate exa	mination for the teaching	g degree Gymnasium	Computer Science (2)	2009)

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	data record Lehramt Realschulen Informatik - 2012	

Module title				Abbreviation		
Datab	Databases 10-I-DB-102-m01					
Modu	e coord	inator		Module offered by		
Dean of Studies Informatik (Computer Science)		Institute of Comput	er Science			
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5 numerical grade						
Duration Module level Other prerequisites						
1 Seme	ester	undergraduate	Admission prerequi	site to assessment:	exercises (type and s	scope to be
1 Jenn		undergraduate	announced by the l	ecturer at the beginn	ing of the course).	
Conto	-+-					
Conte						
Relation ment.	onal alg	ebra and complex SQL s	tatements; database	planning and norma	l forms; transaction	manage-
Intend	ed lear	ning outcomes				
The st	udents	possess knowledge abo	ut database modellin	g and queries in SQL	as well as transacti	ons.
Course	es (type	number of weekly cont	act hours. language –	- if other than Germa	n)	
V ± Ü (no info	mation on SWS (weekly	contact hours) and co	ourse language avail	ahle)	
Mothe	d of ac		anguage if other th	an Corman avamina	tion offered if not	aver como
ster, in	nformati	ion on whether module of	anguage — If other th an be chosen to earn	a bonus)	illion offered — If hol	every seme-
if anno ced by nutes, Langu	ounced an oral groups age of a	by the lecturer by four w examination of one can of 2: 20 minutes, group ssessment: German, En	eeks prior to the exan didate each or an ora s of 3: 25 minutes) glish if agreed upon w	nination date, the wr l examination in grou vith the examiner	itten examination ca ups (one candidate e	ın be repla- each: 15 mi-
Alloca	tion of j	olaces				
iti bhA	onal inf	ormation				
Workl	had		_			
WORK						
Teach	ing cycl	e				
Referr	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
§ 49 (1 § 69 (1	l) 1. b) [l) 1. b) [atenbanksysteme und S atenbanksysteme und S	Softwaretechnologie			
Modul	o annos	ars in				
Racho	lor' dog	roo (1 major) Computer 9	Science (2010)			
Bache	lor' deg	ree (1 major) Computer 3 ree (1 major) Mathemati	cs(2010)			
Bache	lor' deg	ree (1 major) Mathemati	(2012)			
Bachelor' degree (1 major) Rusiness Information Systems (2012)						
Bachelor' degree (1 major) Computational Mathematics (2012)						
Bachelor' degree (1 major) Computational Mathematics (2013)						
Bachelor' degree (1 major) Aerospace Computer Science (2009)						
Bachelor' degree (1 major) Aerospace Computer Science (2011)						
Bachelor' degree (1 major) Functional Materials (2012)						
Master's degree (1 major) Computer Science (2010)						
Master's degree (1 major) Mathematics (2012)						
Maste	r's degr	ee (1 major) Mathematic	s (2010)			
LA Realsc	nulen Comj	outer Science (2012)	JMU Würzburg data record l	• generated 26-Aug-2024 • e ehramt Realschulen Informat	exam. reg. tik - 2012	page 5 / 19

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Master's degree (1 major) Physics (2010) Master's degree (1 major) Physics (2011) Master's degree (1 major) Nanostructure Technology (2011) Master's degree (1 major) Nanostructure Technology (2010) Master's degree (1 major) Computational Mathematics (2012) First state examination for the teaching degree Realschule Computer Science (2012) First state examination for the teaching degree Gymnasium Computer Science (2009)

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	data record Lehramt Realschulen Informatik - 2012	

