

# Subdivided Module Catalogue for the Subject

# **Computer Science**

as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Examination regulations version: 2015 Responsible: Faculty of Mathematics and Computer Science Responsible: Institute of Computer Science

JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record 82|079|-|-|H|2015



# **Learning Outcomes**

German contents and learning outcome available but not translated yet.

# Wissenschaftliche Befähigung

- Die Absolventinnen und Absolventen können die mathematischen, technischen, theoretischen und praktischen Grundlagen der Informatik anwenden.
- Die Absolventinnen und Absolventen verstehen die wesentlichen Zusammenhänge und Konzepte der einzelnen Teilgebiete der Informatik.
- Die Absolventinnen und Absolventen können tiefergehende Kenntnisse in mindestens einem Teilgebiet abrufen.
- Die Absolventinnen und Absolventen können unter Anleitung hard- und/oder softwaregetriebene Experimente durchführen, analysieren, auswerten und die erhaltenen Ergebnisse darstellen.
- Die Absolventinnen und Absolventen sind in der Lage, sich mit Hilfe von Fachliteratur in neue Aufgabengebiete einzuarbeiten und die Ergebnisse zu interpretieren und zu bewerten.
- Die Absolventinnen und Absolventen besitzen Abstraktionsvermögen, analytisches Denken, Problemlösungskompetenz und die Fähigkeit, Zusammenhänge zu strukturieren.
- Die Absolventinnen und Absolventen sind in der Lage, Methoden der Informatik unter Anleitung auf konkrete praktische oder theoretische Aufgabenstellungen anzuwenden, Lösungswege zu entwickeln und die Ergebnisse zu interpretieren und zu bewerten.
- Die Absolventinnen und Absolventen setzen die erlernten theoretischen und praktischen Methoden in geschlossener Form unter Anleitung ein, um zu zeigen, dass sie zur Anwendung der Grundlagen wissenschaftlichen Arbeitens befähigt sind.
- Die Absolventinnen und Absolventen können ihr Wissen und ihre Erkenntnisse einem Fachpublikum gegenüber darstellen und vertreten.

# Befähigung zur Aufnahme einer Erwerbstätigkeit

- Die Absolventinnen und Absolventen können ihr Wissen und ihre Erkenntnisse einem Fachpublikum gegenüber darstellen und vertreten.
- Die Absolventinnen und Absolventen sind in der Lage, konstruktiv und zielorientiert in einem Team zusammenzuarbeiten und auftretende Konflikte zu lösen (Teamfähigkeit).
- Die Absolventinnen und Absolventen können ihre erworbenen Kompetenzen in unterschiedlichen interkulturellen Kontexten und in international zusammengesetzten Teams anwenden.
- Die Absolventinnen und Absolventen kennen wichtige Anforderungen und Arbeitsweisen im gewerblichen Umfeld sowie in Forschung und Entwicklung.
- Die Absolventinnen und Absolventen sind befähigt, Probleme zu analysieren und zu lösen und sich in weniger vertraute Themenkomplexe einzuarbeiten.

# Persönlichkeitsentwicklung

- Eigenverantwortlichkeit, Selbstständigkeit, Zeitmanagement, Teamfähigkeit
- Die Absolventinnen und Absolventen kennen die Regeln guter wissenschaftlicher Praxis und beachten sie.
- Die Absolventinnen und Absolventen können ihr Wissen und ihre Erkenntnisse einem Fachpublikum gegenüber darstellen und vertreten.

# Befähigung zum gesellschaftlichen Engagement

- Die Absolventinnen und Absolventen können naturwissenschaftliche Entwicklungen kritisch reflektieren und deren Auswirkungen auf die Wirtschaft, Gesellschaft und die Umwelt in Ansätzen erfassen, zum Beispiel Technikfolgenabschätzung, Ethik, IT-Recht oder Datenschutz.
- Die Absolventinnen und Absolventen haben ihr Wissen bezüglich wirtschaftlicher, gesellschaftlicher, naturwissenschaftlicher, kultureller etc. Fragestellungen erweitert und können begründet Position beziehen.



• Die Absolventinnen und Absolventen entwickeln die Bereitschaft und Fähigkeit, ihre Kompetenzen in partizipative Prozesse einzubringen und aktiv an Entscheidungen mitzuwirken.

Bachelor's with	a major Computer Scie	nce (2015)
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# Abbreviations used

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:

# ASPO2015

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

# 28-Sep-2015 (2015-165)

# 13-Apr-2016 (2016-69)

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.

Bachelor's with 1 major Computer Science (2015)

# The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	pag
Compulsory Courses (115	ECTS credits)			
Computer Science (75 EC	TS credits)			
10-I-EinP-152-m01	Introduction to Programming	5	NUM	44
10-I-ADS-152-m01	Algorithms and data structures	10	NUM	34
10-l-ST-152-m01	Software Technology	10	NUM	65
10-I-PP-152-m01	Practical Course in Programming	10	B/NB	54
10-I-SWP-152-m01	Practical course in software	10	B/NB	67
10-I-RAL-152-m01	Digital computer systems	10	NUM	58
10-l-lÜ-152-m01	Information Transmission	10	NUM	48
10-I-HWP-152-m01	Practical course in hardware	10	B/NB	46
Theoretical Informatics (	10 ECTS credits)			
10-I-TIV-152-m01	Theoretical Informatics	5	NUM	69
10-I-TIT-152-m01	Tutorial Theoretical Informatics	5	B/NB	68
Mathematics (30 ECTS ci	'edits)	-	L	
10-I-LOG-152-m01	Logic for informatics	5	NUM	5
10-M-INF1-152-m01	Mathematics 1 for students in Computer Science	10	NUM	78
10-M-INF2-152-m01	Mathematics 2 for students in Computer Science	10	NUM	79
10-I-AGT-152-m01	Algorithmic Graph Theory	5	NUM	30
Compulsory Electives (35		,		<u> </u>
Computer Science (25 EC				
10-l=lCG-152-m01	Interactive Computer Graphics	5	NUM	30
10-I-DB-152-m01	Databases		NUM	40
10-I-WBS-152-m01	Knowledge-based Systems	5	NUM	<u>                                      </u>
10-I-DM-152-m01	Data Mining	5	NUM	74
10-I-OOP-152-m01	Object oriented Programming	5	NUM	4
10-I-KT-152-m01	Computational Complexity	5	NUM	5:
-	Cryptography and Data Security	5		50
10-I-KD-152-m01		5	NUM	4
10-l-3D-152-m01	3D Point Cloud Processing	5	NUM	32
10-I-BS-152-m01	Operating Systems	5	NUM	3
10-I-RAK-152-m01	Computer Architecture	5	NUM	50
10-I-RK-152-m01	Computer Networks and Communication Systems	8	NUM	6
10-l-Gl-152-m01	Selected Basics of Computer Science	5	NUM	4
subsidiary subject (10 EC		FCTC and	:	
Mathematics (10 ECTS )	e of the minors offered and must achieve the required number of redits)	ECTS crea	its in this mino	or.
Mathematics (10 Let 5 (	Introduction to Discrete Mathematics for students of other			1
10-M-DIMaf-152-m01	subjects	10	NUM	7
10-M-NUM1af-152-m01	Numerical Mathematics 1 for students of other subjects	10	NUM	80
	Stochastics 1 for students of other subjects		NUM	8
10-M-ZTHaf-152-m01	Introduction Into Number Theory for students of other subjects	10 10	NUM	8
10-M-21Hai-152-m01	Ordinary Differential Equations for students of other subjects		NUM	
-		10		70
10-M-ORSaf-152-mo1	Operations Research for students of other subjects	10	NUM	8:
Physics (10 ECTS credit	5)			

11-EFNF-152-m01	Introduction to Physics for Students of other Disciplines	7	NUM	85
11-PFNF-152-m01	Laboratory Course Physics for Students of other Disciplines	3	B/NB	91
Economics (10 ECTS cre	dits)			
12-NW-EBWL-152-m01	Introduction to Business Administration - Minor	5	NUM	111
12-NW-EVWL-152-m01	Introduction to Economics - Minor	5	NUM	113
12-ExtUR-G-152-m01	Financial Accounting	5	NUM	101
12-IntUR-G-152-m01	Managerial Accounting	5	NUM	109
12-BPL-G-152-m01	Supply, Production and Operations Management. An Introduc- tion	5	NUM	97
12-l&F-G-152-m01	Investment and Finance. An Introduction	5	NUM	107
12-Ewiinf-G-152-m01	Introduction to Business Informatics	5	NUM	99
12-GP-G-152-m01	Integrated Business Processes	5	NUM	105
12-FRBE-F-152-m01	Forward and Reverse Business Engineering	5	NUM	103
Linguistics (10 ECTS cre	dits)	-	I	
o4-DtLABA-BM-				
SW-152-m01	Level One Module German Linguistics	5	NUM	14
o4-DtLABA-AM-				İ
SW1-152-m01	Level Two Module Grammatical Structures of German	5	NUM	12
Biology (10 ECTS credits	;)		1	
07-1A1TI-152-m01	Evolution and the Animal Kingdom	5	NUM	20
07-2A2GENV-152-m01	Genetics, Neurobiology, Behaviour	5	NUM	22
07-M-BST-152-m01	Mathematical Biology and Biostatistics	4	NUM	28
	Plant and Animal Ecology	6	NUM	26
07-3A3GEMT-152-m01	Genes, Molecules, Technologies		NUM	24
Law (10 ECTS credits)			I	
02-J1-152-m01	Introduction to the German Legal System	5	NUM	9
-	Commercial and Business Law	5	NUM	8
Geography (10 ECTS cre		,	-	
04-Geo-FER-				
NE-152-m01	Introduction to Geographical Remote Sensing	5	NUM	18
o4-Geo-FER-				
NA-152-m01	Applications of Remote Sensing in Geography	5	NUM	16
Medicine (10 ECTS credi	ts)			
03-M-MT-152-m01	Practical Course in medical terminology	5	B/NB	11
03-M-IM-152-m01	Internal Medicine	5	, NUM	10
Key Skills Area (20 ECTS c	1	5		
General Key Skills (5 ECT In addition to the module transferable skills (ASQ).	<b>S credits)</b> s listed below, students may also take modules offered by JMU a	as part of t	he pool of gen	eral
General Key Skills (subj		2		r –
10-I-TUT1-152-m01	Tutor activity 1		B/NB	71
10-I-TUT2-152-m01	Tutor activity 2	2	B/NB	72
10-I-TUT3-152-m01	Tutor activity 3	2	B/NB	73
Subject-specific Key Skil				-
10-I-SEM1-152-m01	Seminar - Selected Topics in Computer Science 1	5	NUM	62
10-I-SEM2-152-m01	Seminar - Selected Topics in Computer Science 2	5	NUM	64
10-I-PV-152-m01	Project Presentation	5	NUM	55
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Thesis (10 ECTS credits)					
10-I-BA-152-m01	Bachelor's Thesis Informatics	10	NUM	38	

Bachelor's with a	major Computer	Science	(2015)	
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Module title				Abbreviation		
Commercial and Business Law				02-G&Hre-G-152-m01		
Module	e coord	inator		Module offered by		
Dean o	f the Fa	iculty of Law		Faculty of Law		
ECTS		od of grading	Only after succ. com	,		
5	<u> </u>	rical grade		• • • • •		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
This mo	odule p	rovides an introduction t	o German and Europe	ean corporate and co	ommercial law.	
Intende	ed learı	ning outcomes				
Germai	n inten	ded learning outcomes av	/ailable but not trans	lated yet.		
_ /				· ··· · ·		
					chts, insbesondere über Gesell-	
		is der Handelsgeschäfte i			ellschaften sowie über Grundla-	
-		, number of weekly conta			n)	
V (3) +						
		essment (type, scope, la	nguage — if other tha	an German. examina	tion offered — if not every seme-	
		on on whether module ca				
written	examiı	nation (approx. 120 minu	tes)			
Allocat	ion of p	olaces				
There a	ire no r	estrictions with regard to	available places for s	students of Rechtswi	issenschaft (Law) as well as Ba-	
chelor'	s stude	ents with the minor Privat	recht (Private Law). A	total of 20 places w	ill be allocated to students of	
					programme Economics. Should	
					ng places may be allocated to stu- ng places will be allocated as fol-	
					past years will be given preferen-	
					ill be maintained and places re-	
		ot as they become availal		5	·	
Additio	onal info	ormation				
Worklo	ad					
150 h						
Teachi	ng cycl	е				
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Bachel	Bachelor's degree (1 major) Computer Science (2015)					
Bachel	or's de	gree (1 major) Business N	Nanagement and Eco	10mics (2015)		
Bachel	or's de	gree (1 major) Business N	Nanagement and Eco	nomics (2019)		

				Abbreviation				
Introdu	Introduction to the German Legal System 02-J1-152-m01							
Module coordinator Modu				Module offered by	Module offered by			
Dean of Studies Faculty of Law				Faculty of Law				
ECTS	1	od of grading	Only after succ. con	npl. of module(s)				
5	<u> </u>	rical grade						
Duratio	· · · · · · · · · · · · · · · · · · ·	Module level	Other prerequisites	;				
1 seme		undergraduate						
Conten								
Germa	n conte	nts available but not tr	anslated yet.					
zessys den ins Arbeits tionsre	Die Vorlesung führt über die Beantwortung allgemeiner juristischer Fragen wie der Normenhierarchie, der Geset- zessystematik und Auslegungstechniken in die großen Rechtsgebiete der Rechtswissenschaft ein. Dabei wer- den insbesondere die fünf Bücher des Bürgerlichen Gesetzbuches sowie das Handels-, Gesellschafts- und das Arbeitsrecht besprochen. Gegenstand der Einheit Öffentliches Recht sind die Grundrechte, das Staatsorganisa- tionsrecht, das Verwaltungsrecht in seinen allgemeinen und besonderen Ausprägungen sowie das Europa- und das Völkerrecht. Im Strafrecht wird inhaltlich vor allem auf den allgemeinen Teil und die wichtigsten Normen des							
		ning outcomes						
		led learning outcomes	available but not trans	slated yet.				
ben ne beispie haben <b>Course</b> V (2) + <b>Metho</b> ster, in written Assess	Die Studierenden verfügen über Basiswissen in den wichtigsten Teilbereichen der Rechtswissenschaft. Sie haben neben fachlichen Grundkenntnissen über das materielle und das Prozessrecht auch allgemeine Kenntnisse beispielsweise über die Gesetzessystematik und die Rechtsquellenlehre erworben. Anhand von Beispielfällen haben sie ersten Einblick ins juristische Arbeiten erhalten. <b>Courses</b> (type, number of weekly contact hours, language — if other than German) $V(2) + \ddot{U}(2)$ <b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) written examination (approx. 120 minutes) Assessment offered: Every semester							
	tion of p							
sters w mainta	vill be gi ined ar	s. Students applying a ven preferential consid id places re-allocated b ber of places will be a	leration. The remaining of the second s	g places will be alloc available. Places on a	ated by lot. A waiting	g list will be		
Additio	onal inf	ormation						
Worklo	oad							
150 h								
Teaching cycle								
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)								
Module appears in								
Bachelor's degree (1 major) Geography (2015)								
	Bachelor's degree (1 major) Computer Science (2015)							
[		gree (1 major) Political	and Social Studies (20	15)				
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 9 / 114		

Module	e title				Abbreviation	
Internal Medicine					03-M-IM-152-m01	
Module	e coord	inator		Module offered by		
unknov	wn			Faculty of Medicine		
ECTS	1	od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	unknown				
Conten	Its					
No info	ormatio	n on contents available.				
Intend	ed lear	ning outcomes				
No info	ormatio	n on intended learning ou	utcomes available.			
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
V (o)						
		s <b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-	
per car Assess	ndidate ment w	)	e to one of the sub-sp	ecialities of internal	candidates: approx. 10 minutes medicine, e. g. cardiology, pul- gy, infectious disease.	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Module appears in						
Bachel	or's de	gree (1 major) Computer S	Science (2015)			
Bachel	or's de	gree (1 major) Computer S	Science (2017)			
Bachel	Bachelor's degree (1 major) Computer Science (2019)					

Modul	le title				Abbreviation
Praction	cal Cou	rse in medical terminolog	Sy		03-M-MT-152-m01
Modul	le coord	linator		Module offered by	
Institu	ite for th	ne History of Medicine		Faculty of Medicine	
ECTS		od of grading	Only after succ. con	· ·	
5	(not)	successfully completed			
Durati	on	Module level	Other prerequisites		
1 seme	ester	unknown			
Conte	nts				
No inf	ormatio	n on contents available.			
Intend	led lear	ning outcomes			
No inf	ormatio	n on intended learning ou	utcomes available.		
		, number of weekly conta		- if other than Germa	n)
P (o)		,			
ster, ir	nformat	ion on whether module ca	an be chosen to earn		tion offered — if not every seme-
		nation (approx. 60 to 90	minutes)		
Alloca	tion of	places			
Additi	onal inf	ormation			
Workl	oad				
150 h					
Teachi	ing cycl	e			
Referr	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	le appe	ars in			
Bache	lor's de	gree (1 major) Computer 9 gree (1 major) Computer 9	Science (2017)		
Bache	lor's de	gree (1 major) Computer 5 gree (1 major) Artificial In	telligence and Data S		
		gree (1 major) Artificial In gree (1 major) Artificial In	-	-	

Modul				Abbreviation	
Level 1	wo Module Grammatical Struct	tures of German		o4-DtLABA-AM-SW:	1-152-m01
Modul	e coordinator		Module offered by		
	of the Chair of German Linguist	ics	Institute of German	Studies	
ECTS	Method of grading	Only after succ. con		Studies	
5	numerical grade				
Durati					
Durali	undergraduate	Other prerequisites			
Conter					
gramm cy dep tion of tise the start w sis of c and str <b>Intend</b> Studer tify and up to t <b>Course</b> V (1) + <b>Metho</b> ster, in	the lecture, this module aims t natical sentence analysis, e.g. d ending and non-depending clau the structure of complex senter e analytical and description me with the analysis of simple senter difficult sentences up to sub-lev udents will be confident with the ed learning outcomes nots possess solid knowledge of d determine syntactic structures he sentence level assuredly. es (type, number of weekly cont S (2) + T (1) d of assessment (type, scope, I nformation on whether module on examination (approx. 75 minut	etermining clauses by uses, syntactical funct nces. During this mod thods, covered during ences, then goes over rels. The tutorial, whic e covered description the sub-area syntax w s and are acquainted w act hours, language – anguage — if other the can be chosen to earn	the use of grammat ion and semantics of ule, which is a part of the lecture, by auth to levels of clauses a h is a part of the mo- and analytical meth with focus on valency with the description - if other than Germa an German, examina	ical samples, detern if relative clauses, fo of the seminar, stude entic sentences. Thi and will continue wit dule, provides furthe ods. grammar, they are a and analysis of lingu	nining valen- ormal descrip ents will prac- s module wil h the analy- er practise able to iden- uistic units
	tion of places				
Additio	onal information				
Worklo	pad				
150 h					
-	ng cycle	_			
···					
Defer	ad to in IDO L (avamination re-	ulations for tooshing			
	ed to in LPO I (examination reg		legiee programmes)		
<b>U</b>	Nr. 2 b) Nr. 2 b)				
-	e appears in				
		(Science (2015)			
	lor's degree (1 major) Computer lor's degree (1 major, 1 minor) G	-	Literature (Minor 20	015)	
	lor's degree (1 major, 1 minor) G			/ر - ∕	
	ate examination for the teaching				
	ate examination for the teachin		_		
	ate examination for the teachin				
First st	ate examination for the teachin	g degree Mittelschule	German (2015)		
	lor's degree (2 majors) German				
Master	r's degree (1 major) Russian Lan	guage and Culture (20	017)		
Bachelor's	s with 1 major Computer Science (2015)	IMII W/ürzburg	• generated 18-Apr-2025 • e	xam reg	page 12 / 114
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Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Mittelschule German (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)