Module title				Abbreviation	
Didactics of Informatics 1 (inc. Practical Course in the Application of Informa- tics Systems from a Didactical Point of View)			10-l-Dl1-092-m01		
Module coo	dinator		Module offered by	• •	
Dean of Stu	lies Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS Met	hod of grading	Only after succ. com	pl. of module(s)		
6 num	erical grade				
Duration	Module level	Other prerequisites			
2 semester	undergraduate	Admission prerequise announced by the le	site to assessment: ecturer at the beginn	exercises (type and scope to be ing of the course).	
Contents	1	<u>,</u>		<u> </u>	
The module the module ses. The mo	gives an overview of comp teaches students practical dule demonstrates and dis	uter science didactic skills for use in scho scusses possibilities f	s. Using the example ols and, more specif for a practical applic	e of computer science systems, fically, in computer science clas- ation in the classroom.	
Intended lea	rning outcomes				
Students are and media f topics. Stud well as guid ses.	e familiar (in particular in t or teaching topics in comp ents are familiar with both elines and standards for te	he area of computer s uter science. They are historical and curren eaching computer scie	cience in <i>Sekundars</i> e able to didactically t teaching approach ence. They are able t	<i>stufe I</i>) with methods, techniques analyse and prepare practical es, typical teaching methods as to plan, organise and deliver clas-	
Courses (typ	e, number of weekly conta	act hours, language —	if other than Germa	in)	
V + Ü + P (no	information on SWS (wee	kly contact hours) an	d course language a	vailable)	
Method of a ster, informa	ssessment (type, scope, la ation on whether module c	anguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
written exan tion date, th amination in candidate e	nination (approx. 50 to 60 e written examination can groups. A 50 to 60 minute ach, a 20 minute oral exam	minutes). If announce be replaced by an ora written examination nination in groups of a	ed by the lecturer by al examination of on is equivalent to a 19 2 and a 25 minute or	four weeks prior to the examina- e candidate each or an oral ex- 5 minute oral examination of one ral examination in groups of 3.	
Allocation o	fplaces				
Additional i	nformation				
Workload					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 49 (1) 2. Informatik Didaktik					
Module app	ears in				
First state ex	First state examination for the teaching degree Realschule Computer Science (2012)				

LA Realschu	ılen Computer	Science	(2012)	
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Module title				Abbreviation	
Didacti	cs of In	formatics 2 for the "Rea	lschule"		10-l-Dl2R-092-m01
Module coordinator				Module offered by	
Dean of	f Studie	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
6	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
2 seme	ster	undergraduate	Admission prerequis	site to assessment: o	exercises (incl. elaboration and
			presentation of a top	pic). Type and scope	to be specified by the lecturer at
			the beginning of the	course.	
Conten	ts				
This cou ses pos topics i classro	urse di ssibiliti n comp om.	scusses different topics i es for a practical applicat outer science didactics fo	n computer science o tion in the classroom or <i>Realschule</i> includin	didactics in more def . The seminar supple .g, in particular, relev	ail. It demonstrates and discus- ementing the course focuses on vant practical skills for use in the
Intende	ed learı	ning outcomes			
and ana assess to apply	alysis c these. y selec	of computer science class The students are able to ted computer science sys	handle the special posters, seen and the special poster fundament of the special posters in practice.	ntal teaching and lear roblems of their sub	arning strategies and are able to ject in <i>Realschule</i> and know how
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü +	P (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)
Method ster, inf	l of ass formati	sessment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
written tion dat aminati	examin te, the ion in g	nation (approx. 50 to 60 r written examination can groups (one candidate ea	minutes); if announce be replaced by an ora ch: 15 minutes, group	ed by the lecturer by al examination of on os of 2: 20 minutes,	four weeks prior to the examina- e candidate each or an oral ex- groups of 3: 25 minutes)
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Workload					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
§ 49 (1) 2. Informatik Didaktik					
Module	appea	irs in			
First sta	ate exa	mination for the teaching	g degree Realschule C	Computer Science (20	012)

Module title				Abbreviation	
Practical Course in Didactics of Informatics			10-l-DP-092-m01		
Module coordinator				Module offered by	
Dean of	fStudie	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
4	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
This cou classro dactic a classro	urse co om" or analyse om.	vers practical topics in te "robotics in the classroo s, the contemporary deb	eaching computer sciem". In particular, the ate in computer scier	ence such as "functi course discusses su nce didactics as well	onal programming in the ubject-specific foundations, di- l as possible approaches in the
Intende	ed leari	ning outcomes			
The stu course aspects	dents and are	possess practical skills ir e able to use these in the	working with the sel classroom, taking in	ected computer scie to account subject d	ence systems discussed in the lidactic as well as methodical
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
P (no in	format	ion on SWS (weekly cont	act hours) and course	e language available	2)
Method ster, inf	l of ass formati	e ssment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
comple the beg Assessi	tion of inning ment o	project assignments, pre of the course) ffered: usually only in the	esentation (type and e	expenditure of time t he course is offered	to be specified by the lecturer at
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Workload					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
First sta	ate exa	mination for the teaching	g degree Realschule C	omputer Science (2	012)
First sta	First state examination for the teaching degree Gymnasium Computer Science (2009)				

Module title				Abbreviation	
Advanced Practical Course in Didactics of Informatics				10-I-DPP-092-m01	
Module coordinator				Module offered by	
Dean o	f Studie	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
8	numei	rical grade			
Duratio	n	Module level	Other prerequisites		
2 seme	ster	undergraduate	Admission prerequis	site to assessment: e	ing of the course)
Conton			announced by the le	clurer at the beginn	
Conten	ts 				<u> </u>
papers shops. topic, s in grou work. Ir pupils	(<i>Facha</i> In the t search f ps with n the pr and afte	rbeiten), Pluskurse (addi heoretical phase, the stu or a suitable topic, elabo students providing each actical phase, the studen erwards reflect the plann	tional courses for the idents formulate the orate this topic for the other with advice as nts prepare the imple ing and implementat	in-depth study of an subject-specific and project and draw up well as challenging mentation of the project.	reas of special interest), work- didactic requirements of the o a project plan. This is done and reflecting on each other's oject, implement the project with
Intende	ed learr	ning outcomes			
The stu are able le to cri	dents a e to ela itically	are able to select a topic borate it. They are familia reflect the process.	from the area of comp ar with different aspe	outer science that is cts of project planni	suitable for a school project and ng and management and are ab-
Course	s (type,	number of weekly conta	ct hours, language —	if other than Germa	n)
P + S (n	o infor	mation on SWS (weekly o	ontact hours) and co	urse language availa	able)
Methoo ster, in	l of ass formati	essment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
project with pu Assess	and im pils ment o	plementation thereof: dr	awing up a project pl e semester in which tl	an (approx. 10 page	s) and practical implementation
Allocat	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
First sta	First state examination for the teaching degree Realschule Computer Science (2012)				
First sta	First state examination for the teaching degree Gymnasium Computer Science (2009)				

Module title					Abbreviation
Seminar Didactics of Informatics					10-l-DS-092-m01
Module coordinator				Module offered by	
Dean of	f Studie	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
4	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Selecte	d topic	s in computer science di	dactics.		
Intende	ed learı	ning outcomes			
The stu selves v subject	dents g with an . They a	gain initial experience in d structure a given topic, are also able to actively p	the area of independ , using selected litera participate in a scient	ent scientific work. T ture, as well as to p ific discussion.	hey are able to acquaint them- repare a talk on the respective
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	<u>a)</u>
Methoo ster, inf	l of ass formati	essment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
written sion (aj Assess	elabor oprox. ment o	ation (approx. 20 to 25 pa 15 minutes) on a topic fro ffered: usually only in the	ages) and oral preser om the field of compu e semester in which t	ntation (approx. 60 r ter science didactics he course is offered	ninutes) with subsequent discus- s
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
First sta	First state examination for the teaching degree Realschule Computer Science (2012)				
First state examination for the teaching degree Gymnasium Computer Science (2009)					