Module	e title			Abbreviation		
Level C	Level One Module German Linguistics 04-DtLABA-BM-SW-152-mo1					
Module	e coordinator		Module offered by			
holder	of the Chair of German Linguist	ics	Institute of German	Studies		
ECTS	Method of grading	Only after succ. con	npl. of module(s)			
5	numerical grade					
Duratio	on Module level	Other prerequisites				
1 seme	ster undergraduate					
Conten	its					
man lir descrip dual w analysi bet (IP)	Within the lecture, this module aims to provide an overview and first introduction to the important parts of Ger- man linguistics. At the same time, the seminar that is a part of the module, provides students with analytical and description methods up to the word level, for example morphological segmentation and classification of indivi- dual word forms into basic morphemes, morphology and inflectional morphemes, morphological and semantic analysis of word formation structures, phonetic and phonological transcription in International Phonetic Alpha- bet (IPA)-phonetics, graphical realisation of phonemes and associated with orthography principles. The associa- ted tutorial helps to practise further and to become more confident with the analytical and description methods,					
	ed learning outcomes					
Studer le to de miliar v	nts possess an overview of the c escribe and analyse linguistic u	nits up to the word le	vel assuredly. Thank	dual subdisciplines. They are ab- s to the module, students are fa- will be extended and consolida-		
Course	<b>s</b> (type, number of weekly conta	act hours, language –	- if other than Germa	n)		
V (2) +	S (2) + T (1)					
	d of assessment (type, scope, la formation on whether module c			tion offered — if not every seme-		
written	examination (approx. 75 minut	es)				
Allocat	ion of places					
Additio	onal information					
Worklo	ad					
150 h						
	ng cycle					
		_				
Referre	ed to in LPO I (examination regu	lations for teaching.	legree programmes)			
§ 43   N § 63   N	vr. 2 b)					
	Module appears in					
	or's degree (1 major) Computer	Science (2015)				
	or's degree (1 major, 1 minor) G			15)		
	or's degree (1 major, 1 minor) G		_			
	ate examination for the teaching					
	ate examination for the teaching					
	ate examination for the teachin ate examination for the teachin					
	or's degree (2 majors) German I		_			
1			× 2/	I		

Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Mittelschule German (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)

Modul	e title				Abbreviation	
Applica	ations o	of Remote Sensing in G	eography		04-Geo-FERNA-152-	m01
Modul	e coordi	inator		Module offered by		
Module coordinator holder of the Professorship of Remote Sensing			Soncing	Institute of Geogra		
	1	•			phy and Geology	
ECTS		od of grading rical grade	Only after succ. cor	npl. of module(s)		
5	<u> </u>	-				
Duratio		Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
fundan graphic topics atmosp	nental u cal data are ana pheric c	parts basic knowledge inderstanding of remot , metadata, spatial ove logue, visual image int orrection. A focus lies c ange detection. Further	ely sensed data as geo rlaying of geodata, ge erpretation, digital ima on the digital remote s	oinformation and lat ographical informati age processing (calik ensing based mappi	er geoinformation in on systems) is given oration, transformation ng, i.e. spectral anal	general (geo . Following on, filter) and ysis, classifi
Intend	ed learr	ning outcomes				
reflect	their es	explain applications of sential characteristics. methodological approa	They summarise fund	amental aspects of (	digital) image proce	ssing and as-
Course	<b>es</b> (type,	number of weekly con	tact hours, language –	- if other than Germa	an)	
V (2) + Module		t in: German and/or Eng	glish			
		essment (type, scope,			ation offered — if not	every seme-
ster, in	ıformati	on on whether module	can be chosen to earn	a bonus)		
Langua		nation (approx. 45 minu ssessment: German an bonus				
	tion of p					
Additio	onal info	ormation				
Worklo	oad					
150 h						
Teachi	ng cycl	9				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
	e appea					
Bachel	lor's deg	gree (1 major) Geograpł	ıy (2015)			
	-	gree (1 major) Compute				
	-	gree (1 major) Mathema	-			
	-	gree (1 major, 1 minor) (		-		
	-	gree (1 major, 1 minor) (			-	
	-	gree (1 major, 1 minor) (		1an Geography) (201	5)	
	-	gree (2 majors) Geograp				
	-	gree (1 major, 1 minor) (				
ваchel	ior's deg	gree (1 major) Compute	r Science (2017)			
Bachelor's	s with 1 maj	or Computer Science (2015)	JMU Würzbur	g • generated 18-Apr-2025 • 6	exam. reg.	page 16 / 114
			data record	Bachelor (180 ECTS) Informat	ik - 2015	

Bachelor's degree (1 major) Computer Science (2019) Module studies (Bachelor) Geography (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (Minor, 2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023)

Module title			Abbreviation			
Introdu	Introduction to Geographical Remote Sensing 04-Geo-FERNE-152-mo1					
Module	e coordinator		Module offered by			
holder of the Professorship of Remote		Sensing	Institute of Geograp	ohy and Geology		
ECTS	Method of grading	Only after succ. con		,		
5	numerical grade		1			
Duratio	on Module level	Other prerequisites				
1 seme	· · · · · · · · · · · · · · · · · · ·					
Contents						
sensing - surfac ant tem and act	ture gives an overview of the pr g / physical principles (energy a ces, objects under investigation nperature, emissivity / detectors tive systems, e.g. hyperspectral ensing parameters (land, atmos	nd radiation, interact : soils, vegetation, wa s: characterisation of and LiDAR) / radar re	ions radiation - atmo ater) / thermal remot remote sensing data	osphere, interactions radiation e sensing: radiation laws, radi- n, platforms and sensors (passive		
Intende	ed learning outcomes					
sphere		on and back to the se	•	radiation path through the atmo- e essential characteristics of re-		
Course	<b>s</b> (type, number of weekly conta	ict hours, language –	- if other than Germa	n)		
V (2) + Module	T (2) e taught in: German and/or Engl	ish				
ster, in	d of assessment (type, scope, la formation on whether module c examination (approx. 45 minut	an be chosen to earn		tion offered — if not every seme-		
Langua	ige of assessment: German and ble for bonus					
Allocat	ion of places					
Additio	onal information					
Worklo	ad	-				
150 h						
Teachi	ng cycle					
Referre	ed to in LPO I (examination regu	llations for teaching-o	degree programmes)			
§661N	Vr. 2					
Module	e appears in					
Bachel	Bachelor's degree (1 major) Geography (2015)					
Bachel	Bachelor's degree (1 major) Computer Science (2015)					
	Bachelor's degree (1 major) Mathematics (2015)					
	or's degree (1 major, 1 minor) G		-			
	or's degree (1 major, 1 minor) Pr			,		
	or's degree (1 major, 1 minor) Pr			-		
	or's degree (1 major, 1 minor) G			-		
	or's degree (1 major, 1 minor) Ge			5)		
Bachel	Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015)					

First state examination for the teaching degree Gymnasium Geography (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Module studies (Bachelor) Geography (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (Minor, 2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

UNIVERSITÄT

WÜRZBURG

tendance
prox. 25 to

#### Contents

The lecture *Evolution* will acquaint students with fundamental concepts and mechanisms of evolutionary biology: the origins of diversity; natural and sexual selection; speciation; population genetics. It will provide students with an introduction to phylogenetic reconstruction and will thus enable them to develop an understanding of the system of plants and animals. During the exercise, students will complete exercises on mechanistic evolution and evolutionary history. The lecture *Tierreich (Animal Kingdom)* will discuss the diversity of animal organisms on the basis of the phyla of the animal kingdom focusing on phylogenetic criteria. It will address the ecological constraints that led to the development of different types of body plans with their different structures and functions. In this context, the lecture will also develop an awareness in students of how important a knowledge of the fundamental principles of zoology is for research and applications not only but in particular in biology and medicine. In the exercise, students will prepare and/or examine selected species and histological preparations and will thus become familiar with the functional and morphological characteristics of the major multicellular animal phyla. In this context, students will practise working with light microscopes and stereo microscopes and will acquire fundamental preparation skills. They will prepare drawings, documenting and interpreting what they have seen.

#### Intended learning outcomes

Students will be familiar with the fundamental concepts and mechanisms of evolutionary biology and will know that these are key to understanding biological processes. They will have gained an overview of the diversity of animals on the basis of different types of body plans and will understand important structures in both a functional and an ecological context.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + Ü (3)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 60 minutes) creditable for bonus

#### **Allocation of places**

#### . . .

Additional information

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Workload

150 h

Teaching cycle

--

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

§ 41 | Nr. 1 (4 ECTS credits) and § 41 | Nr. 4 (1 ECTS credits) § 61 | Nr. 1 (4 ECTS credits) and § 61 | Nr. 4 (1 ECTS credits)

Bachelor's with 1 major Computer Science (2015)	
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### Module appears in

Bachelor's degree (1 major) Biology (2015)
Bachelor's degree (1 major) Computer Science (2015)
Bachelor's degree (1 major) Mathematics (2015)
Bachelor's degree (1 major) Computational Mathematics (2015)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2015)
Bachelor's degree (1 major) Biology (2017)
Bachelor's degree (1 major) Computer Science (2017)
Bachelor's degree (1 major) Computer Science (2019)
Bachelor's degree (1 major) Biology (2021)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2020)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2021)
Bachelor's degree (1 major) Biology (2022)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)
Bachelor's degree (1 major) Mathematics (2023)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Module	e title				Abbreviation				
Geneti	cs, Neuro	obiology, Behaviour			07-2A2GENV-152-m01				
Modula	e coordir	ator		Module offered by					
					-				
Dean of Studies Biologie (Biology)				Faculty of Biology					
ECTS		l of grading	Only after succ. con	npl. of module(s)					
5		cal grade							
Duratio		Module level	Other prerequisites						
1 seme	ster l	undergraduate			exercises. Regular attendance				
					tion of exercises (approx. 25 to				
			30 hours) are prerec	quisites for admissio	on to assessment.				
Conten	its								
Fundar	nental p	rinciples of genetics, n	eurobiology and beha	vioural biology.					
		ng outcomes							
		-	re molecular, cellular;	and system biologic:	al mechanisms and processes				
					olecular and formal bases of i				
heritan									
Course	s (type, i	number of weekly cont	act hours, language –	- if other than Germa	in)				
V (3)	()p ()				)				
-					tion offered if not even on				
		n on whether module			ition offered — if not every sen				
			written examination (approx. 60 to 90 minutes)						
creditable for bonus									
	ble for b t <b>ion of pl</b>								
Allocat	ion of pl	aces							
Allocat		aces							
Allocat	ion of pl	aces							
Allocat	ion of pl	aces							
Allocat  Additic  Worklo	ion of pl	aces							
Allocat  Additic  Worklo 150 h	ion of pl onal info	aces							
Allocat  Additic  Worklo 150 h	ion of pl	aces							
Allocat  Additio  Worklo 150 h Teachin 	ion of pl onal info oad ng cycle	aces							
Allocat  Additic  Worklo 150 h Teachi  Referre	ion of pl onal info oad ng cycle ed to in L	aces rmation POI (examination reg	ulations for teaching-o	degree programmes)					
Allocat  Additic  Worklo 150 h Teachi  Referre § 61   N	ion of pl onal info oad ng cycle ed to in L	aces rmation POI (examination reg CTS credits)	ulations for teaching-o	degree programmes)					
Allocat  Additic  150 h Teachi  Referre § 61   N § 61   N	ion of pl onal info oad ng cycle ed to in L Ir. 2 (2 EC	aces rmation POI (examination reg CTS credits) CTS credits)	ulations for teaching-o	degree programmes)					
Allocat  Additic  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N	tion of pl pnal infor pad ng cycle ed to in L Nr. 2 (2 EC Nr. 3 (1 EC Nr. 4 (1 EC	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits)	ulations for teaching-0	degree programmes)					
Allocat  Additio  150 h Teachin  § 61   N § 61   N § 61   N	ion of pl onal info oad ng cycle Ir. 2 (2 EC Ir. 3 (1 EC Ir. 4 (1 EC e appear	aces mation POI (examination reg CTS credits) CTS credits) CTS credits) s in		degree programmes)					
Allocat  Additio  Worklo 150 h Teachin  § 61   N § 61   N § 61   N § 61   N Bachel	ion of pl onal infor oad ng cycle dr. 2 (2 EG Jr. 2 (2 EG Jr. 3 (1 EG Jr. 4 (1 EG e appear or's degr	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits) s in ree (1 major) Biology (2	2015)	degree programmes)					
Allocat  Additic  Worklo 150 h Teachi Teachi S 61   N S 61   N S 61   N Module Bachel Bachel	ion of pl onal infor oad ng cycle dr. 2 (2 EG Ir. 3 (1 EC Ir. 4 (1 EC e appear or's degr or's degr	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Computer	2015) r Science (2015)	degree programmes)					
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Allocat  Additio  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N Bachel Bachel Bachel Bachel Bachel Bachel	ion of pl onal infor oad ng cycle dto in L Jr. 2 (2 EG Jr. 3 (1 EG Jr. 4 (1 EG or's degr or's degr or's degr or's degr or's degr or's degr	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits) s in ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Computer ree (1 major) Computat ree (1 major, 1 minor) E	2015) 7 Science (2015) tics (2015) tional Mathematics (20 Biology (Minor, 2015)						
Allocat  Additic  Worklo 150 h Teachii Teachii S 61   N S 61   N S 61   N S 61   N Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ion of pl onal infor oad ng cycle ed to in L dr. 2 (2 EG dr. 3 (1 EG dr. 3 (1 EG dr. 4 (1 EG e appear or's degr or's degr or's degr or's degr or's degr or's degr or's degr or's degr	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Computent ree (1 major) Computat ree (1 major, 1 minor) E ree (1 major, 1 minor) E ree (1 major) Biology (2 ree (1 major) Computat	2015) r Science (2015) tics (2015) rional Mathematics (20 Biology (Minor, 2015) 2017)						
Allocat  Additic  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N § 61   N Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ion of pl onal info pad ng cycle d to in L Ir. 2 (2 EC Ir. 3 (1 EC Ir. 4 (1 EC e appear or's degi or's degi	aces rmation POI (examination reg CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Computation ree (1 major, 1 minor) E ree (1 major, 1 minor) E ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Computent	2015) 7 Science (2015) tics (2015) tional Mathematics (20 Biology (Minor, 2015) 2017) 7 Science (2017)						
Allocat  Additic  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ion of pl onal info oad ad ad ad ad ad ad ad ad ad ad ad ad a	aces rmation PO I (examination reg CTS credits) CTS credits) CTS credits) s in ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Computer ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Computer	2015) r Science (2015) tics (2015) tional Mathematics (20 Biology (Minor, 2015) 2017) r Science (2017) r Science (2019)						
Allocat  Additio  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N Bachel	ion of pl onal infor oad ng cycle ed to in L Ir. 2 (2 EG Ir. 3 (1 EG Ir. 4 (1 EG e appear or's degr or's degr	aces rmation PO I (examination reg CTS credits) CTS credits) CTS credits) s in ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Biology (2 ree (1 major) Biology (	2015) 7 Science (2015) tics (2015) tional Mathematics (20 Biology (Minor, 2015) 2017) 7 Science (2017) 7 Science (2019) 2019)						
Allocat  Additic  Worklo 150 h Teachin Teachin S 61   N S 61   N S 61   N S 61   N Bachel Bac	ion of pl onal infor ad ng cycle ed to in L dr. 2 (2 EG dr. 3 (1 EG dr. 3 (1 EG dr. 4 (1 EG e appear or's degr or's degr	aces rmation PO I (examination reg CTS credits) CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Mathema ree (1 major) Computer ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Computer	2015) Science (2015) tics (2015) cional Mathematics (20 Biology (Minor, 2015) 2017) Science (2017) Science (2019) 019) ngsstudien (2020)						
Allocat  Additic  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N § 61   N Bachel	ion of pl onal info oad ng cycle d to in L Ir. 2 (2 EC Ir. 3 (1 EC Ir. 4 (1 EC e appear or's degi or's degi	aces rmation PO I (examination reg CTS credits) CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Biology (2 ree (1 major) Computent ree (1 major) Biology (2 (Bachelor) Orientierunt ree (1 major) Biology (2 (Bachelor) Biol	2015) r Science (2015) tics (2015) tional Mathematics (20 Biology (Minor, 2015) 2017) r Science (2017) r Science (2019) 5019) ngsstudien (2020) 2021)						
Allocat  Additio  Worklo 150 h Teachin  Referre § 61   N § 61   N § 61   N § 61   N Bachel	ion of pl onal infor oad ad ad ag cycle dto in L Jr. 2 (2 E0 Jr. 3 (1 E0 Jr. 3 (1 E0 Jr. 4 (1 E0 e appear or's degr or's degr	aces rmation PO I (examination reg CTS credits) CTS credits) CTS credits) CTS credits) S in ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Mathema ree (1 major) Computer ree (1 major) Biology (2 ree (1 major) Computer ree (1 major) Computer	2015) Science (2015) tics (2015) cional Mathematics (20 Biology (Minor, 2015) 2017) Science (2017) Science (2019) 019) ngsstudien (2020) 2021) Biology (Minor, 2020)						

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2021) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Module title					Abbreviation	
Genes,	Molec	ules, Technologies			07-3A3GEMT-152-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Biologie (Biology)		Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
6	6 numerical grade					
Duratio	on	Module level	Other prerequisites	es		
1 seme	ster	undergraduate				
Conten	ts					
ng topi <i>to Gene</i> of the e	cs: The e <i>tics</i> ) a eukaryc	section <i>Spezielle Geneti</i> nd will deepen the stude otic genome, regulatory R	k (Special Genetics) v nts' knowledge of top NA, epigenetically an	vill build on <i>Einführu</i> bics from the followin d evolutionarily sigr	Il include lectures on the followi- ing in die Genetik (Introduction ng areas: structure and evolution nificant genetic mechanisms. The	

section will also focus on methods of gene expression profiling, reverse genetics and modern methods of gene function and gene sequence analysis. In the lecture *Einführung in die Bioinformatik (Introduction to Bioinformatics*), students will acquire an overview of major areas in the field of bioinformatics: protein sequence and protein domain analysis, phylogeny and evolution of sequences, protein structure, RNA/DNA sequences and structures, cellular networks (regulation, metabolism) and systems biology. During the section *Einführung in die Biotechnologie (Introduction to Biotechnology)*, students will acquire an overview of the following topics: history of biotechnology, DNA and RNA technologies, recombinant antibodies, molecular diagnostics, nanobiotechnology, biomaterials, bioprocess engineering, microbial biotechnology, transgenic animals and plants, microfluidics. The lecture *Einführung in die Pharmakokinetik (Introduction to Pharmacokinetics*) will provide students with an overview of the rational development of drugs and active agents. The module component will discuss an important aspect for biologists in more detail: the optimisation of the pharmacokinetics of small molecules and proteins. Pharmacokinetics describes the uptake, distribution, metabolism and elimination of a drug or xenobiotic in an organism.