Module title					Abbreviation	
Advanced Topics of Didactic of Informatics					10-l-DV-092-m01	
Module coordinator				Module offered by		
Dean o	f Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
4	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Discuss particu tics as	sion of lar sub well as	topics in teaching compu ject-specific foundations possible approaches in t	uter science in <i>Gymnc</i> , didactic analyses, tl the classroom.	<i>asium</i> that takes into he contemporary del	account different aspects, in bate in computer science didac-	
Intende	ed lear	ning outcomes				
The stu into ac	idents a count s	are able to discuss centra ubject-specific, didactic	al topics and issues o and methodical aspe	n teaching compute cts.	r science in a <i>Gymnasium</i> , taking	
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	in)	
S (no ir	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)	
Methoo ster, in	d of ass formati	essment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
written sion (a Assess	elabor pprox. ment o	ation (approx. 20 to 25 p 15 minutes) on a topic fro ffered: usually only in the	ages) and oral preser om the field of compu e semester in which t	ntation (approx. 60 r ter science didactics he course is offered	ninutes) with subsequent discus- s	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in						
First sta	First state examination for the teaching degree Realschule Computer Science (2012)					
First sta	First state examination for the teaching degree Gymnasium Computer Science (2009)					

Module title					Abbreviation	
Thesis Informatics (Realschule)					10-I-HA-RS-122-m01	
Module coordinator				Module offered by	·	
Dean of	f Studi	es Informatik (Computer :	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
10	nume	rical grade	Where applicable, s supervisor.	pecific modules/mo	dule components as specified by	
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts		,			
Largely didactio	indepe cs.	endently researching and	writing on an approp	priate topic in compu	uter science or computer science	
Intende	ed lear	ning outcomes				
The stu comput	dents a ter scie	are able to largely indepe nce didactics, using kno	ndently research and wn methods.	l write on an approp	riate topic in computer science or	
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	in)	
no cour	rses as	signed				
Methoo ster, inf	l of ass formati	s essment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
written Langua	thesis ge of a	(approx. 250 to 300 hou ssessment: German, Eng	rs total) lish if agreed upon w	ith the examiner		
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Additio	nal info	ormation on module dura	ition: 1 to 2 semester	s.		
Worklo	Workload					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
First sta	ate exa	mination for the teaching	g degree Realschule C	Computer Science (2	012)	

Module title					Abbreviation	
Practical Course in Programming					10-I-PP-102-m01	
Module coordinator				Module offered by		
Dean o	f Studi	es Informatik (Computer S	Science)	cience) Institute of Computer Science		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
10	(not) s	successfully completed				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate	Admission prerequis announced by the le	site to assessment: e cturer at the beginn	exercises (type and scope to be ing of the course).	
Conten	ts					
The pro	gramm	ning language Java. Indep	endent creation of sr	nall to middle-sized,	, high-quality Java programs.	
Intende	ed lear	ning outcomes				
The stu	dents a	are able to independently	develop small to mi	ddle-sized, high-qua	llity Java programs.	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
P (no ir	format	ion on SWS (weekly cont	act hours) and course	e language available)	
Methoo ster, in	l of ass formati	sessment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
tion da aminat tion of examin	examinet te, the ion in g one can ation in	written examination can groups. A 80 to 90 minute ndidate each, a 30 minut n groups of 3.	be replaced by an ora written examination e (approx.) oral exam	al examination of one is equivalent to a 20 ination in groups of	e candidate each or an oral ex- o minute (approx.) oral examina- 2 and a 40 minute (approx.) oral	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Additio	nal info	ormation on module dura	tion: 1 to 2 semesters	5.		
Worklo	ad					
Teachi	ng cycl	e				
Referre	d to in	LPOI (examination regu	lations for teaching-d	legree programmes)		
§ 49 (1) § 69 (1)	1. c) lr 1. d) li	nformatik Praktische Soft nformatik Praktische Soft	wareentwicklung wareentwicklung			
Module appears in						
Bachel	Bachelor' degree (1 major) Computer Science (2010)					
Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013)						
Bachelor' degree (1 major) Computational Mathematics (2012)						
Bachel	Bachelor' degree (1 major) Computational Mathematics (2013)					
Bachel	or' deg	ree (1 major) Aerospace (Computer Science (20	09)		
Bachel	or' deg	ree (1 major) Aerospace (Computer Science (20	11)		
Master	's degr	ee (1 major) Digital Huma	nities (2011)			
First sta	ate exa	mination for the teaching	degree Realschule C	omputer Science (20	012)	
First sta	ate exa	mination for the teaching	g degree Gymnasium	Computer Science (2	2009)	