#### Intended learning outcomes

Students possess an advanced knowledge on genome evolution and the regulation of gene expression and are familiar with current methods in genetics as well as methods for the analysis of DNA and protein databases. They have acquired an overview of both traditional and modern methods in biotechnology and are familiar with fundamental topics in biotechnology. Students have acquired an overview of the fundamental principles of the development and review of active agents in research, clinical practice and the pharmaceutical industry. They are familiar with methods and technologies in biology and are able to evaluate potential applications of these in research and industry.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (4)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 90 minutes) creditable for bonus

Allocation of places

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#### Additional information

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Workload

180 h

Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

#### Module appears in

Bachelor's degree (1 major) Biology (2015)
Bachelor's degree (1 major) Computer Science (2015)
Bachelor's degree (1 major) Mathematics (2015)
Bachelor's degree (1 major) Computational Mathematics (2015)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2015)
Bachelor's degree (1 major) Biology (2017)
Bachelor's degree (1 major) Computer Science (2017)
Bachelor's degree (1 major) Computer Science (2019)
Bachelor's degree (1 major) Biology (2021)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2020)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2021)
Bachelor's degree (1 major) Biology (2022)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022)
exchange program Biosciences (2022)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)
Bachelor's degree (1 major) Mathematics (2023)
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Module title					Abbreviation		
Plant a	Plant and Animal Ecology 07-3A30EK0-152-mo1					101	
Modul	e coord	inator		Module offered by			
				Faculty of Biology			
Dean of Studies Biologie (Biology) ECTS Method of grading		Only after succ. con					
6		rical grade					
Durati		Module level	Other prerequisites				
1 seme		undergraduate	Other prerequisites				
	Contents						
This m	odule w	vill provide students wit	th an overview of the ir	nteractions of plants	and animals with th	eir abiotic	
and bi	otic env	ironments. The module	e will focus on the func	tional adaptation to	environmental cond	itions as well	
		cture and dynamics of p					
		nodel concepts of ecol					
		ental knowledge neces	sary to develop an und	ierstanding of currer	it ecological problem	ns.	
		ning outcomes					
		amiliar with the fundan					
		c and biotic factors that ient. In addition, they u					
	ntal iss			ic relevance ecology			
Course	es (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)		
V (2) +	Ü (2)						
		essment (type, scope,	language — if other th	an German. examina	ition offered — if not	everv seme-	
		on on whether module					
writter	ı examiı	nation (approx. 90 mini	utes)				
credita	ble for	bonus					
Alloca	tion of p	olaces					
			_				
Additio	onal info	ormation					
Worklo	oad						
180 h							
Teachi	ng cycl	9					
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)	1		
§61	Vr. 4						
Modul	e appea	rs in					
		gree (1 major) Biology (					
		gree (1 major) Geograpł					
	Bachelor's degree (1 major) Computer Science (2015)						
	Bachelor's degree (1 major) Mathematics (2015)						
Bachelor's degree (1 major) Computational Mathematics (2015)							
		gree (1 major, 1 minor)					
		mination for the teaching	,	Biology (2015)			
		gree (1 major) Biology (	-				
		gree (1 major) Compute					
		gree (1 major) Compute	-				
Bache	ior's de	gree (1 major) Biology (	2021)				
Bachelor's	s with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat		page 26 / 114	

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2020) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) exchange program Biosciences (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Module	title				Abbreviation			
Mathem	natical Biolog	y and Biostatist	cs		07-M-BST-152-m01			
Madula	coordinator			Modulo offered by				
				Module offered by				
holder of the Chair of Bioinformatics				Faculty of Biology				
	Method of gr	-	Only after succ. com	ipl. of module(s)				
· .								
Duration			Other prerequisites					
1 semes		graduate						
	Contents							
Fundam	ental principl	les of the most ir	nportant mathematica	l and statistical met	hods in biology.			
Intende	d learning ou	tcomes						
			ntal skills in the evalu		, the interpretation o	of readings		
and num	nbers as well	as the mathema	tical description of bio	logical processes.				
Courses	(type, numb	er of weekly cont	act hours, language —	if other than Germa	in)			
V (2) + Ü	) (2)							
			anguage — if other tha		tion offered — if not	every seme-		
ster, info	ormation on v	whether module	can be chosen to earn	a bonus)				
		(approx. 60 minu	ites)					
creditab	ole for bonus							
Allocatio	on of places							
Addition	nal informatio	on						
Workloa	ad							
120 h								
Teachin	g cycle							
	5 09000		_					
Poforroc	to in IPOI	(oxamination roo	ulations for teaching-c	logroo programmoc)				
Keleffet								
	appears in							
	-	major) Biochemi						
	•	major) Biology (2 major) Compute						
	-	major) Mathema	-					
	_	-	tional Mathematics (20	<u>م</u> رد (				
	_		Biology (Minor, 2015)	12)				
	-	major) Biology (2						
	•	major) Biochemi						
	_	-						
	Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019)							
	Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major) Biology (2021)							
	Bachelor's degree (1 major, 1 minor) Biology (Minor, 2020)							
	-	-	Biology (Minor, 2020)					
	_	-	Science und Sustaina	bility (2021)				
	_	major) Biochemi		(2021)				
	_	major) Biology (2	-					
	-		ntelligence and Data S	science (2022)				
Bachelor's w	vith 1 major Compu	ter Science (2015)	-	• generated 18-Apr-2025 • e	-	page 28 / 114		
			data record E	Bachelor (180 ECTS) Informat	ik - 2015			



Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Module title				Abbreviation		
	Interactive Computer Graphics 10-I=ICG-152-m01					
Module	e coordi	inator		Module offered by		
holder of the Chair of Computer Science IX Insti			Institute of Comput	er Science		
ECTS		od of grading	Only after succ. compl. of module(s)			
5	numer	ical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
cifically contern about l jection line wil Accomp or Direct	y conce porary ight and as well l be con panying ctX.	ntrates on interactive g as well as for novel hu d images, lighting mod as texturing methods. nplemented by algorit	for digitally synthesising graphics with an addition man-computer interfact els, data representation Theoretical aspects of nmical approaches for Il utilise modern graph	onal focus on 3D gra es and computer ga ns, mathematical fo the steps involved in interactive image syn	phics as a requireme mes. The course will rmulations of moven n ray-tracing and the ntheses using comp	ent for many cover topics nents, pro- raster pipe- uter systems.
			s will have a broad und	lerstanding of the un	derlying theoretical	models of
			to implement a promir	-	, .	
active §	graphic	s applications and to c	hoose the right softwa	re tool for this task.		
Course	<b>s</b> (type,	number of weekly con	tact hours, language –	- if other than Germa	n)	
V (2) +	Ü (2)					
ster, in	formati	on on whether module	language — if other the can be chosen to earn		tion offered — if not	every seme-
lf anno examin prox. 1 <u>9</u>	unced b ation o 5 minut ge of as	f one candidate each ( es per candidate). ssessment: German an	eginning of the course, approx. 20 minutes) or			
Allocat	ion of p	laces				
Additio	onal info	ormation				
Focuse HCI	s availa	ble for students of the	Master's programme I	nformatik (Computer	Science, 120 ECTS o	credits):
Worklo	ad					
150 h						
Teachi	ng cvcle	2				
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module		rc in				
Module		rs in gree (1 major) Compute	r Science (2015)			
	-	gree (1 major) Compute				
	-		tional Mathematics (20	015)		
		ee (1 major) Computer S		2/		
	-	gree (1 major) Compute				
Bachelor's	with 1 maj	or Computer Science (2015)		g ● generated 18-Apr-2025 ● e Bachelor (180 ECTS) Informati	-	page 30 / 114



Bachelor's degree (1 major) Computer Science (2019)

Bachelor's with 1 major Computer Science (2015)	

	Module title Abbreviation					
3D Poi	3D Point Cloud Processing 10-l-3D-152-m01					
Module	e coord	inator		Module offered by		
holder	of the (	Chair of Computer Scie	nce XVII	Institute of Comput	er Science	
ECTS						
5	nume	rical grade				
Duratio		Module level	Other prerequisites	i		
1 seme	1 semester undergraduate					
Conten	nts					
	, regist	g, Kinect and camera n ration, features, segme				
Intend	ed lear	ning outcomes				
munica data pi require	ate with rocessin ements,	erstand the fundament engineers / surveyors ng and have experience in terms of memory re	/ CV people / etc. Studed that real application quirements and in term	dents are able to solve scenarios are challen ns of implementation	ve problems of mode enging in terms of co issues.	ern sensor
		, number of weekly con	tact hours, language –	- if other than Germa	n)	
V (2) +						
		<b>sessment</b> (type, scope, on on whether module			tion offered — if not	every seme-
lf anno examir prox. 1 Langua	ounced nation c 5 minut	nation (approx. 60 to 1: by the lecturer at the bo of one candidate each ( res per candidate). ssessment: German ar bonus	eginning of the course, approx. 20 minutes) or			
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)		
§ 22 Il Nr. 3 b)						
Module appears in						
Bachelor's degree (1 major) Computer Science (2015)						
Bachelor's degree (1 major) Mathematics (2015)						
Bachelor's degree (1 major) Computational Mathematics (2015)						
	Bachelor's degree (1 major) Aerospace Computer Science (2015) First state examination for the teaching degree Gymnasium Computer Science (2015)					
1		mination for the teachi ning degree Gymnasiur			-	016)
1		y course MINT Teacher				010)
		gree (1 major) Aerospa			_, (2010)	
		gree (1 major) Compute				
Packal-	with a sec	ior Computor Crience ()	1841114425	a concreted +0 America	Nom rog	
Dachelor's	with 1 ma	jor Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 32 / 114

### UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Computer Science (2019)

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020)

Bachelor's degree (1 major) Aerospace Computer Science (2020)

Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022)

Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)

Bachelor's degree (1 major) Mathematics (2023)

Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Bachelor's degree (1 major) Games Engineering (2025)

Modul			Abbreviation						
Algorithms and data structures 10-I-ADS-152-mo1									
Modul	e coord	inator		Module offered by	/				
Dean of Studies Informatik (Computer		er Science)	Institute of Comput	er Science					
ECTS	Metho	od of grading	Only after succ. con	compl. of module(s)					
10 numerical grade									
Duration Module level		Other prerequisites							
1 seme	ester	undergraduate							
Contents									
Design and analysis of algorithms, recursion vs. iteration, sort and search methods, data structures, abstract da- ta types, lists, trees, graphs, basic graph algorithms, programming in Java.									
Intended learning outcomes									
Students are proficient in independently designing, precisely describing and analyzing algorithms. The students know the basic paradigms for the design of algorithms and can implement them in practical programs. Students are able to estimate the runtime behavior of algorithms and prove the correctness of algorithms.									
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)				
V (4) +	Ü (2)								
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)									
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 (ap- prox. 15 minutes per candidate). creditable for bonus Allocation of places									
Additic	nal inf	ormation							
Addition									
Worklo	ad								
300 h									
-	ng cycl	٩							
		e: only in winter semes	 ter						
		LPOI (examination reg		degree programmes)					
§ 49   1 § 69   1	Vr. 1 a)								
-	e appea	in in							
			r Science (2015)						
Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Mathematics (2015)									
Bachelor's degree (1 major) Economathematics (2015)									
Bachelor's degree (1 major) Human-Computer Systems (2015)									
Bachelor's degree (1 major) Computational Mathematics (2015)									
Bachelor's degree (1 major) Aerospace Computer Science (2015)									
First state examination for the teaching degree Realschule Computer Science (2015) First state examination for the teaching degree Gymnasium Computer Science (2015)									
Bachelor's degree (1 major) Aerospace Computer Science (2017)									
Bachelor's degree (1 major) Computer Science (2017)									
		gree (1 major) Compute							
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 34 / 114			



Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Mathematics (2023)

Module			Abbreviation						
Algorithmic Graph Theory 10-I-AGT-152-m01									
Module	e coord	inator		Module offered by					
holder of the Chair of Computer Scienc			nce l	Institute of Computer Science					
ECTS		od of grading	Only after succ. cor	c. compl. of module(s)					
5	nume	rical grade							
Duratio	on	Module level	Other prerequisites						
1 semester undergraduate									
Conten	Its								
We discuss typical graph problems: We solve round trip problems, calculate maximal flows, find matchings and colourings, work with planar graphs and find out how the ranking algorithm of Google works. Using the examples of graph problems, we also become familiar with new concepts, for example how we model problems as linear programs or how we show that they are fixed parameter computable.									
Intended learning outcomes									
The students are able to model typical problems in computer science as graph problems. In addition, the participants are able to decide which tool from the course helps solve a given graph problem algorithmically. In this course, students learn in detail how to estimate the run time of given graph algorithms. Courses (type, number of weekly contact hours, language — if other than German)									
$V(2) + \ddot{U}(2)$									
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme-									
ster, information on whether module can be chosen to earn a bonus)									
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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places									
Additic	nal inf	ormation							
Addition									
Worklo	ad								
150 h									
Teachi	ng cycl	e							
Referred to in LPO I (examination regulations for teaching-degree programmes)									
§ 22    Nr. 3 b)									
Module appears in									
Bachelor's degree (1 major) Computer Science (2015)									
Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Computational Mathematics (2015)									
Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Aerospace Computer Science (2015)									
First state examination for the teaching degree Gymnasium Computer Science (2015)									
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)									
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)									
			ce Computer Science (2	2017)					
Bachel	or's deg	gree (1 major) Compute	er Science (2017)						
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informati	-	page 36 / 114			

Bachelor's degree (1 major) Computer Science (2019) Module studies (Bachelor) Computer Science (2019) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Games Engineering (2025)

Modul	e title				Abbreviation
Bache	lor's Th	esis Informatics			10-I-BA-152-m01
Modul	e coord	linator		Module offered by	
Dean	of Studi	es Informatik (Computer	Science)	Institute of Comput	er Science
ECTS	-	od of grading	Only after succ. con	· · · · · ·	
10	nume	rical grade		•	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
	rching a ific prac		problem within a give	n time frame and ad	hering to the principles of good
Intend	led lear	ning outcomes			
The sto practio		are able to research and	write on a defined pro	oblem, adhering to t	he principles of good scientific
Course	<b>es</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
Νο cou	urses as	signed to module			
		<b>sessment</b> (type, scope, la ion on whether module c			tion offered — if not every seme-
		esis (approx. 50 to 100 pa assessment: German and			
Alloca	tion of	places			
Additi	onal inf	ormation			
Time t	o comp	lete: 10 weeks.			
Workl	oad				
300 h					
Teach	ing cycl	e			
			-		
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)					
Modul	e appea	ars in			
Bache	lor's de	gree (1 major) Computer	Science (2015)		
		gree (1 major) Computer			
Bache	lor's de	gree (1 major) Computer	Science (2019)		

Module	e title				Abbreviation
Operat	ing Sys	stems			10-l-BS-152-m01
Module	e coord	inator		Module offered by	
		Chair of Computer Scienc	e ll	Institute of Comput	er Science
ECTS	1	od of grading	Only after succ. com	· ·	
5		rical grade		.p	
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Conten	its				
Introdu sing in	iction to operat		ind threads, CPU sche	eduling, synchronisa	ure principles, interrupt proces- ation and communication, memo
Intend	ed lear	ning outcomes			
The stu	idents j	possess knowledge and	practical skills in buil	ding and using esse	ntial parts of operating systems.
Course	s (type	, number of weekly conta	ict hours, language —	· if other than Germa	in)
V (2) +			· · · · · · · · · · · · · · · · · · ·		·
		<b>sessment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
credita	ble for		/or English		
Allocat	ion of p	Diaces			
Additio	onal inf	ormation			
Worklo	ad				
150 h					
Teachi	ng cycl	e	<u>.</u>		
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	nrs in			
	Bachelor's degree (1 major) Computer Science (2015)				
Bachelor's degree (1 major) Mathematics (2015)					
Bachelor's degree (1 major) Computational Mathematics (2015)					
	Bachelor's degree (1 major) Aerospace Computer Science (2015)				
	-	ee (1 major) Physics (201			
	-	ee (1 major) Nanostructur		(017)	
		gree (1 major) Aerospace gree (1 major) Computer :		.01/)	
			Science (2017)		

Module	e title				Abbreviation	
Databases 10-I-DB-152-m01						
Module	e coordi	nator		Module offered by		
Dean o	of Studie	es Informatik (Compute	Science) Institute of Computer Science			
ECTS	Metho	d of grading	Only after succ. cor	npl. of module(s)		
5	numer	ical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	nts					
Relatio ment.	onal alge	ebra and complex SQL	statements; database	planning and norma	l forms; transaction	manage-
Intend	ed learr	ing outcomes				
The stu	idents r	oossess knowledge ab	out database modellin	g and queries in SOL	as well as transaction	ons.
		number of weekly con		· · · · · · · · · · · · · · · · · · ·		
		number of weekly con	tact nours, tanguage -		(11)	
V (2) +		. /				
		<b>essment</b> (type, scope, on on whether module			tion offered — if not	every seme-
lf anno examir prox. 1 Langua	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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
Allocat	tion of p	laces				
Additio	onal info	ormation				
Worklo	ad					
150 h						
_	ng cycle					
Teacini	ing cycle	2				
 Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)		
§ 49 I N				<u></u>		
§ 69 I N						
Module	e appea	rs in				
Bachel	or's deg	gree (1 major) Compute	r Science (2015)			
Bachel	or's deg	gree (1 major) Mathema	atics (2015)			
Bachel	or's deg	gree (1 major) Business	Information Systems	(2015)		
Bachel	or's deg	gree (1 major) Computa	tional Mathematics (2	015)		
Bachel	Bachelor's degree (1 major) Aerospace Computer Science (2015)					
Bachelor's degree (1 major) Functional Materials (2015)						
	First state examination for the teaching degree Realschule Computer Science (2015)					
		nination for the teachi		Computer Science (2	2015)	
	-	ee (1 major) Physics (20		4		
		gree (1 major) Business				
	-	gree (1 major) Aerospa	•	2017)		
Bachel	or's deg	gree (1 major) Compute	r Science (2017)			
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 40 / 114

Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) Games Engineering (2025)