Module title					Abbreviation	
Review Course in Informatics for the Staatsexamen (Realso				hule)	10-I-REP-RS-121-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studie	es Informatik (Computer :	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
5	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
2 seme	ster	undergraduate				
Conten	ts					
Revisio	n of co	ntents of modules coveri	ng the subject as wel	ll as the subject dida	actics of computer science.	
Intende	ed learı	ning outcomes				
The stu nation.	dents l	nave refreshed their skill	s for the solution of th	he type of problems	asked in the written state exami-	
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	n)	
Ü (no ir	nformat	tion on SWS (weekly cont	tact hours) and cours	e language available	2)	
Methoo ster, in	d of ass formati	s essment (type, scope, la on on whether module ca	inguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
comple course)	etion of)	assignments (type and e	expenditure of time to	be specified by the	lecturer at the beginning of the	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	Workload					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
First sta	First state examination for the teaching degree Realschule Computer Science (2012)					

Module title					Abbreviation		
Softwa	Software Technology 10-I-ST-102-m01						
Module coordinator				Module offered by			
Dean of Studies Informatik (Computer Science)			er Science)	Institute of Comput	er Science		
ECTS Method of grading Only after succ. compl. of module(s)							
10	nume	rical grade					
Durati	on	Module level	Other prerequisites	i			
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	exercises (type and s	scope to be	
			announced by the le	ecturer at the beginn	ing of the course).		
Conter	nts						
Object bases cesses	-oriente and obj , unifie	ed software developme ject-relational mapping d process, agile softwa	nt with UML, developm , foundations of web p re development, projec	ent of graphical use rogramming (HTML, 1 ct management, qua	r interfaces, foundat XML), software deve lity assurance.	ions of data- lopment pro-	
Intend	ed lear	ning outcomes					
The stu softwa	udents re syste	possess a fundamenta ems.	theoretical and praction	cal knowledge on the	e design and develop	oment of	
Course	es (type	, number of weekly con	tact hours, language –	- if other than Germa	n)		
V + Ü (no infoi	mation on SWS (weekl	y contact hours) and co	ourse language avail	able)		
Metho ster, in	d of ass Iformati	sessment (type, scope, on on whether module	language — if other th can be chosen to earn	an German, examina a bonus)	tion offered — if not	every seme-	
tion da aminat tion of examin	tion in g one can nation i	written examination ca groups. A 80 to 90 minu ndidate each, a 30 min n groups of 3.	n be replaced by an or ute written examinatior ute (approx.) oral exam	al examination of on 1 is equivalent to a 2 1 nination in groups of	e candidate each or o minute (approx.) o 2 and a 40 minute (an oral ex- ral examina- approx.) oral	
Alloca	tion of p	olaces					
Additio	onal inf	ormation					
Worklo	ad						
Teachi	ng cycl	•					
reacin	iis cycl	6					
Deferr		IDOL (avamination ro		dagraa pragrammac)			
Releff				degree programmes)			
§ 49 (1 § 69 (1) 1. b) L) 1. b) C	atenbanksysteme und atenbanksysteme und	Softwaretechnologie				
Module appears in							
Bachelor' degree (1 major) Computer Science (2010)							
Bachelor' degree (1 major) Mathematics (2012)							
Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Economathematics (2013)							
Dachelor' degree (1 major) Economiatinematics (2012) Bachelor' degree (1 major) Business Information Systems (2012)							
Dachelor' degree (1 major) Busiless information Systems (2013) Bachelor' degree (1 major) Human-Computer Systems (2010)							
Dachelor' degree (1 major) Fuman-Computer Systems (2010) Bachelor' degree (1 major) Computational Mathematics (2012)							
Bachelor' degree (1 major) Computational Mathematics (2012)							
Bachelor' degree (1 major) Aerospace Computer Science (2009)							
Bachelor' degree (1 major) Aerospace Computer Science (2009)							
LA Realsch	iulen Comp	outer Science (2012)	JMU Würzburg data record L	• generated 26-Aug-2024 • e ehramt Realschulen Informat	exam. reg. ik - 2012	page 16 / 19	



First state examination for the teaching degree Realschule Computer Science (2012) First state examination for the teaching degree Gymnasium Computer Science (2009)

LA Realschulen Computer Science (2012)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 17 / 19
	data record Lehramt Realschulen Informatik - 2012	

Module title					Abbreviation	
Practical course in software					10-I-SWP-102-m01	
Module coordinator				Module offered by		
Dean of	f Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
10	(not) s	successfully completed				
Duratio	'n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Comple cation of tion and	etion of of solut d deliv	a project assignment in tion components (e. g. UI ery of the runnable softw	groups, problem ana ML) and milestones, ι are product in a collo	lysis, creation of req user manual, prograr quium.	uirements specifications, specifi- nming documentation, presenta-	
Intende	ed lear	ning outcomes				
The stu small te	dents eams.	possess the practical skil	ls for the design, dev	elopment and execu	ition of a software project in	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
P (no in	format	ion on SWS (weekly cont	act hours) and course	e language available)	
Methoo ster, inf	l of ass formati	sessment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
comple	tion of	project assignments, pre	esentation			
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachir	ıg cycl	e				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
§ 49 (1) § 69 (1)	§ 49 (1) 1. c) Informatik Praktische Softwareentwicklung § 69 (1) 1. d) Informatik Praktische Softwareentwicklung					
Module appears in						
Bachelor' degree (1 major) Computer Science (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) First state examination for the teaching degree Realschule Computer Science (2012) First state examination for the teaching degree Gymnasium Computer Science (2009)						

Module title					Abbreviation	
Theoretical informatics					10-I-TI-102-m01	
Module coordinator				Module offered by		
Dean of Studies Informatik (Computer S			Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
10	nume	rical grade				
Duration	1	Module level	Other prerequisites			
1 semes	ter	undergraduate	Admission prerequis announced by the le	site to assessment: e cturer at the beginn	exercises (type and scope to be ing of the course).	
Content	s					
Comput mata an	ability d regu	, decidability, countabilit ılar sets, generative gram	y, complexity of calcumars, context-free la	ulations, Boolean fu nguages, context-se	nctions and circuits, finite auto- nsitive languages.	
Intende	d learr	ning outcomes				
The stuc tability, gramma	lents p compl irs, con	possess fundamental and lexity of calculations, Boo ntext free languages, con	d applicable knowled blean functions and c text sensitive langua	ge in the area of con ircuits, finite automa ges.	nputability, decidability, coun- ata and regular sets, generative	
Courses	(type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
V + Ü (n	o infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)	
Method ster, info written e tion date aminatio	of ass ormati examine, the on in g	eessment (type, scope, la on on whether module ca nation (approx. 80 to 90 i written examination can groups. A 80 to 90 minute	nguage — if other tha an be chosen to earn minutes). If announce be replaced by an ora e written examination	n German, examina a bonus) ed by the lecturer by Il examination of on is equivalent to a 20	tion offered — if not every seme- four weeks prior to the examina- e candidate each or an oral ex- o minute (approx.) oral examina-	
tion of o examina	ne car ation in	ndidate each, a 30 minut n groups of 3.	e (approx.) oral exam	ination in groups of	2 and a 40 minute (approx.) oral	
Allocati	on of p	olaces				
Additior	nal info	ormation				
Workloa	ıd					
Teachin	g cycl	e				
	14		lationa fonte a la	\		
Referred		LPOT (examination regu	lations for teaching-o	legree programmes)		
§ 49 (1) 1. a) Informatik Theoretische Informatik, Algorithmen und Datenstrukturen § 69 (1) 1. a) Informatik Theoretische Informatik, Algorithmen und Datenstrukturen						
Module	Module appears in					
Bachelor' degree (1 major) Computer Science (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2012)						
First stat	te exa	mination for the teaching	degree Realschule C	omputer Science (20	012)	
First sta	te exa	mination for the teaching	degree Gymnasium	Computer Science (2	2009)	