Modul	e title				Abbreviation	
Data Mining 10-I-DM-152-m01						
Modul	e coord	inator		Module offered by		
holder	of the (	f the Chair of Computer Science VI Institute of Computer Science				
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Durati	-	Module level	Other prerequisites			
1 seme		undergraduate				
Conter						
model, metho	, relatio ds (clus	nship to data warehou ster and association me	definition of data minin se and OLAP, data prep ethods), supervised lea data types, other learni	processing, data visu Irning (e. g. Bayes cla	alisation, unsupervi	sed learning
Intend	ed lear	ning outcomes				
ta mini the kno or imp	ing and owledge lementa	machine learning. The e acquired in this cours ation of data mining al		tical knowledge disc D process. They have	covery problems with acquired experienc	n the help of
		, number of weekly cor	ntact hours, language –	- if other than Germa	n)	
V (2) +						
ster, in	formati	ion on whether module	language — if other th can be chosen to earn		tion offered — if not	every seme-
lf anno examir prox. 1 Langua	ounced nation c 5 minut	of one candidate each ( tes per candidate). ssessment: German ar	eginning of the course, (approx. 20 minutes) or			
Alloca	tion of <sub>l</sub>	olaces				
Additio	onal inf	ormation				
Worklo	bad					
150 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination re	gulations for teaching-	degree programmes)		
§ 22	Nr. 3 b)					
Modul	e appea	ars in				
		gree (1 major) Compute				
Bachelor's degree (1 major) Mathematics (2015)						
			s Information Systems ational Mathematics (2)	-		
		,	ce Computer Science (2	-		
			ing degree Gymnasium	-	2015)	
			s Information Systems			
Master	r's teacl	hing degree Gymnasiu	n MINT Teacher Educat	ion PLUS, Elite Netw	ork Bavaria (ENB) (2	016)
Bachelor's	with 1 ma	jor Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 42 / 114

Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major) Business Information Systems (2019) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Business Information Systems (2021) Master's degree (1 major) Information Systems (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Modul	e title				Abbreviation
Introduction to Programming 10-I-EinP-152-m01					10-l-EinP-152-m01
Modul	e coord	linator		Module offered by	
holder	ofthe	Chair of Computer Scienc	e ll	Institute of Comput	er Science
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conter	its				
		ontrol structures, foundat on in Java, selected topics			d topics of C, introduction to ob- : scripting languages.
Intend	ed lear	ning outcomes			
		possess a fundamental k to independently develop			(in particular Java, C and C++)
Course	e <b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
V (2) +	Ü (2)				
		<b>sessment</b> (type, scope, la ion on whether module ca			tion offered — if not every seme-
lf anno examir	unced nation o 5 minu	of one candidate each (ap tes per candidate).	inning of the course,		tion may be replaced by an oral i in groups of 2 candidates (ap-
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
150 h					
Teachi	ng cvcl	e			
		e: only in winter semester	r		
		<b>LPO I</b> (examination regu		legree programmes)	
§ 49					
§ 69   1					
Modul	e appea	ars in			
Bachel	Bachelor's degree (1 major) Computer Science (2015)				
	Bachelor's degree (1 major) Mathematics (2015)				
Bachelor's degree (1 major) Business Information Systems (2015)					
Bachel	Bachelor's degree (1 major) Human-Computer Systems (2015)				
Bachel	Bachelor's degree (1 major) Computational Mathematics (2015)				
Bachel	or's de	gree (1 major) Aerospace	Computer Science (2	2015)	
First st	ate exa	mination for the teaching	g degree Realschule (	Computer Science (2)	015)
First st	ate exa	mination for the teaching	g degree Gymnasium	Computer Science (2	2015)
Bachel	or's de	gree (1 major) Business Ir	nformation Systems (	(2016)	
Bachel	or's de	gree (1 major) Business lı	nformation Systems (	(2019)	

Selected Basics of Computer Science 10-I-GI-152-m01   Module coordinator Module offered by   Dean of Studies Informatik (Computer Science) Institute of Computer Science   ECTS Method of grading Only after succ. compl. of module(s)   5 numerical grade   5 numerical graduate   1 semester undergraduate   Contents Selected topics in computer science.   Instende learning outcomes   The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.   Courses (type, number of weekly contact hours, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)   written examination (approx. 6o 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 Information	Module	title				Abbreviation
Dear of Studies Informatik (Computer Science)         Institute of Computer Science           ECTS         Method of grading         Only after succ. compl. of module(s)           5         numerical grade            Duration         Module level         Other prerequisites         Institute of Computer Science.           Contents         Contents         Contents         Computer science.         Institute of transfer them to related topics.           Selected topics.         Intended learning outcomes         Intended topics.         Computer science and to transfer them to related topics.           Courses         (type, number of weekly contact hours, language — if other than German)         V (4) + 0 (2)           Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         written examination of one candidate each (approx. 60 to 20 minutes).           If announced by the lecturer at the beginning of the course, the written examination in groups of 2 candidates (approx. 35 minutes per candidate).         Language of assessment: German and/or English creditable for bonus           Additional information         Feaching cycle         Second candidate each (approx. 50 teaching-degree programmes)           Second candidate each (approx. 50 teaching-degree programmes)         Second candidate each (approx. 50 teaching-degree programmes)           Additional information         <	Selecte	d Basi	cs of Computer Science			10-l-Gl-152-m01
Method of grading       Only after succ. compl. of module(s)         5       numerical grade	Module	coord	inator		Module offered by	
5       numerical grade          Duration       Module level       Other prerequisites         1 semester       undergraduate          Contents       Selected topics in computer science.       Intended learning outcomes         The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.       Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Û (2)       Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         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       Allocation of places                 Mokload	Dean of	f Studie	es Informatik (Computer :	Science)	Institute of Comput	er Science
Duration         Module level         Other prerequisites           1 semester         undergraduate            Contents         Selected topics in computer science.         Intended learning outcomes           Intended learning outcomes         Intended topics.         Intended topics.           Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Ú (2)           Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)           written examination (approx. 6o 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. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 c	ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
1 semester       undergraduate          Contents         Selected topics in computer science.         Intended learning outcomes         The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.         Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Û (2)       Wethod of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         written examination (approx. 6o 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. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) ereclaidate for bonus         Allocation of places	5	nume	rical grade			
Contents         Selected topics in computer science.         Intended learning outcomes         The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.         Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Û (2)         Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         written examination (approx. 6o 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         Allocation of places            Workload         150 h         Teaching cycle            Referred to in LPO I (examination regulations for teaching-degree programmes)            Module appears in	Duratio	n	Module level	Other prerequisites		
Selected topics in computer science. Intended learning outcomes The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics. Courses (type, number of weekly contact hours, language — if other than German) V (4) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places Motkload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	1 semes	ster	undergraduate			
Intended learning outcomes         The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.         Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Ü (2)         Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         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. 20 minutes) or an oral examination in groups of 2 candidates (approx. 10 minutes).         Language of assessment: German and/or English creditable for bonus         Allocation of places               Morkload         150 h         Teaching cycle            Referred to in LPO I (examination regulations for teaching-degree programmes)            Module appears in	Content	ts				
Intended learning outcomes         The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics.         Courses (type, number of weekly contact hours, language — if other than German)         V (4) + Ü (2)         Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         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. 20 minutes) or an oral examination in groups of 2 candidates (approx. 10 minutes).         Language of assessment: German and/or English creditable for bonus         Allocation of places               Morkload         150 h         Teaching cycle            Referred to in LPO I (examination regulations for teaching-degree programmes)            Module appears in	Selecte	d topic	s in computer science.			
The students are able to understand solutions to fundamental problems in computer science and to transfer them to related topics. Courses (type, number of weekly contact hours, language — if other than German) V (4) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places Additional information Workload 150 h Teaching cycle Referred to in LPO 1 (examination regulations for teaching-degree programmes) Module appears in			· · · · · · · · · · · · · · · · · · ·			
Courses (type, number of weekly contact hours, language — if other than German) V (4) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places  Additional information  Workload 150 h Teaching cycle  Referred to in LPO I (examination regulations for teaching-degree programmes)  Module appears in	The stu	dents a	are able to understand so	olutions to fundamen	tal problems in com	puter science and to transfer
V (4) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places Additional information Workload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Courses	s (type	number of weekly conta	ct hours, language —	· if other than Germa	n)
Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places  Additional information  Workload 150 h Teaching cycle  Referred to in LPO I (examination regulations for teaching-degree programmes)  Module appears in			,			
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Additional information Workload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	lf annou examin prox. 15 Langua	unced ation o ; minut ge of a	by the lecturer at the beg of one candidate each (ap res per candidate). ssessment: German and,	inning of the course, oprox. 20 minutes) or		
 Workload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Allocati	ion of p	olaces			
 Workload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in						
 Workload 150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Additio	nal inf	ormation			
150 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in						
Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Workloa	ad				
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	150 h					
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Teachin	ng cycl	e			
 Module appears in		<u> </u>				
 Module appears in	Referre	d to in	IPOL (examination regu	lations for teaching.	legree programmes)	
	Kerene					
Bachelor's degree (1 major) Computer Science (2015)	Module	appea	ırs in			
Bashelor a degree (1 major) comparer brieffee (2017)				Science (2015)		
Bachelor's degree (1 major) Computer Science (2017)						
Bachelor's degree (1 major) Computer Science (2019)						
Module studies (Bachelor) Computer Science (2019)						
Bachelor's degree (1 major) Computer Science und Sustainability (2021)						
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022)	Bachelo	or's deg	gree (1 major) Artificial In	telligence and Data S	icience (2022)	
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)	Bachelo	or's deg	gree (1 major) Artificial In	telligence and Data S	science (2023)	
Bachelor's degree (1 major) Mathematics (2023)				-		
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)	Bachelo	or's de	gree (1 major) Artificial In	telligence and Data S	science (2024)	

Module	e title				Abbreviation	
Practical course in hardware 10-I-HWP-152-m01						
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10		successfully completed				
Duratio	n	Module level	Other prerequisites			
1 seme		undergraduate				
Conten	ts	5				
		riments on hardware as croprocessor.	pects, for example in o	communication tech	nology, robots or the	e structure of
Intende	ed lear	ning outcomes				
The stu	idents a ons, to i	are able to independent independently search fo				
Course	<b>s</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	n)	
P (6)						
		essment (type, scope, l on on whether module			tion offered — if not	every seme-
		pletion of approx. 3 to 1 inutes per project)	o project assignments	s (approx. 250 hours	total) and presentat	ion of results
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Additio	mat min					
 Worklo	ad		_			
300 h						
Teachi	ng cycl	۵				
reaciiii	is cycl					
 Referre	d to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
§ 22						
Module						
		gree (1 major) Computer	Science (2015)			
		gree (1 major) Mathema	-			
		gree (1 major) Mathema gree (1 major) Computat	-	<b>715</b> )		
		gree (1 major) Aerospac		-		
		mination for the teaching	•	-	2015)	
		ning degree Gymnasium		•	-	016)
		y course MINT Teacher I				010)
		•			D) (2010)	
	Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Computer Science (2017)					
		gree (1 major) Computer gree (1 major) Computer				
		es (Bachelor) Computer	-			
		ning degree Gymnasium		ion PLUS Flite Netwo	ork Bayaria (FNR) (a	020)
		y course MINT Teacher I				020)
		gree (1 major) Aerospac				
		gree (1 major) Aerospaci gree (1 major) Computer				
				-		
Bachelor's	with 1 ma	jor Computer Science (2015)	-	g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 46 / 114

Bachelor's degree (1 major) Mathematics (2023)

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Module title Abbreviation					
Information Transmission 10-I-IÜ-152-m01					
Module coordinator Module offered by					
holder of the Chair of Computer Science III Institute of Computer Science					
ECTS Method of grading Only after succ. compl. of module(s)					
10 numerical grade					
Duration Module level Other prerequisites					
1 semester undergraduate					
Contents					
Introduction to probability calculus, coding theory, coding for fault detection and fault correction, informati theory, spectrum and Fourier transform, modulation technique, structure of digital transmission systems, in duction to the structure of computer networks, communication protocols.					
Intended learning outcomes					
The students possess a technical, theoretical and practical knowledge of the structure of systems for inforr transmission, a knowledge that is necessary to understand these systems.	nation				
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)					
V (4) + Ü (2)					
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every s ster, information on whether module can be chosen to earn a bonus)	eme-				
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 examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates prox. 15 minutes per candidate). creditable for bonus					
Allocation of places					
Additional information					
Workload					
300 h					
Teaching cycle					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)					
§ 22 II Nr. 3 b)					
Module appears in					
Bachelor's degree (1 major) Computer Science (2015)					
Bachelor's degree (1 major) Mathematics (2015)					
Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Aerospace Computer Science (2015)					
First state examination for the teaching degree Gymnasium Computer Science (2015)					
Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)					
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)					
Bachelor's degree (1 major) Aerospace Computer Science (2017)					
Bachelor's degree (1 major) Computer Science (2017)					

Module					Abbreviation
Crypto	graphy	and Data Security			10-l-KD-152-m01
Module	e coord	inator		Module offered by	
Dean o	of Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	1	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Conten	its				
RSA, Di	iffie-He		ser-Micali, digital sig	nature, challenge-re	oublic key cryptography systems, sponse methods, secret sharing,
Intende	ed lear	ning outcomes	,		
stems, wasser	Vernar r-Micali	n one-time pad, AES, per	fect security, public k nge-response metho	key cryptography, RS	private key cryptography sy- A, Diffie-Hellman, Elgamal, Gold- llionaire problem, secure circuit
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V (2) +	Ü (2)				
ster, in written	format exami	ion on whether module ca nation (approx. 60 to 120	an be chosen to earn minutes).	a bonus)	tion offered — if not every seme-
prox. 1	5 minut age of a	tes per candidate). ssessment: German and		an oral examination	in groups of 2 candidates (ap-
Allocat					
Additio	onal inf	ormation			
Worklo	ad				
150 h					
Teachi	ng cycl	e			
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
§ 22	§ 22 II Nr. 3 b)				
Module appears in					
Bachel Bachel First sta Master Supple	or's de or's de ate exa d's teacl ementa	gree (1 major) Computer 9 gree (1 major) Mathemati gree (1 major) Computatio mination for the teaching hing degree Gymnasium I ry course MINT Teacher Eo gree (1 major) Computer 9	cs (2015) onal Mathematics (20 g degree Gymnasium MINT Teacher Educati ducation PLUS, Elite I	Computer Science (2 ion PLUS, Elite Netwo	ork Bavaria (ENB) (2016)

Module				Abbreviation	
Compu	tational Complexity			10-I-KT-152-m01	
Module	e coordinator		Module offered by		
Dean o	f Studies Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS	Method of grading	Only after succ. con	npl. of module(s)		
5	numerical grade				
Duratio		Other prerequisites			
1 seme	ster undergraduate				
Conten	ts				
sumpti	exity measurements and classes on versus computation time, de P-NP problem, completeness pr	terminism versus ind	leterminism, hierarch	nical theorems, translation me-	
Intende	ed learning outcomes				
classes determ	idents possess a fundamental a s, general relationships betweer inism versus indeterminism, hi ms, Turing reduction, interactive	n space and time clas erarchical theorems, t	ses, memory consum	nption versus computation time,	
Course	<b>s</b> (type, number of weekly conta	ict hours, language —	- if other than Germa	n)	
V (2) +	Ü (2)				
ster, in written If anno examin prox. 19 Langua credita Allocat  Additio	V (2) + Ü (2) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) written examination (approx. 6o 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 (ap- prox. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus Allocation of places  Morkload				
	ng cycle				
Referre	d to in LPO I (examination regu	lations for teaching-	degree programmes)		
	Referred to in LPO I (examination regulations for teaching-degree programmes) § 22 II Nr. 3 b)				
	Module appears in				
Bachel Bachel Bachel First sta Master Supple	or's degree (1 major) Computer or's degree (1 major) Mathemati or's degree (1 major) Computati ate examination for the teaching 's teaching degree Gymnasium mentary course MINT Teacher E or's degree (1 major) Computer	ics (2015) onal Mathematics (20 g degree Gymnasium MINT Teacher Educat ducation PLUS, Elite I	Computer Science (2 ion PLUS, Elite Netwo	ork Bavaria (ENB) (2016)	

Module title Abbreviation						
Logic f	Logic for informatics 10-I-LOG-152-m01					
Module	e coord	inator		Module offered by		
		es Informatik (Compute	r Science)	Institute of Computer Science		
ECTS		od of grading	Only after succ. con	· · · · ·		
5	· · · · · · · · · · · · · · · · · · ·	rical grade				
Duratio	<u> </u>	Module level	Other prerequisites			
1 seme		undergraduate				
Conten	its	-	_			
		mantics of propositiona ets, syntax and semant		nd normal forms, Ho	rn formulas, SAT, res	solution, infi-
Intend	ed learr	ning outcomes				
		are proficient in the follo Horn formulas, SAT, res				
		, number of weekly cont		•	•	
V (2) +					,	
		essment (type, scope,	language — if other th	an German, examina	tion offered — if not	every seme-
		on on whether module				
		nation (approx. 60 to 12 by the lecturer at the be		the written examination	tion may be replace	d by an oral
		f one candidate each (a				
		es per candidate).			0 - 1	
		ssessment: German and	d/or English			
	ble for		_			
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
§ 22	Nr. 3 b)					
Module	e appea	irs in				
Bachel	or's deg	gree (1 major) Compute	r Science (2015)			
	-	gree (1 major) Mathema				
		gree (1 major) Computa		-	,	
		mination for the teachir			-	
	Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)					
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Bachelor's degree (1 major) Computer Science (2017)						
		gree (1 major) Computer				
		ning degree Gymnasium		ion PLUS, Elite Netwo	ork Bavaria (ENB) (2	020)
		y course MINT Teacher				
		gree (1 major) Aerospac				
Bachel	or's deg	gree (1 major) Compute	r Science und Sustaina	ability (2021)		
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informati		page 51 / 114

Bachelor's degree (1 major) Mathematics (2023)

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Games Engineering (2025)

Module	e title				Abbreviation	
Object oriented Programming 10-I-OOP-152-m01						
Module	e coord	nator		Module offered by		
Dean o	f Studie	es Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS	·	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	i		
1 seme	ster	undergraduate				
Conten	ts					
Polymo ment.	orphism	, generic programming,	meta programming, v	veb programming, te	mplates, document	manage-
Intende	ed learr	ing outcomes				
The stu their pr		are proficient in the diffe use.	erent paradigms of ob	ject-oriented prograr	nming and have exp	erience in
Course	<b>s</b> (type,	number of weekly cont	act hours, language –	- if other than Germa	n)	
V (2) +		,				
		essment (type, scope, l	anguage — if other th	an German, examina	tion offered — if not	every seme-
ster, in	formati	on on whether module	can be chosen to earn			
		nation (approx. 60 to 12 by the lecturer at the be		the written examine	tion may be replaced	d by an oral
		f one candidate each (a				
		es per candidate).	pp: 0// _0			
_	-	ssessment: German and	l/or English			
credita	ble for	bonus				
Allocat	ion of p	laces				
Additio	onal info	ormation				
Worklo	ad					
150 h						
Teachi	ng cycle	9				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
§ 22	Nr. 3 b)					
Module	e appea	rs in				
Bachel	or's deg	gree (1 major) Computer	Science (2015)			
	-	gree (1 major) Mathema	_			
		gree (1 major) Business				
	-	gree (1 major) Computat		-		
	Bachelor's degree (1 major) Aerospace Computer Science (2015)					
		mination for the teachir		Computer Science (2	2015)	
	-	ee (1 major) Physics (20 ee (1 major) Nanostructi				
	-	gree (1 major) Business				
	-	ing degree Gymnasium	•		ork Bavaria (FNB) (วง	016)
		y course MINT Teacher				- /
		, gree (1 major) Business			-	
Bachelor's	with 1 mai	or Computer Science (2015)	IMU Würzburs	g ● generated 18-Apr-2025 ● e	xam. reg.	page 53 / 114
				Bachelor (180 ECTS) Informati	-	1.0- 5574

In Programming         In Programming           Module circle is informatik (Computer Science)           Institute of Computer Science           Computer Science)           Institute of Computer Science           Only after succ. comp.I. of module(s)           Computer Science           Only after succ. comp.I. of module(s)           Contents           Undergraduate           Contents	Module					Abbreviation
Deam of Studies Informatik (Computer Science)         Institute of Computer Science           ECTS         Method of grading         Only after succ. compl. of module(s)           10         (not) successfully completed            Duration         Module level         Other prerequisites           undergraduate             Contents           The programming language Java. Independent creation of small to middle-sized, high-quality Java programs.           Intended learning outcomes           The students are able to independently develop small to middle-sized, high-quality Java programs.           Courses (type, number of weekly contact hours, language – if other than German)           P (6)						10-I-PP-152-m01
ECTS         Metion for grading         Only after succ. compl. of module(s)           10         (not) successfully completed            Duration         Module level         Other prerequisites           11         (motigraduate)            Contents             Contents             Contents             Contents             Contents             Contents             The students are able to independently develop small to middle-sized, high-quality Java programs.            Courses (type, number of weekly contact hours, language – if other than German)         P           P (6)	Module	e coord	inator		Module offered by	
10       (not) successfully completed	Dean o	f Studi	es Informatik (Computer	Science)	Institute of Comput	er Science
Duration         Module levet         Other prerequisites           undergraduate            Contents           The programming language Java. Independent creation of small to middle-sized, high-quality Java programs.           Intended learning outcomes           The students are able to independently develop small to middle-sized, high-quality Java programs.           Courses (type, number of weekly contact hours, language – if other than German)           P (6)           Method of assessment (type, scope, language – if other than German, examination offered – if not every seme- ster, information on whether module can be chosen to eam a bonus)           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).           Allocation of places                 Workload           300 h           Teaching cycle           Teaching cycle: every semester           Referred to in LPO1 (examination regulations for teaching-degree programmes)           § 49 1Nr. 10           Module appears in           Bachelor's degree (1 major) Computer Science (2015)           Bachelor's degree (1 major) Computer Science (2015)	ECTS			Only after succ. con	npl. of module(s)	
undergraduate       -         Contents       -         The programming language Java. Independent creation of small to middle-sized, high-quality Java programs.         Intendel learning outcomes         The students are able to independently develop small to middle-sized, high-quality Java programs.         Courses (type, number of weekly contact hours, language — if other than German)         P (6)         Method of assessment (type, scope, language — if other than German, examination offered — if not every seme-ster, information on whether module can be chosen to earn a bonus)         written examination (approx. 60 to 120 minutes).         If anounced 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. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 20 minutes) or an oral examination for more candidate each (approx. 20 minutes) or an oral examination for more scandidate each (approx. 20 minutes) or an oral examination for more scandidate each (approx. 20 minutes) or an oral examination for the candidate each (approx. 20 minutes) or an oral examination for the candidate each (approx. 20 minutes) or an oral examination for the candidate each (approx. 20 minutes) or an oral examination for the canding the course, the written examination for the canding the course, the written examination for the canding the course, the written examination for the c	10	(not) s	successfully completed			
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Intended learning outcomes         The students are able to independently develop small to middle-sized, high-quality Java programs.         Courses (type, number of weekly contact hours, language — if other than German)         P (6)         Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)         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 (ap- prox. 15 minutes per candidate).         Allocation of places               Morkload         300 h            Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49 I Nr. 1 c)         § 69 I Nr. 1 d)         Module appears in         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Atompatica (2015)         Bachelor's degree (1 major) Acrospace Computer Science (2015)         Bachelor's degree (1 maj	Conten	ts				
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Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)         written examination (approx. 6o 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. 2o minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).         Allocation of places            Additional information            Workload         300 h         Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49   Nr. 1 c)         § 69   Nr. 1 c)         § 69   Nr. 1 c)         So b         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)         First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Gymnasium Computer Science (2015)         Master's degree (1 major) Functional Materials (2020)	Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
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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).          Allocation of places            Additional information            Workload         300 h         Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49 l Nr. 1 c)         § 69 l Nr. 1 d)         Module appears in         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Athematics (2015)         Bachelor's degree (1 major) Athematics (2015)         Bachelor's degree (1 major) Computational Mathematics (2015)         Bachelor's degree (1 major) Computer Science (2015)						
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Allocation of places            Additional information            Workload         300 h         Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49   Nr. 1 c)         § 69   Nr. 1 d)         Module appears in         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Human-Computer Systems (2015)         Bachelor's degree (1 major) Computational Mathematics (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)         First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Gymnasium Computer Science (2015)         Master's degree (1 major) Functional Materials (2016)         Bachelor's degree (1 major) Functional Materials (2016)         Bachelor's degree (1 major) Functional Materials (2016)         Bachelor's degree (1 major) Functional Materials (2022)						
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Workload         300 h         Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49   Nr. 1 c)         § 69   Nr. 1 d)         Module appears in         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Human-Computer Systems (2015)         Bachelor's degree (1 major) Computational Mathematics (2015)         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)         First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Gymnasium Computer Science (2015)         Master's degree (1 major) Functional Materials (2016)         Bachelor's degree (1 major) Computer Science (2017)         Master's degree (1 major) Functional Materials (2022)	Allocat	ion of p	olaces			
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300 h         Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49   Nr. 1 c)       §         § 69   Nr. 1 d)       Module appears in         Bachelor's degree (1 major) Computer Science (2015)       Bachelor's degree (1 major) Mathematics (2015)         Bachelor's degree (1 major) Human-Computer Systems (2015)       Bachelor's degree (1 major) Computational Mathematics (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)       First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Gymnasium Computer Science (2015)       First state examination for the teaching degree Gymnasium Computer Science (2015)         Master's degree (1 major) Functional Materials (2016)       Bachelor's degree (1 major) Functional Materials (2016)						
Teaching cycle         Teaching cycle: every semester         Referred to in LPO I (examination regulations for teaching-degree programmes)         § 49 l Nr. 1 c)         § 69 l Nr. 1 d)         Module appears in         Bachelor's degree (1 major) Computer Science (2015)         Bachelor's degree (1 major) Mathematics (2015)         Bachelor's degree (1 major) Computer Systems (2015)         Bachelor's degree (1 major) Computational Mathematics (2015)         Bachelor's degree (1 major) Aerospace Computer Science (2015)         First state examination for the teaching degree Realschule Computer Science (2015)         First state examination for the teaching degree Gymnasium Computer Science (2015)         Master's degree (1 major) Functional Materials (2016)         Bachelor's degree (1 major) Functional Materials (2017)         Master's degree (1 major) Functional Materials (2022)	Worklo	ad				
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<ul> <li>§ 69   Nr. 1 d)</li> <li>Module appears in</li> <li>Bachelor's degree (1 major) Computer Science (2015)</li> <li>Bachelor's degree (1 major) Mathematics (2015)</li> <li>Bachelor's degree (1 major) Human-Computer Systems (2015)</li> <li>Bachelor's degree (1 major) Computational Mathematics (2015)</li> <li>Bachelor's degree (1 major) Aerospace Computer Science (2015)</li> <li>First state examination for the teaching degree Realschule Computer Science (2015)</li> <li>First state examination for the teaching degree Gymnasium Computer Science (2015)</li> <li>Master's degree (1 major) Functional Materials (2016)</li> <li>Bachelor's degree (1 major) Functional Materials (2022)</li> </ul>				lations for teaching-o	degree programmes)	
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Master's degree (1 major) Functional Materials (2022)		-				
	Master	's degr	ee (1 major) Functional M	aterials (2025)		

			Abbreviation	
Project Presentation 10-I-PV-152-m01				
linator		Module offered by		
ies Informatik (Computer S	Science)	Institute of Compute	er Science	
od of grading	Only after succ. com	pl. of module(s)		
erical grade				
Module level	Other prerequisites			
undergraduate				
laypersons with a knowle	dge of computer scie	nce at a trade fair. Th	ne project, which may also be	
ning outcomes				
are able to present a proj	ect they developed a	nd to create the requ	iired media.	
e, number of weekly conta	ct hours, language —	if other than Germa	n)	
			tion offered — if not every seme-	
er science at a trade fair a	s well as discussion			
places				
formation				
le				
LPOI (examination regu	lations for teaching-c	legree programmes)		
)				
ars in				
amination for the teaching hing degree Gymnasium / ry course MINT Teacher Ed egree (1 major) Computer S hing degree Gymnasium / ry course MINT Teacher Ed egree (1 major) Artificial In egree (1 major) Artificial In egree (1 major) Artificial In hing degree Gymnasium /	degree Gymnasium MINT Teacher Educati ducation PLUS, Elite N Science (2017) MINT Teacher Educati ducation PLUS, Elite N telligence and Data S telligence and Data S MINT Teacher Educati	on PLUS, Elite Netwo Network Bavaria (ENF on PLUS, Elite Netwo Network Bavaria (ENF cience (2022) ccience (2023) ccience (2024) on PLUS, Elite Netwo	ork Bavaria (ENB) (2016) 3) (2016) ork Bavaria (ENB) (2020) 3) (2020) ork Bavaria (ENB) (2025)	
	dinator         ies Informatik (Computer S         od of grading         erical grade         Module level         undergraduate         of a project developed by laypersons with a knowle- ress, is presented with the raing outcomes         are able to present a proje- e, number of weekly conta         sessment (type, scope, la ion on whether module ca of a project developed by er science at a trade fair a assessment: German and/ places         formation         le         ars in         egree (1 major) Computer S amination for the teaching thing degree Gymnasium I ry course MINT Teacher Ec egree (1 major) Artificial In egree (1 major) Artificial In	Jinator         ies Informatik (Computer Science)         od of grading       Only after succ. computer sciencal grade         indergraduate          Module level       Other prerequisites         undergraduate          of a project developed by the student (e. g. Backard and and and and and and and and and an	Imator       Module offered by         ies Informatik (Computer Science)       Institute of Compute         od of grading       Only after succ. compl. of module(s)         prical grade          Module level       Other prerequisites         undergraduate          of a project developed by the student (e. g. Bachelor's thesis, softv         laypersons with a knowledge of computer science at a trade fair. Thess, is presented with the help of a poster, a short talk and optionaring outcomes         are able to present a project they developed and to create the reques, number of weekly contact hours, language — if other than German, examination on whether module can be chosen to earn a bonus)         of a project developed by the candidate analogous to a presentation erscience at a trade fair as well as discussion (approx. 10 to 15 min assessment: German and/or English         places	

Modul	e title				Abbreviation		
Computer Architecture 10-I-RAK-152-mo1							
Module coordinator Module of				Module offered by	offered by		
Dean c		es Informatik (Compute	er Science)	Institute of Comput	er Science		
ECTS		d of grading	Only after succ. con	npl. of module(s)			
5	· · · · ·	ical grade					
Duratio		Module level	Other prerequisites				
1 seme		undergraduate					
Instruc	tion set	architectures, comma ector processors, mult	nd processing through i-core processors.	pipelining, statical a	and dynamic instruct	tion schedu-	
		ing outcomes	<u> </u>				
The stu	udents r		ant techniques to desi	gn fast computers as	s well as their interac	ction with	
		· ·	tact hours, language –	if other than Corma	n)		
V (2) +		number of weekly con			iii <i>)</i>		
Metho	d of ass		language — if other th		tion offered — if not	every seme-	
			can be chosen to earn	a bonus)			
lf anno examir prox. 1 Langua	ounced l nation o 5 minut	f one candidate each ( es per candidate). ssessment: German ar	eginning of the course, approx. 20 minutes) or				
Alloca	tion of p	laces					
Additio	onal info	ormation					
Worklo	oad						
150 h							
Teachi	ng cycl	9					
 Referre	ed to in	<b>LPO I</b> (examination re-	gulations for teaching-	degree programmes)			
§ 22	Nr. 3 b)	Rechnerarchitektur					
-							
Module appears inBachelor's degree (1 major) Computer Science (2015)Bachelor's degree (1 major) Mathematics (2015)Bachelor's degree (1 major) Computational Mathematics (2015)Bachelor's degree (1 major) Aerospace Computer Science (2015)First state examination for the teaching degree Gymnasium Computer Science (2015)Master's degree (1 major) Physics (2016)Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)Bachelor's degree (1 major) Aerospace Computer Science (2017)Bachelor's degree (1 major) Computer Science (2019)Master's degree (1 major) Physics (2020)							
Bachelor's	with 1 maj	or Computer Science (2015)	-	5 ● generated 18-Apr-2025 ● e Bachelor (180 ECTS) Informat	-	page 56 / 114	

Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Master's degree (1 major) Physics International (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Master's degree (1 major) Physics International (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Games Engineering (2025)

Module title					Abbreviation		
Digital computer systems 10-I-RAL-152-m01							
Module coordinator Module offered by							
Dean c	of Studi	es Informatik (Compute	er Science)	Institute of Comput	er Science		
ECTS		od of grading	Only after succ. con				
10	1	rical grade					
Durati		Module level	Other prerequisites				
1 seme		undergraduate					
Conter	nts						
		o digital technologies, l re description language					
Intend	ed lear	ning outcomes					
ming o	of easy r	oossess a knowledge o nicroprocessors as wel al systems.					
Course	<b>es</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)		
V (4) +	Ü (2)						
		essment (type, scope, on on whether module			tion offered — if not	every seme-	
prox. 1 credita			approx. 20 minutes) or	an oral examination	i in groups of 2 cand	idates (ap-	
Additio	onal inf	ormation					
Worklo	oad						
300 h							
Teachi	ng cycl	е					
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)			
Modul	e appea	irs in					
Bachel Bachel Bachel Bachel Bachel Bachel Modul Master Supple	Module appears in Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Module studies (Bachelor) Orientierungsstudien (2020) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Bachelor's degree (1 major) Business Information Systems (2020)						
Bachelor's	with 1 ma	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 58 / 114	

Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

Module title				Abbreviation			
Compu	Computer Networks and Communication Systems 10-I-RK-152-mo1						
Module	e coord	inator		Module offered by			
holder	of the (	Chair of Computer Scienc	e III	Institute of Comput	er Science		
ECTS	1	od of grading	Only after succ. con	pl. of module(s)			
8		rical grade					
Duratio		Module level	Other prerequisites				
1 seme		undergraduate					
Proper of com and str chies, and IS	<b>Contents</b> Properties of computer and communication systems: data traffic in distributed systems. Performance analysis of computer networks and communication systems: problem statement and introduction to method architecture and structure of computer networks: network structure, network access, access methods, digital transfer hierarchies, dataflow control and traffic control, transfer network. Communication protocols: fundamental principles and ISO architecture models. Internet: structure and basic mechanism, TCP/IP, routing, network management. Mobile communication networks: fundamental concepts, GSM, UMTS. Future communication systems and net-						
Intend	ed lear	ning outcomes					
		oossess an intricate knov damental principles to ra		re of computer netwo	orks and communica	tion systems	
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	n)		
V (4) +	Ü (2)						
		s <b>essment</b> (type, scope, la on on whether module c			tion offered — if not	every seme-	
lf anno examir prox. 1 Langua	unced nation c 5 minut	nation (approx. 60 to 120 by the lecturer at the beg of one candidate each (ap es per candidate). ssessment: German and bonus	inning of the course, oprox. 20 minutes) or				
Allocat	ion of p	olaces	-				
	· · · ·						
Additio	onal inf	ormation					
Worklo	ad		-				
240 h							
Teachi	ng cycl	e					
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)			
§ 22	Nr. 3 b)						
Module	e appea	irs in					
Bachel Bachel Bachel First st Master Supple Bachel	or's des or's des or's des ate exa de exa 's teach ementas or's des	gree (1 major) Computer gree (1 major) Mathemati gree (1 major) Computati gree (1 major) Aerospace mination for the teaching ning degree Gymnasium y course MINT Teacher E gree (1 major) Aerospace for Computer Science (2015)	ics (2015) onal Mathematics (20 Computer Science (2 g degree Gymnasium MINT Teacher Educat ducation PLUS, Elite Computer Science (2	2015) Computer Science (2 ion PLUS, Elite Netwo Network Bavaria (EN	ork Bavaria (ENB) (20 B) (2016)	016) page 60 / 114	
				Bachelor (180 ECTS) Informati			



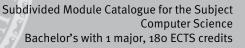
Bachelor's degree (1 major) Computer Science (2017)

Module	e title			Abbreviation		
Semina	ar - Selected Topics in Comp	uter Science 1		10-I-SEM1-152-m01		
Module	e coordinator		Module offered by			
	f Studies Informatik (Compu	iter Science)	Institute of Comput	er Science		
ECTS	Method of grading	Only after succ. cor				
5	numerical grade					
Duratio	on Module level	Other prerequisites	5			
1 seme	ster undergraduate					
Conten	its	<b>I</b>				
ware w rent are	ndent review of a current to ith written and oral presenta eas (this usually means that	ation. The topics in modu	ules 10-I-SEM1 and 10			
Intend	ed learning outcomes					
	idents are able to independ s in written form and to oral			ce, to summarise th	e main	
Course	<b>s</b> (type, number of weekly c	ontact hours, language -	– if other than Germa	n)		
S (2)						
	<b>d of assessment</b> (type, scop formation on whether modu			tion offered — if not	every seme-	
	elaboration (approx. 10 to 1		on (approx. 30 to 45 i	minutes) with subse	quent dis-	
	n on a topic from the field of					
	age of assessment: German	and/or English				
Allocat	ion of places					
Additio	onal information					
 Worklo						
150 h						
Teachi	ng cycle					
	ed to in LPO I (examination	regulations for teaching-	degree programmes)			
	Nr. 3 b)					
	e appears in					
	or's degree (1 major) Compu					
	or's degree (1 major) Busine	•	-			
	ate examination for the teac or's degree (1 major) Busine	,	•	2015)		
	's teaching degree Gymnasi			ork Bayaria (FNB) (2)	<b>D16</b> )	
	,				510)	
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016) Bachelor's degree (1 major) Computer Science (2017)						
Duciiel	Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019)					
	Module studies (Bachelor) Computer Science (2019)					
Bachel Module	e studies (Bachelor) Comput					
Bachel Module Bachel	e studies (Bachelor) Comput or's degree (1 major) Busine	ss Information Systems				
Bachel Module Bachel Master	e studies (Bachelor) Comput or's degree (1 major) Busine 's teaching degree Gymnasi	ss Information Systems um MINT Teacher Educat	tion PLUS, Elite Netwo		020)	
Bachel Module Bachel Master Supple	e studies (Bachelor) Comput or's degree (1 major) Busine 's teaching degree Gymnasi mentary course MINT Teach	ss Information Systems um MINT Teacher Educat er Education PLUS, Elite	tion PLUS, Elite Netwo Network Bavaria (EN		020)	
Bachel Module Bachel Master Supple Bachel	e studies (Bachelor) Comput or's degree (1 major) Busine 's teaching degree Gymnasi mentary course MINT Teach or's degree (1 major) Busine	ss Information Systems um MINT Teacher Educat er Education PLUS, Elite ss Information Systems	tion PLUS, Elite Netwo Network Bavaria (EN (2020)		020)	
Bachel Module Bachel Master Supple Bachel Bachel	e studies (Bachelor) Comput or's degree (1 major) Busine 's teaching degree Gymnasi mentary course MINT Teach	ss Information Systems um MINT Teacher Educat er Education PLUS, Elite ss Information Systems iter Science und Sustain	tion PLUS, Elite Netwo Network Bavaria (EN (2020)	B) (2020)	D20)	

Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Business Information Systems (2024) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025)

	e title				Abbreviation
Semina	ar - Sel	ected Topics in Compute	er Science 2		10-l-SEM2-152-m01
Module	e coord	inator		Module offered by	<u> </u>
		es Informatik (Compute	r Science)	Institute of Comput	er Science
ECTS	-	od of grading	Only after succ. con		
5		rical grade			
) Duratio		Module level	Other prorequisites		
1 seme:		undergraduate	Other prerequisites		
		undergraduate	]		
Conten					
					ture and, where applicable, sof
					o-I-SEM2 must come from diffe-
		s usually means that th	ey are assigned by dir	rerent lecturers).	
	-	ning outcomes			
					ice, to summarise the main
· ·		tten form and to orally p			
Course	<b>s</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
S (2)					
Metho	d of ass	sessment (type, scope, l	anguage — if other th	an German, examina	tion offered — if not every sem
ster, in	format	ion on whether module	can be chosen to earn	a bonus)	
Wrap-u	p repo	rt on tutoring activities (	5 to 10 pages)		
		ssessment: German and			
Allocat	ion of	olaces			
Additio	nalinf	ormation			
Auditio	inat iiii				
			_		
Worklo	ad		_		
150 h					
Teachir	ng cycl	е			
Referre	d to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
Module	2000	are in			
			(Science (2017)		
		gree (1 major) Computer gree (1 major) Business		(2015)	
		gree (1 major) Business gree (1 major) Business	•	-	
		gree (1 major) Business gree (1 major) Computer	•	(2010)	
		gree (1 major) Computer gree (1 major) Computer			
		es (Bachelor) Computer	-		
		gree (1 major) Business	-	(2010)	
			Information Systems		
	$m \in m$			20201	
Bachel					
Bachelo Bachelo	or's de	gree (1 major) Business gree (1 major) Business gree (1 major) Business	Information Systems	(2021)	

Module title					Abbreviation		
Software Technology 10-I-ST-152-m01							
Module coordinator				Module offered by			
Dean o	of Studie	es Informatik (Compute	er Science)	Institute of Comput	er Science		
ECTS		d of grading	Only after succ. con	npl. of module(s)			
10	nume	ical grade					
Duratio	· · · · · · · · · · · · · · · · · · ·	Module level	Other prerequisites				
1 seme		undergraduate					
Conter							
bases	and obj	ect-relational mapping	nt with UML, developm , foundations of web p re development, projec	rogramming (HTML, )	XML), software deve		
Intend	ed learr	ning outcomes					
	ıdents p re syste		theoretical and praction	cal knowledge on the	e design and develop	oment of	
Course	<b>s</b> (type,	number of weekly con	tact hours, language –	- if other than Germa	n)		
V (4) +	Ü (2)						
			language — if other th can be chosen to earn		tion offered — if not	every seme-	
lf anno examir prox. 1 credita	ounced l nation o 5 minut Ible for	f one candidate each ( es per candidate). bonus	eginning of the course, approx. 20 minutes) or				
Allocat	tion of p	olaces					
Additio	onal info	ormation					
Worklo	ad						
300 h							
Teachi	ng cycl	2					
Teachi	ng cycle	e: only in summer seme	ester				
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)			
§ 49   1 § 69   1							
Modul	e appea	rs in					
Bachel	or's deg	gree (1 major) Compute gree (1 major) Mathema					
	-	gree (1 major) Economa	-				
	-		Computer Systems (201	-			
	Bachelor's degree (1 major) Computational Mathematics (2015)						
	Bachelor's degree (1 major) Aerospace Computer Science (2015) First state examination for the teaching degree Realschule Computer Science (2015)						
			ng degree Gymnasium	•			
			Information Systems	•			
	-		ce Computer Science (2				
	-	gree (1 major) Economa					
Bachelor's	with 1 maj	or Computer Science (2015)		; • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 65 / 114	



Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major) Business Information Systems (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024)

Module	e title				Abbreviation
Practic	al cour	se in software			10-I-SWP-152-m01
Module	a coord	inator		Module offered by	
		es Informatik (Computer :	Science	Institute of Comput	ar Science
ECTS		od of grading	Only after succ. com	· · · ·	
10		successfully completed	10-I-PP, 10-I-ST		
Duratio	·	Module level	Other prerequisites		
1 seme		undergraduate	In addition, the know	wledge and skills ac	quired in module 10-I-ADS are le is therefore highly recommen-
Conten	ts				
cation tion an	of solut d deliv	ion components (e.g. UI ery of the runnable softw	ML) and milestones, u	user manual, prograi	uirements specifications, specifi- mming documentation, presenta-
		ning outcomes			
The stu small t		oossess the practical skil	ls for the design, dev	elopment and exect	ution of a software project in
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	- if other than Germa	an)
P (6)					
ster, in practic	formati al proje	on on whether module ca	an be chosen to earn r software project in	a bonus)	ntion offered — if not every seme-
Allocat		• =			
			,		
Additio	onal info	ormation			
Worklo	ad				
300 h					
Teachi	ng cycl	e			
			· · · · · · · · · · · · · · · · · · ·		
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
§691N	Nr. 1 d)				
Module	e appea	in and the second se			
Bachel Bachel First sta Bachel Bachel Bachel	or's de or's de ate exa or's de or's de or's de	gree (1 major) Computer 9 gree (1 major) Mathemati gree (1 major) Computation mination for the teaching gree (1 major) Computer 9 gree (1 major) Computer 9 gree (1 major) Computer 9 gree (1 major) Mathemati	cs (2015) onal Mathematics (20 g degree Gymnasium Science (2017) Science (2019) Science und Sustaina	Computer Science (2	2015)

Module	<u>e title</u>				Abbreviation
Tutorial Theoretical Informatics 10-I-TIT-152-m01					10-I-TIT-152-m01
Module	e coord	inator		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)	
5	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		, decidability, countabilit xt-sensitive languages, c	-		/e grammars, context-free lan- NP completeness.
Intende	ed lear	ning outcomes			
tability	, finite		enerative grammars,	context-free languag	computability, decidability, coun- ges, context-sensitive languages,
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
Ü (2)					
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
b) writt	en exa	of approx. 11 exercises w mination (approx. 180 to sessment to be selected b	240 minutes)	nents each (50% to l	pe completed correctly) or
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
150 h					
Teachi	ng cycl	e			
	3 - 9	-			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
§ 49   N § 69   N					
Module	e appea	urs in			
Bachel Bachel Bachel First sta First sta Master	or's des or's des or's des ate exa ate exa 's teacl	gree (1 major) Computer S gree (1 major) Mathemati gree (1 major) Computatio gree (1 major) Aerospace mination for the teaching mination for the teaching ning degree Gymnasium <i>I</i> gree (1 major) Aerospace	cs (2015) onal Mathematics (20 Computer Science (2 degree Realschule C degree Gymnasium WINT Teacher Educati	015) Computer Science (20 Computer Science (2 ion PLUS, Elite Netwo	2015)

Module title				Abbreviation			
Theoretical Informatics 10-I-TIV-152-m01							
Module	e coord	inator		Module offered by	<u> </u>		
Dean o	fStudie	es Informatik (Compute	er Science)	Institute of Comput	er Science		
ECTS		od of grading	Only after succ. con	· · · · · ·	· · · · ·		
5		rical grade		,			
Duratio	<u> </u>	Module level	Other prerequisites				
1 seme		undergraduate					
Conten	its						
		, decidability, countabi xt-sensitive languages,				t-free lan-	
Intende	ed learr	ning outcomes					
The stu tability comple	idents p , finite exity of	oossess a fundamental automata, regular sets, computations, P-NP pro	generative grammars, oblem, NP completene	context-free languages.	ges, context-sensitiv		
Course	<b>s</b> (type	number of weekly con	tact hours, language –	- if other than Germa	n)		
V (4)							
		essment (type, scope, on on whether module			tion offered — if not	every seme-	
lf anno examin prox. 1	unced l nation o	nation (approx. 60 to 12 by the lecturer at the be f one candidate each ( es per candidate). llaces	eginning of the course,				
Additio	onal info	ormation					
Worklo	ad						
150 h							
Teachi	ng cycl	9					
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)			
§ 49   N § 69   N							
Module	e appea	rs in					
		gree (1 major) Compute	r Science (2015)				
		gree (1 major) Mathema					
Bachel	or's deg	gree (1 major) Computa	tional Mathematics (20	015)			
		gree (1 major) Aerospac					
	First state examination for the teaching degree Realschule Computer Science (2015)						
		mination for the teachi		•	-		
		ning degree Gymnasiun			ork Bavaria (ENB) (20	016)	
	-	gree (1 major) Aerospac gree (1 major) Compute	•	.01/)			
		gree (1 major) Compute					
	-	ing degree Gymnasiun	-	ion PLUS. Elite Netwo	ork Bavaria (ENB) (20	020)	
		y course MINT Teacher				,	
Bachelor's	with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informati	-	page 69 / 114	

Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023)

Module	title		Abbreviation					
Tutor a	ctivity	1		10-I-TUT1-152-m01				
Module	coord	inator		Module offered by				
Dean of	fStudie	es Informatik (Computer S	Science)	Institute of Computer Science				
ECTS Method of grading		Only after succ. compl. of module(s)						
2 (not) successfully completed								
Duratio	n	Module level	Other prerequisites					
		undergraduate						
Contents								
Tutoring activities in the area of computer science.								
Intended learning outcomes								
Imparting knowledge and skills to students of computer science.								
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)								
Τ(2)								
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)								
Wrap-up report on tutoring activities (5 to 10 pages)								
Allocation of places								
Additio	nal inf	ormation						
Worklo	ad							
60 h								
Teaching cycle								
-								
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)				
§ 22    Nr. 2 f)								
§ 22 II Nr. 3 f)								
Module appears in								
Bachelor's degree (1 major) Computer Science (2015)								
First state examination for the teaching degree Realschule Computer Science (2015)								
First state examination for the teaching degree Gymnasium Computer Science (2015)								
Bachelor's degree (1 major) Computer Science (2017)								
Bachelor's degree (1 major) Computer Science (2019)								
Bachelor's degree (1 major) Computer Science und Sustainability (2021)								
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022)								
	Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)							
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)								

Module	title		Abbreviation					
Tutor a	ctivity	2			10-I-TUT2-152-m01			
Module	coord	inator		Module offered by				
Dean of	fStudie	es Informatik (Computer S	Science)	Institute of Computer Science				
ECTS	ECTS Method of grading		Only after succ. compl. of module(s)					
2 (not) successfully completed								
Duration		Module level	Other prerequisites					
undergraduate								
Contents								
Tutoring activities in the area of computer science.								
Intended learning outcomes								
Imparting knowledge and skills to students of computer science.								
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)								
Τ(2)								
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)								
Wrap-up report on tutoring activities (5 to 10 pages)								
Allocation of places								
Additional information								
Workload								
60 h								
Teaching cycle								
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)								
§ 22 II Nr. 2 f)								
§ 22    Nr. 3 f)								
Module appears in								
Bachelor's degree (1 major) Computer Science (2015)								
First state examination for the teaching degree Realschule Computer Science (2015)								
First state examination for the teaching degree Gymnasium Computer Science (2015)								
Bachelor's degree (1 major) Computer Science (2017)								
Bachelor's degree (1 major) Computer Science (2019)								
Bachelor's degree (1 major) Computer Science und Sustainability (2021)								
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023)								
Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024)								

Module	Module title Abbreviation				
Tutor a	ctivity 3			10-I-TUT3-152-m01	
Module	e coordinator		Module offered by		
Dean o	f Studies Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS	Method of grading	Only after succ. com	pl. of module(s)		
2	(not) successfully completed				
Duratio	on Module level	Other prerequisites			
	undergraduate				
Conten	ts				
Tutorin	g activities in the area of compu	iter science.			
Intende	ed learning outcomes				
Imparti	ng knowledge and skills to stud	lents of computer sci	ence.		
	<b>s</b> (type, number of weekly conta			n)	
T (2)					
ster, in	<b>d of assessment</b> (type, scope, la formation on whether module c p report on tutoring activities (s	an be chosen to earn		tion offered — if not every seme-	
	ion of places	to to pages)			
Allocal	ion of places				
Additio	nal information				
Worklo	ad				
60 h					
Teachi	ng cycle				
Referre	d to in LPO I (examination regu	llations for teaching-o	legree programmes)		
Module	e appears in				
Bachel	or's degree (1 major) Computer	Science (2015)			
	or's degree (1 major) Computer				
	or's degree (1 major) Computer	-			
	or's degree (1 major) Computer				
	or's degree (1 major) Artificial Ir	-			
	or's degree (1 major) Artificial Ir	•			
Bachel	or's degree (1 major) Artificial Ir	itelligence and Data S	Science (2024)		

Modul	e title				Abbreviation		
Knowl	edge-ba	sed Systems		_	10-I-WBS-152-m01		
Modul	e coord	inator		Module offered by			
		Chair of Computer Scie		Institute of Computer Science			
ECTS	1	od of grading		· · · · · · · · · · · · · · · · · · ·			
5	1	rical grade	Only after succ. compl. of module(s)				
Duration         Module level         Other prerequisites           1 semester         undergraduate							
Conter							
			knowledge managemer ng, guidance dialogue		ge representation, so	olving me-	
		ning outcomes	ing, gardance alatogae				
	_		d practical knowledge f	or the understanding	g and design of know	wledge-based	
			isation and have acqui			-	
Course	<b>es</b> (type,	, number of weekly cor	itact hours, language –	- if other than Germa	ın)		
V (2) +	Ü (2)						
			language — if other th		tion offered — if not	every seme-	
			can be chosen to earn	a bonus)			
		nation (approx. 60 to 1		the written evening	tion may be realized	d hu an aral	
			eginning of the course, approx. 20 minutes) or				
		es per candidate).				laates (ap	
		ssessment: German ar	ıd/or English				
credita	able for	bonus					
Alloca	tion of p	olaces					
Additio	onal info	ormation					
Worklo	oad						
150 h							
Teachi	ng cycl	e					
Referre	ed to in	LPOI (examination re	gulations for teaching-	degree programmes)			
§ 22	Nr. 3 b)						
Modul	e appea	irs in					
Bache	lor's de	gree (1 major) Compute	er Science (2015)				
Bache	lor's de	gree (1 major) Mathem	atics (2015)				
Bache	lor's de	gree (1 major) Business	Information Systems	(2015)			
Bache	lor's de	gree (1 major) Computa	ational Mathematics (2	015)			
			ce Computer Science (2	-			
			ng degree Gymnasium		2015)		
			Information Systems				
			n MINT Teacher Educat			016)	
		•	Education PLUS, Elite		В) (2016)		
			ce Computer Science (2	2017)			
		gree (1 major) Compute					
Басре	ior's deg	gree (1 major) Compute	er Science (2019)				
Bachelor's	s with 1 maj	or Computer Science (2015)		g • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat	-	page 74 / 114	



Bachelor's degree (1 major) Business Information Systems (2019) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Games Engineering (2025)

Ordina	e title				Abbreviation	
Ordinary Differential Equations for students of other subje				cts	10-M-DGLaf-152-m	01
Module	e coordinator			Module offered by		
	f Studies Mathematik (	Mathoma	tics)	Institute of Mathematics		
ECTS	Method of grading	(Mathema			natics	
ECTS     Method of grading     Only after succ. compl. of module(s)       10     numerical grade						
Duratio	<u> </u>		Other prerequisites	5		
1 seme	· · · · ·			•		
Conten	· · · · ·	I				
	ice and uniqueness the	orom. co	ntinuque denenden	a of colutions on ini	tial values, systems	of linear dif
	al equations; matrix ex					or linear un-
Intende	ed learning outcomes					
	ident is acquainted wit ons. He/she is able to a				heory of ordinary dif	ferential
Course	<b>s</b> (type, number of wee	ekly conta	ct hours, language -	– if other than Germa	an)	
V (4) +						
	d of assessment (type,	scope, la	nguage — if other th	an German. examina	ation offered — if not	everv seme-
	formation on whether r					· · · · · , · · · · · ·
a) writt	en examination (appro	x. 90 to 1	80 minutes, usually	chosen) or		
	examination of one car			-		
	examination in groups			per candidate)		
	age of assessment: Ger ble for bonus	man and/	or English			
Allocal	ion of places					
Additio	onal information					
Worklo	ad					
Worklo	ad					
300 h	ad ng cycle					
300 h						
300 h <b>Teachi</b> i		ition regu	lations for teaching-	degree programmes;	)	
300 h <b>Teachi</b> i	ng cycle	ition regu	lations for teaching-	degree programmes)	)	
300 h Teachin  Referre	ng cycle	ition regu	lations for teaching-	degree programmes)	)	
300 h Teachin  Referre  Module	ng cycle ed to in LPO I (examina e appears in			degree programmes	)	
300 h Teachin  Referre  Module Bachel	ng cycle ed to in LPO I (examina	omputer S	Science (2015)		)	
300 h Teachin  Referre  Module Bachel Bachel	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co	omputer S erospace	Science (2015) Computer Science (:		)	
300 h Teachin  Referre  Bachele Bachele Bachele	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co or's degree (1 major) Ad	omputer S erospace unctional	Science (2015) Computer Science (: Materials (2015)	2015)	)	
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300 h Teachin  Referre  Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co or's degree (1 major) Ao or's degree (1 major) Fu or's degree (1 major) Co or's degree (1 major) Co	omputer S erospace unctional erospace omputer S omputer S	Science (2015) Computer Science (: Materials (2015) Computer Science (: Science (2017) Science (2019)	2015) 2017)	)	
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300 h Teachin  Referre  Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co or's degree (1 major) Ao or's degree (1 major) Ao or's degree (1 major) Ao or's degree (1 major) Co or's degree (1 major) Ao or's degree (1 major) Ao or's degree (1 major) Fu	omputer S erospace unctional erospace omputer S omputer S erospace unctional	Science (2015) Computer Science (2 Materials (2015) Computer Science (2 Science (2017) Science (2019) Computer Science (2 Materials (2021)	2015) 2017) 2020)	)	
300 h Teachin  Referre  Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co or's degree (1 major) Ac or's degree (1 major) Ac or's degree (1 major) Ac or's degree (1 major) Co or's degree (1 major) Ac or's degree (1 major) Ac or's degree (1 major) Fu or's degree (1 major) Fu	omputer S erospace unctional erospace omputer S omputer S erospace unctional omputer S	Science (2015) Computer Science (: Materials (2015) Computer Science (: Science (2017) Science (2019) Computer Science (: Materials (2021) Science und Sustain	2015) 2017) 2020) ability (2021)	)	
300 h Teachin  Referre  Module Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele	ng cycle ed to in LPO I (examina or's degree (1 major) Ad or's degree (1 major) Ad or's degree (1 major) Ad or's degree (1 major) Ad or's degree (1 major) Co or's degree (1 major) Co or's degree (1 major) Ad or's degree (1 major) Fu or's degree (1 major) Fu or's degree (1 major) Co or's degree (1 major) Ad	omputer S erospace unctional erospace omputer S erospace unctional omputer S rtificial In	Science (2015) Computer Science (: Materials (2015) Computer Science (: Science (2017) Science (2019) Computer Science (: Materials (2021) Science und Sustain telligence and Data	2015) 2017) 2020) ability (2021) Science (2022)	)	
300 h Teachin  Referre  Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele	ng cycle ed to in LPO I (examina or's degree (1 major) Ad or's degree (1 major) Ad	omputer S erospace unctional erospace omputer S erospace unctional omputer S rtificial Inf	Science (2015) Computer Science (2 Materials (2015) Computer Science (2 Science (2017) Science (2019) Computer Science (2 Materials (2021) Science und Sustain telligence and Data 2	2015) 2017) 2020) ability (2021) Science (2022) Science (2023)	)	
300 h Teachin  Referre  Module Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele	ng cycle ed to in LPO I (examina e appears in or's degree (1 major) Co or's degree (1 major) Ad or's degree (1 major) Ad	omputer S erospace unctional erospace omputer S erospace unctional omputer S rtificial Inf rtificial Inf	Science (2015) Computer Science (2015) Computer Science (2017) Science (2017) Science (2019) Computer Science (2019) Computer Science (2021) Science und Sustain telligence and Data 2 telligence and Data 2	2015) 2017) 2020) ability (2021) Science (2022) Science (2023)		
300 h Teachin  Referre  Module Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele Bachele	ng cycle ed to in LPO I (examina or's degree (1 major) Ad or's degree (1 major) Ad	omputer S erospace unctional erospace omputer S erospace unctional omputer S rtificial Inf rtificial Inf rtificial Inf	Science (2015) Computer Science (2015) Computer Science (2017) Science (2017) Science (2019) Computer Science (2019) Computer Science (2011) Science und Sustain telligence and Data 2 telligence and Data 2 telligence and Data 2 telligence and Data 2	2015) 2017) 2020) ability (2021) Science (2022) Science (2023)		

10       numerical grade          Duration       Module level       Ot         1 semester       undergraduate          Contents           Techniques from combinatorics, introduct error-correcting codes.          Intended learning outcomes          The student is acquainted with the fundar levant proof techniques, is able to apply r realises the scope of applications of discr       Courses (type, number of weekly contact         V (4) + Ü (2)	Module of s) Institute Instite Institute Institute Institute Institute Institute	ng applications), cryptographic methods, 5 in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
Dean of Studies Mathematik (Mathematic         ECTS       Method of grading       Out         10       numerical grade          Duration       Module level       Out         1 semester       undergraduate          Contents        Contents         Techniques from combinatorics, introduct error-correcting codes.       Intended learning outcomes         The student is acquainted with the fundar levant proof techniques, is able to apply realises the scope of applications of discr         Courses (type, number of weekly contact         V (4) + Ü (2)         Method of assessment (type, scope, lang ster, information on whether module can         a) written examination (approx. 90 to 180 b) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus         Allocation of places            Additional information	s) Institute hly after succ. compl. of more her prerequisites ion to graph theory (includi nental concepts and results nethods from number theore ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	of Mathematics dule(s) Ing applications), cryptographic methods, in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) h, examination offered — if not every seme- r
ECTS       Method of grading       Or         10       numerical grade          Duration       Module level       Or         1 semester       undergraduate          Contents        Contents         Techniques from combinatorics, introduct error-correcting codes.          Intended learning outcomes          The student is acquainted with the fundar levant proof techniques, is able to apply r realises the scope of applications of discr       Courses (type, number of weekly contact         V (4) + Ü (2)        Method of assessment (type, scope, lang ster, information on whether module can         a) written examination (approx. 90 to 180 b) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus          Allocation of places	her prerequisites her prerequisites ion to graph theory (includi nental concepts and results nethods from number theor ete structures. nours, language — if other theor be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	dule(s) ng applications), cryptographic methods, in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme- r
10       numerical grade          Duration       Module level       Ot         1 semester       undergraduate          Contents           Techniques from combinatorics, introduct error-correcting codes.          Intended learning outcomes          The student is acquainted with the fundar levant proof techniques, is able to apply realises the scope of applications of discr       Courses (type, number of weekly contact         V (4) + Ü (2)           Method of assessment (type, scope, lang ster, information on whether module can       a) written examination (approx. 90 to 180 b) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus         Allocation of places	her prerequisites ion to graph theory (includi nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	ng applications), cryptographic methods, 5 in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
Duration       Module level       Ot         1 semester       undergraduate          Contents           Techniques from combinatorics, introduct error-correcting codes.          Intended learning outcomes          The student is acquainted with the fundar levant proof techniques, is able to apply realises the scope of applications of discr       Courses (type, number of weekly contact         V (4) + Ü (2)        Method of assessment (type, scope, lang ster, information on whether module can         a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus         Allocation of places	ion to graph theory (includi nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
1 semester       undergraduate          Contents	ion to graph theory (includi nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
1 semester       undergraduate          Contents	nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
Techniques from combinatorics, introduct error-correcting codes. Intended learning outcomes The student is acquainted with the fundar levant proof techniques, is able to apply r realises the scope of applications of discr Courses (type, number of weekly contact V (4) + Ü (2) Method of assessment (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus Allocation of places  Additional information	nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
error-correcting codes. Intended learning outcomes The student is acquainted with the fundar levant proof techniques, is able to apply r realises the scope of applications of discr Courses (type, number of weekly contact V (4) + Ü (2) Method of assessment (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus Allocation of places  Additional information	nental concepts and results nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) or n (15 to 30 minutes) or , 10 to 15 minutes per candi	in discrete mathematics, masters the re- y and algebra to discrete mathematics and han German) n, examination offered — if not every seme-
The student is acquainted with the fundar levant proof techniques, is able to apply r realises the scope of applications of discr <b>Courses</b> (type, number of weekly contact V (4) + Ü (2) <b>Method of assessment</b> (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus <b>Allocation of places</b> 	nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	y and algebra to discrete mathematics and han German) n, examination offered — if not every seme- r
levant proof techniques, is able to apply r realises the scope of applications of discr <b>Courses</b> (type, number of weekly contact V (4) + Ü (2) <b>Method of assessment</b> (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus <b>Allocation of places</b>  <b>Additional information</b>	nethods from number theor ete structures. nours, language — if other the uage — if other than German be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	y and algebra to discrete mathematics and han German) n, examination offered — if not every seme r
V (4) + Ü (2) Method of assessment (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus Allocation of places  Additional information	uage — if other than German be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	n, examination offered — if not every semeor
Method of assessment (type, scope, lang ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus Allocation of places  Additional information	be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	r
ster, information on whether module can a) written examination (approx. 90 to 180 b) oral examination of one candidate each c) oral examination in groups (groups of 2 Language of assessment: German and/or creditable for bonus Allocation of places  Additional information	be chosen to earn a bonus) minutes, usually chosen) o n (15 to 30 minutes) or , 10 to 15 minutes per candi	r
 Additional information		
 Workload		
Workload		
300 h		
Teaching cycle		
Referred to in LPO I (examination regulat	ons for teaching-degree pro	ogrammes)
	ons for teaching acgree pre	5-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6-6
Modulo appoars in		
Module appears in		
Bachelor's degree (1 major) Computer Sci Bachelor's degree (1 major) Computer Sci		
Bachelor's degree (1 major) Computer Sci Bachelor's degree (1 major) Computer Sci		
Bachelor's degree (1 major) Computer Sci Bachelor's degree (1 major) Computer Sci		21)
Bachelor's degree (1 major) Computer Sch Bachelor's degree (1 major) Artificial Intel	-	
Bachelor's degree (1 major) Artificial Intel	IVENIE AND DATA SUBDICT	022)
Bachelor's degree (1 major) Artificial Intel	-	(22)

Module					Abbreviation
Mathematics 1 for students in Computer Science					10-M-INF1-152-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)				Institute of Mathem	natics
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
integer	s; elem				nd lambda-symbols; the ring of linear maps and matrix calculus
Intend	ed lear	ning outcomes			
to appl	y these				ced mathematics. He/She learns ticular in computer science, and
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	an)
V (4) + Module	• •	t in: Ü: German or Englisł	1		
		<b>sessment</b> (type, scope, la on on whether module ca			tion offered — if not every seme
b) oral c) oral	examir examin Ige of a	mination (approx. 90 to 1 nation of one candidate e ation in groups (groups c ssessment: German and, bonus	ach (15 to 30 minutes of 2, 10 to 15 minutes	5) or	
Allocat	ion of p	olaces			
Additio	onal inf	ormation			
Worklo	ad				
300 h					
Teachi	ng cvcl	e			
	<u> </u>				
Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	urs in			
		gree (1 major) Computer S	Science (2015)		
Bachel		gree (1 major) Computer S	Science (2017)		
Bachel Bachel Bachel	or's de or's de	gree (1 major) Computer S	Science (2019)		
Bachel Bachel Bachel Bachel	or's de or's de or's de		Science (2019) Science und Sustaina	ability (2021)	

Module	e title				Abbreviation
Mathe	natics	2 for students in Comput	er Science		10-M-INF2-152-m01
Module	e coord	inator		Module offered by	
Dean o	f Studie	es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS		od of grading	Only after succ. com	pl. of module(s)	
10	î	rical grade		•	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		eigenvalue theory; even parameter estimates; ba		ces, combinatorics,	random variables, examples of
Intend	ed learı	ning outcomes			
to appl	y these				ced mathematics. He/She learns ticular in computer science, and
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	an)
V (4) + Module	• •	t in: Ü: German or English	1		
		<b>essment</b> (type, scope, la on on whether module ca			ation offered — if not every seme-
b) oral c) oral	examin examin Ige of a	nination (approx. 90 to 1 ation of one candidate e ation in groups (groups c ssessment: German and, bonus	ach (15 to 30 minutes of 2, 10 to 15 minutes	s) or	
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
300 h					
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	irs in			
Bachel Bachel Bachel	or's de or's de or's de	gree (1 major) Computer 9 gree (1 major) Computer 9 gree (1 major) Computer 9 gree (1 major) Computer 9	Science (2017) Science (2019) Science und Sustaina	bility (2021)	
exchan	ge prog	gram Mathematics (2023)	)		

Numer	e title				Abbreviation	
	ical Mat	hematics 1 for studen	ts of other subjects		10-M-NUM1af-152-n	n01
Madul	e coordii			Madula offered by		
				Module offered by		
	-	s Mathematik (Mathe		Institute of Mathem	atics	
ECTS		of grading Only after succ. compl. of module(s)				
10		cal grade				
Duratio		Module level	Other prerequisites	6		
1 seme	I	undergraduate				
Conten	nts					
			ons and curve fitting pro splines and trigonome			s of equati-
Intend	ed learni	ing outcomes				
		•	undamental concepts a out their typical fields o		erical mathematics, a	applies them
			ntact hours, language –		n)	
V (4) +						
	_	comant (tuna coora	language — if other th	an Corman ovamina	tion offered if not	avon como
ster, in	formatio	on on whether module	e can be chosen to earn	a bonus)	tion onered — If not	every seme-
			o 180 minutes, usually			
			e each (15 to 30 minute	-		
		sessment: German ar	s of 2, 10 to 15 minutes	s per candidate)		
	age of as					
	tion of pl					
Allocal						
Additic	onal Info					
		rmation				
		rmation				
 Worklo	oad	rmation				
	bad	rmation				
 <b>Worklo</b> 300 h	oad ng cycle					
 <b>Worklo</b> 300 h						
 Worklo 300 h Teachi	ng cycle		gulations for teaching-	degree programmes)		
 Worklo 300 h Teachi	ng cycle		gulations for teaching-	degree programmes)		
 Worklo 300 h Teachin  Referre	ng cycle ed to in L	<b>PO I</b> (examination re	gulations for teaching-	degree programmes)		
 Worklo 300 h Teachin  Referre  Modulo	ng cycle ed to in L e appear	POI (examination re		degree programmes)		
 Worklo 300 h Teachi  Referre  Bachel	<b>ed to in L</b> e appear lor's deg	<b>PO I</b> (examination re <b>s in</b> ree (1 major) Compute	er Science (2015)	degree programmes)		
 Worklo 300 h Teachin  Referre  Modulo Bachel Bachel	ng cycle ed to in L e appear lor's deg lor's deg	POI (examination re s in ree (1 major) Compute ree (1 major) Physics	er Science (2015) (2015)			
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 Worklo 300 h Teachin  Referre  Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ng cycle ed to in L e appear lor's deg lor's deg lor's deg lor's deg lor's deg lor's deg	POI (examination re s in ree (1 major) Compute ree (1 major) Physics ree (1 major) Nanostru ree (1 major) Aerospa ree (1 major) Function	er Science (2015) (2015) ucture Technology (201 ce Computer Science (2 val Materials (2015) ce Computer Science (2	5) 2015)		
 Worklo 300 h Teachin  Referre  Module Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	ed to in L e appear lor's deg lor's deg lor's deg lor's deg lor's deg lor's deg lor's deg lor's deg lor's deg	POI (examination re s in ree (1 major) Compute ree (1 major) Nanostru ree (1 major) Nanostru ree (1 major) Aerospa ree (1 major) Aerospa ree (1 major) Compute ree (1 major) Compute	er Science (2015) (2015) ucture Technology (201 ce Computer Science (2 al Materials (2015) ce Computer Science (2 er Science (2017) er Science (2019)	5) 2015)		
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#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree (1 major) Functional Materials (2025)

Module	title				Abbreviation
Operat	ions Re	search for students of o	ther subjects		10-M-ORSaf-152-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mathem	natics
ECTS		od of grading	Only after succ. com		
10		rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme		undergraduate			
Conten	ts				
Linear	orogran	nming, duality theory, tra	nsport problems, int	egral linear program	ming, graph theoretic problems.
Intende	ed learr	ning outcomes			
for solv probler	ing ma ns, bot	ny practical problems es h theoretically and nume	pecially in economics rically.	s. He/She is able to	h, as required as a central tool apply these methods to practical
		, number of weekly conta	ct nours, language –	· If other than Germa	in)
V (4) +		. (			
		s <b>essment</b> (type, scope, la on on whether module ca			ition offered — if not every seme-
-	ment o ble for		-	offered and in the su	ubsequent semester
Additio	nal info	ormation			
Worklo	ad				
300 h					
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	in in			
		gree (1 major) Computer S			
	-	ee (1 major) Physics (201			
		gree (1 major) Computer S			
		gree (1 major) Computer S	-		
		ee (1 major) Physics (202 ee (1 major) Physics Inter			
	-	gree (1 major) Physics Inter		bility (2021)	
Duchen				(2021)	

Module title					Abbreviation
Stochastics 1 for students of other subjects					10-M-STO-1af-152-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mather	natics
ECTS	1	od of grading	Only after succ. con		indico
10		rical grade			
Duratio	ı	Module level	Other prerequisites		
1 seme		undergraduate			
Conter	ts		<u> </u>		
continu chastic	uous di indep	stributions: normal distri	bution, random varia ditional probability,	ble, distribution fur characteristics of di	easure and integration theory, nction, product measures and sto stributions: expected value and
Intend	ed lear	ning outcomes			
		acquainted with fundam lems and knows about th			tics, applies these methods to
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V (4) +	Ü (2)				
b) oral c) oral Langua	examir examin	mination (approx. 90 to 1 nation of one candidate e nation in groups (groups o ssessment: German and bonus	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita	examir examin age of a	nation of one candidate e ation in groups (groups o ssessment: German and bonus	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita	examir examin age of a ble for	nation of one candidate e ation in groups (groups o ssessment: German and bonus	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat	examir examin age of a ble for <b>ion of j</b>	nation of one candidate e ation in groups (groups o ssessment: German and bonus	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat	examir examin age of a ble for <b>ion of j</b>	nation of one candidate e lation in groups (groups of ssessment: German and bonus <b>blaces</b>	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat	examir examin age of a ble for ion of p	nation of one candidate e lation in groups (groups of ssessment: German and bonus <b>blaces</b>	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat  Additic	examir examin age of a ble for ion of p	nation of one candidate e lation in groups (groups of ssessment: German and bonus <b>blaces</b>	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat  Morklo 300 h	examir examin age of a ble for ion of p	nation of one candidate e lation in groups (groups of ssessment: German and bonus blaces ormation	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat  Morklo 300 h	examir examin age of a ble for ion of p onal inf	nation of one candidate e lation in groups (groups of ssessment: German and bonus blaces ormation	ach (15 to 30 minute of 2, 10 to 15 minutes	s) or	
b) oral c) oral Langua credita Allocat  Worklo 300 h Teachi 	examin examin age of a ble for ion of p onal inf pad	nation of one candidate e lation in groups (groups of ssessment: German and bonus blaces ormation	each (15 to 30 minute of 2, 10 to 15 minutes /or English	s) or per candidate)	)
b) oral c) oral Langua credita Allocat  Worklo 300 h Teachi 	examin examin age of a ble for ion of p onal inf pad	ation of one candidate e ation in groups (groups of ssessment: German and bonus blaces ormation	each (15 to 30 minute of 2, 10 to 15 minutes /or English	s) or per candidate)	)
b) oral c) oral Langua credita Allocat  Worklo 300 h Teachi  Referre	examin examin age of a ble for ion of p onal inf pad	ation of one candidate e ation in groups (groups of ssessment: German and bonus blaces ormation e LPO I (examination regu	each (15 to 30 minute of 2, 10 to 15 minutes /or English	s) or per candidate)	)
b) oral c) oral Langua credita Allocat  Additio  300 h Teachi  Referre  Modulo	examin examin age of a ble for ion of j onal inf pad ng cycl ed to in	ation of one candidate e ation in groups (groups of ssessment: German and bonus blaces ormation e LPO I (examination regu	each (15 to 30 minutes of 2, 10 to 15 minutes /or English	s) or per candidate)	)
b) oral c) oral Langua credita Allocat  Morklo 300 h Teachi  Referre  Bachel Bachel	examin examin age of a ble for ion of p onal inf onal inf oad ad ed to in e appea or's de or's de	e LPO I (examination regulars in gree (1 major) Computer	ach (15 to 30 minute of 2, 10 to 15 minutes /or English llations for teaching-o Science (2015) Science (2017)	s) or per candidate)	)
b) oral c) oral Langua credita Allocat  Additic  300 h Teachi  Referre Bachel Bachel Bachel Bachel	examin examin age of a ble for ion of j onal inf oad ad ad ad ad ad ad ad ad ad ad ad ad a	e LPO I (examination regulars in gree (1 major) Computer gree (1 major) Computer gree (1 major) Computer	ach (15 to 30 minutes of 2, 10 to 15 minutes /or English 	s) or per candidate) degree programmes	
b) oral c) oral Langua credita Allocat  Additio  Worklo 300 h Teachi  Referre  Bachel Bachel Bachel Bachel Bachel	examir examin age of a ble for ion of j onal inf onal inf ad ad ad ad ad ad ad ad ad ad ad ad ad	e LPO I (examination regulars in gree (1 major) Computer	ach (15 to 30 minutes of 2, 10 to 15 minutes /or English llations for teaching-o Science (2015) Science (2017) Science (2019) Science und Sustaina	s) or per candidate) degree programmes	
b) oral c) oral Langua credita Allocat  Additic  Worklo 300 h Teachi  Referre  Bachel Bachel Bachel Bachel Bachel Bachel	examir examin age of a ble for ion of p onal inf pad ad ad ad ad ad ad ad ad ad ad ad ad a	e LPO I (examination reguration) Gree (1 major) Computer	ach (15 to 30 minutes of 2, 10 to 15 minutes /or English llations for teaching- Science (2015) Science (2017) Science (2019) Science und Sustaina telligence and Data S	s) or per candidate) degree programmes ability (2021) Science (2022)	
b) oral c) oral Langua credita Allocat  Morklo 300 h Teachi  Referre Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	examin examin age of a ble for ion of j onal inf onal inf oad ad ad ad ad ad ad ad ad ad ad ad ad a	e LPO I (examination regulars in gree (1 major) Computer	ach (15 to 30 minutes of 2, 10 to 15 minutes /or English llations for teaching- Science (2015) Science (2017) Science (2019) Science und Sustaina telligence and Data S telligence and Data S	s) or per candidate) degree programmes ability (2021) Science (2022) Science (2023)	

Module title					Abbreviation
Introduction Into Number Theory for students of other subj				ects	10-M-ZTHaf-152-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)			atics)	Institute of Mathen	natics
ECTS	Metho	od of grading	Only after succ. com	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
tests a	nd met		ructure of the residue	class rings, theory	ation, modular arithmetics, primo of quadratic remainder, quadrati
Intend	ed lear	ning outcomes			
		acquainted with the fun methods and proof tech	•		ber theory. He/she is able to em-
Course	<b>s</b> (type	, number of weekly conta	ict hours, language —	- if other than Germa	an)
V (4) +	Ü (2)				
b) oral c) oral Langua credita	examir examin age of a ble for		ach (15 to 30 minutes of 2, 10 to 15 minutes	s) or	
Allocat	ion of <sub>l</sub>	Diaces			
Additio	onal inf	ormation			
Worklo	ad				
300 h					
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-c	degree programmes	)
Module	e appea	urs in			
		gree (1 major) Computer :	Science (2015)		
		gree (1 major) Computer S			
		gree (1 major) Computer			
		gree (1 major) Artificial In	telligence and Data S	Science (2022)	
	or's do				
		gree (1 major) Artificial In gree (1 major) Artificial In	telligence and Data S	Science (2023)	

Module	title			Abbreviation	
Introdu	ction to Physics for Students	of other Disciplines		11-EFNF-152-m01	
Module	coordinator		Module offered by	<u> </u>	
	ing Director of the Institute of	Applied Physics	Faculty of Physics a	and Astronomy	
ECTS	Method of grading	Only after succ. co			
7	numerical grade				
Duratio		Other prerequisite	s		
2 seme			•		
Conten					
Fundam physics	nentals of mechanics, vibrations,	on theory, thermodyna	mics, optics, science	of electricity, atomic	c and nuclear
	ed learning outcomes				
The stu	dents are able to identify fun n physics. They are able to ap				
	<b>s</b> (type, number of weekly cor	<u> </u>	•		
V (4) + V					
	<b>d of assessment</b> (type, scope,	language — if other t	nan German, evamina	tion offered - if not	AVANI CAMA-
	formation on whether module				every seme-
	examination (60 to 120 minu				
	ion of places				
Additio	nal information				
					and) of our
	ng to § 2 para. 2 sentence 2 A the APOLmCh and No. 4 of a			er d) and No. I 1st lett	er d) of an-
Worklo					
210 h					
	ng cycle				
reaciiii					
Deferre	d to in IDO L (avamination ro	gulations for tooching	dograa programmas		
Referre	d to in LPO I (examination re		-degree programmes)		
	•				
	appears in	<u> </u>			
	or's degree (1 major) Biology				
	or's degree (1 major) Chemist	•			
	or's degree (1 major) Psycholo or's degree (1 major, 1 minor)	•, ·			
	or's degree (1 major, 1 minor)		udies (2012)		
	or's degree (1 major, 1 minor)				
	or's degree (2 majors) Specia				
	er Theologiae Catholic Theolo	-			
-	ate examination for the teach		1 English (2009)		
	ate examination for the teach				
	ate examination for the teach				
	ate examination for the teach	,			
	ate examination for the teach			9)	
	ate examination for the teach	,			
First sta	ate examination for the teach	ing degree Gymnasiun	n History (2009)		
First sta	ate examination for the teach	ing degree Gymnasiun	n Greek Philology (20	09)	
Bachelor's v	with 1 major Computer Science (2015)		rg • generated 18-Apr-2025 • 6 I Bachelor (180 ECTS) Informat		page 85 / 114

First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Biomedicine (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 86 / 114 data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 87 / 114

data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Informatik - 2015

First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 89 / 114 data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

Module				Abbreviation	
Laboratory Course Physics for Students of other Discip			es	11-PFNF-152-m01	
Modul	e coordinator		Module offered by		
Managing Director of the Institute of Applied Physic			Faculty of Physics ar	nd Astronomy	
ECTS	Method of grading	Only after succ. co	· · · · ·	Ta / Stronomy	
3	(not) successfully completed				
Duration         Module level         Other prerequisites					
1 seme			5		
Conten					
	e experiments in the fields of m	echanics, vibration th	neory, thermodynamics	s, optics, X-rays, nu	clear magne
tic reso	pnance atomic and nuclear phy	/sics, imaging method	ds.		
Intende	ed learning outcomes				
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Course	s (type, number of weekly con	tact hours, language	— if other than Germar	n)	
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Metho	<b>d of assessment</b> (type, scope, formation on whether module			ion offered — if not	every seme-
Each ex ments	o minutes). xperiment comprises preparat can each be repeated once.	ion, performance and	evaluation. Test as we	ell as performance o	of experi-
	tion of places				
Only as	s part of pool of general transf	erable skills (ASQ): 10	places (lottery)		
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	or's degree (2 majors) Special				
	er Theologiae Catholic Theolog	-			
-	ate examination for the teachi		n English (2009)		
	ate examination for the teachi				
Sachelor's	with 1 major Computer Science (2015)	MILWürzbu	rg • generated 18-Apr-2025 • ex	am reg	page 91 / 114

First state examination for the teaching degree Gymnasium Chemistry (2009) First state examination for the teaching degree Gymnasium Geography (2009) First state examination for the teaching degree Gymnasium French Studies (2009) First state examination for the teaching degree Gymnasium German (2009) First state examination for the teaching degree Gymnasium History (2009) First state examination for the teaching degree Gymnasium Greek Philology (2009) First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Biomedicine (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 92 / 114 data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 93 / 114 data record Bachelor (180 ECTS) Informatik - 2015

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Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's with 1 major Computer Science (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. page 95 / 114 data record Bachelor (180 ECTS) Informatik - 2015

Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

-	e title			-	Abbreviation	
Supply	<b>, Prod</b> u	iction and Operations	Management. An Introc	luction	12-BPL-G-152-m01	
Modul	e coord	inator		Module offered b	<u>ı</u> Y	
			agement and Industrial	1		
Manag	ement		-			
ECTS	1	od of grading	Only after succ. con	npl. of module(s)		
5	I	rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate				
Conten	_					
			h an overview of funda ctions as well as a mod			
Intend	ed lear	ning outcomes				
rate pro develo	ocurem ping ar	ent, production and lo ad applying basic planr	and discuss the objec gistics as well as their i ning models in these fie	nterdependencies Ids.	. Furthermore, they are	
		, number of weekly cor	itact hours, language –	- ir other than Geri	nañ)	
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		nation (approx. 60 min	utes)			
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Bachelor's degree (1 major) Economathematics (2015) Bachelor's degree (1 major) Business Information Systems (2015) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015) Master's degree (1 major) China Business and Economics (2016) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) China Business and Economics (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019) Bachelor's degree (1 major) Business Information Systems (2020)

Modul	e title				Abbreviation
Introdu	uction t	o Business Informatics			12-Ewiinf-G-152-m01
Module coordinator				Module offered by	
		Chair of Business Manag ystems	ement and Business	Faculty of Managen	nent and Economics
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	1 semester undergraduate				
Conten	nts				
The co	ntent ra	anges from the history of	information systems	and business softwa	aspects of information systems. are to business models, technical

requirements and process modelling. In addition to the lectures, tutorials with practical exercises in HTML, CSS, process mining and BPMN support a deeper understanding and application of the knowledge learnt.

Outline of syllabus:

1. overview and technological basics of WI

2. hardware, computer networks and the internet

- 3. databases and blockchain
- 4. business models, company structure and organisation
- 5. connection between business administration and information systems
- 6. business software and process mining

7. software development

8. future technologies and current research

Reading:

Thome: Grundzüge der Wirtschaftsinformatik.

## Intended learning outcomes

The "Business Informatics" module aims to achieve the following learning outcomes:

- 1. Apply fundamentals: after completing the module, students will have an understanding of the basic concepts and terms of information systems and will be able to explain lecture elements addressed, such as hardware components, various database types or blockchain technology. Thanks to the practical exercises, they are able to implement simple applications and apply what they have learnt in practice. The students were also able to gain an overview of the various fields of business informatics.
- 2. Analysing business processes and system landscapes: After completing the module, students will be able to analyse business models and process modelling and demonstrate their skills by creating BPMN diagrams in practical exercises. They know the basics of software development and are familiar with ERP systems.
- 3. Conception of business solutions: Students are able to use learned knowledge about business software, structural and process organisation and new technologies to develop realistic solution strategies and business models for operational challenges. They have knowledge of the integration of information systems into operational processes.
- 4. Evaluating technology trends: Participants will be able to critically evaluate current and future trends in business informatics, including artificial intelligence and Industry 4.0, and contribute their assessments to discussions.

**Courses** (type, number of weekly contact hours, language — if other than German)

V (2) + T (2)

**Method of assessment** (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) written examination (approx. 60 minutes) or

b) written examination consisting entirely or partly of multiple choice questions (approx. 60 minutes) Language of assessment: German and/or English

creditable for bonus

Bachelor's with 1 major Computer Science (2015)

#### **Allocation of places**

#### 840 places.

(1) No restrictions with regard to available places for Bachelor's students of Wirtschaftswissenschaft (Business Management and Economics) (BSc with 180 ECTS credits), Wirtschaftsmathematik (Mathematics for Economics) (BSc with 180 ECTS credits), Wirtschaftsinformatik (Business Information Systems) (BSc with 180 ECTS credits) as well as Bachelor's students with the minor Wirtschaftswissenschaft (Business Management and Economics) (60 ECTS credits). (2) Additional places will be allocated to students of other subjects. (3) When places are allocated in accordance with (2) and the number of applications exceeds the number of available places, places will be allocated by lot among all applicants irrespective of their subjects. (4) Places on all courses of the module with a restricted number of places will be allocated in the same procedure. (5) A waiting list will be maintained and places re-allocated by lot as they become available.

#### Additional information

Workload

150 h

Teaching cycle

Teaching cycle: winter semester

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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#### Module appears in

Bachelor's degree (1 major) Computer Science (2015)

Bachelor's degree (1 major) Business Management and Economics (2015)

Bachelor's degree (1 major) Business Information Systems (2015)

Master's degree (1 major) China Business and Economics (2016)

Bachelor's degree (1 major) Business Information Systems (2016)

Bachelor's degree (1 major) Computer Science (2017)

Bachelor's degree (1 major) Computer Science (2019)

Master's degree (1 major) China Business and Economics (2019)

Bachelor's degree (1 major) Business Information Systems (2019)

Bachelor's degree (1 major) Business Management and Economics (2019)

Bachelor's degree (1 major) Business Information Systems (2020)

	<u>e title</u>				Abbreviation	
Financi	al Acco	ounting			12-ExtUR-G-152-mo	1
Module	e coord	inator		Module offered by	<u> </u>	
holder	of the (	Chair of Business Manag	gement and Business	Faculty of Managen	nent and Economics	
Taxatio	n		-			
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	· · · · · ·	rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate				
Conten						
ble-ent	ry book	fers an introduction to t <-keeping as well as the y according to German c	fundamentals of reco			
Intende	ed learr	ning outcomes				
		uire a basic unterstandir apply this knowledge, i.e				o arrange, re-
Course	<b>s</b> (type,	, number of weekly cont	act hours, language –	- if other than Germa	in)	
V (2) +	T (2)					
		<b>essment</b> (type, scope, l on on whether module of			tion offered — if not	every seme-
written	examir	nation (approx. 60 minu	ites)			
Allocat						
840 pla (1) No r Manag	aces. estricti ement a	ons with regard to avail and Economics) (BSc wi ECTS credits), Wirtschaf	th 180 ECTS credits), \	Nirtschaftsmathema	tik (Mathematics for	Economics)
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#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015) Master's degree (1 major) China Business and Economics (2016) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) China Business and Economics (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019) Bachelor's degree (1 major) Business Information Systems (2020)

Module	e title				Abbreviation	
		everse Business Engin	eering		12-FRBE-F-152-m01	
Module	e coord	inator		Module offered by		
holder Informa			gement and Business	Faculty of Managen	nent and Economics	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
age. "For cess m cess ar ments of ny. The formati The cou- ject tea	orward odellin nalysis) and tec resulti ion syst urse tra am. In a	" refers to design meth g) that help implement that make it possible hnological innovation ng change needs to be tems. ces the implementatio	ods (such as situation a new solution. "Rever to improve or re-design potential are typical rea implemented into the n cycle of enterprise so students with the theo	analysis, requiremen rse" refers to approa existing structures a asons for the continu organisational struct	r companies in the information nts analysis and business pro- ches (such as the use and pro- and processes. Market require- uous transformation of a compa- ture, business processes and in- t of view of a member of a pro- tation, the course will also dis-	
		ning outcomes				
1. Stud appl 2. Mast and pract 3. Stud le co	ents ac y this k tery of f busine: tical im ents de mplex	quire profound experti nowledge to practical s forward engineering me ss blueprinting, as well plementation in corres evelop interdisciplinary	se in the process of ad scenarios. ethods such as situatio as reverse engineering ponding tools. methodological skills	apting business soft n analysis, requirem g methods like revers that enable them to	llowing learning outcomes: ware libraries and learn how to ents analysis, process modeling, se business engineering and their independently and flexibly tack- ementioned methods of forward	
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	n)	
V (2) +		· · ·				
Metho	d of ass				tion offered — if not every seme-	
a) writt b) term c) term	ster, information on whether module can be chosen to earn a bonus) a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 to 15 pages) and presentation (approx. 10 minutes); (weighted 2:1) creditable for bonus					
Allocat	ion of p	olaces				
follows dits) wi jects. ( numbe course list will	: (1) Ba ill be gi 3) Whe r of ava s of the be ma	chelor's students of W ven preferential consid n places are allocated i ilable places, places w module with a restrict intained and places re-	irtschaftsinformatik (Bu leration. (2) The remain n accordance with (1) a <i>i</i> ll be allocated by lot a	usiness Information ing places will be al and (2) and the numb mong applicants fro ill be allocated in the	laces, places will be allocated as Systems) (BSc with 180 ECTS cre- located to students of other sub- per of applications exceeds the m this group. (4) Places on all e same procedure. (5) A waiting	
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Bachelor's	with 1 ma	or Computer Science (2015)	-	; • generated 18-Apr-2025 • e Bachelor (180 ECTS) Informat		

#### **Teaching cycle**

Teaching cycle: winter semester

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

.. . .

Module appears in Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Economathematics (2015) Bachelor's degree (1 major) Business Information Systems (2015) Master's degree (1 major) Media Communication (2015) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015) Master's degree (1 major) China Business and Economics (2016) Bachelor's degree (1 major) Business Information Systems (2016) Master's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Computer Science (2017) Master's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) China Business and Economics (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019) Master's degree (1 major) Media Communication (2019) Bachelor's degree (1 major) Business Information Systems (2020) Master's degree (1 major) China Business and Economics (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2021) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) exchange program Business Management and Economics (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2023)

Mouule	e title				Abbreviation
Integra	ted Bu	siness Processes			12-GP-G-152-m01
Module	e coord	inator		Module offered by	<u> </u>
holder	of the (	Chair of Business Manag	ement and Business		nent and Economics
Informa			<del>,</del>	, ,	
ECTS	Î	od of grading	Only after succ. con	npl. of module(s)	
5		rical grade			
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Conten	-				
sensch parts. I sis for t quired text, th alt with The cou the exa cesses Intende After cc 1. reflee 2. unde 3. perfo	aft (Bu n the th the pra knowle e huma urse wil mple o and fu ed learn ompleti ct tech erstand orm and	siness Management and neoretical part, students ctical part. The practical edge by working with an S an resources, purchasing Il introduce students to b	Economics) interester will acquire the nece exercise will present SAP S4/HANA on case s, sales, service, project ousiness processes of ion to the basic princ nts will be able to rational models of ERI systems and rocesses within the E	ed in the topic. The c ssary theoretical kno students with an op e studies on the mod ect management and f an ERP system (Ent iples, students will a P systems, RP system SAP Busin	·
V(2) +		, number of weekly conta	ict nours, language –	- II other than Germa	(11)
		accmant (tuna ccana la	if other the	an Corman, ovamina	tion offered — if not every seme-
		on on whether module c			liton onered — If not every seme-
b) term	paper paper	mination (approx. 60 mir (approx. 15 pages) or (approx. 10 to 15 pages) bonus		prox. 10 minutes); (v	veighted 2:1)
Allocat	ion of p	olaces			
informa to stud among ber of p	atik (Bu ents of all app places v	isiness Information Syste other subjects provided licants irrespective of th	ems) (BSc with 180 E0 there is enough capa eir subjects. (3) Place	CTS credits). (2) Addi acity. These addition as on all courses of t	's degree subject Wirtschafts- itional places will be allocated al places will be allocated by lot he module with a restricted num- aintained and places re-alloca-
Additio	nal inf	ormation			
Worklo	ad				
<b>Worklo</b> 150 h	ad				
		e			
150 h <b>Teachi</b> i	ng cycl	<b>e</b> e: summer semester			

## Module appears in

Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Economathematics (2015) Bachelor's degree (1 major) Business Information Systems (2015) Master's degree (1 major) Media Communication (2015) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015) Master's degree (1 major) China Business and Economics (2016) Bachelor's degree (1 major) Business Information Systems (2016) Master's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Computer Science (2017) Master's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) China Business and Economics (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019) Master's degree (1 major) Media Communication (2019) Bachelor's degree (1 major) Business Information Systems (2020) Master's degree (1 major) China Business and Economics (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2021) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) exchange program Business Management and Economics (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2023)

Module title Abbreviation			Abbreviation		
Investr	nent an	d Finance. An Introductio	n		12-l&F-G-152-m01
Module	e coordi	nator		Module offered by	
holder of the Chair of Business Management and Corporate Faculty of Management and Economics Finance					
ECTS	Metho	d of grading	Only after succ. com	pl. of module(s)	
5		rical grade		-	
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
		rovides an overview of ne basics of finance, includ			ory. The students will be familia- ons.
Structu	re:				
a. Finar b. Inves c. Inves	ncial Ma stments stments	ent calculation athematics: calculation o s under certainty s taking into account taxe s under uncertainty		and annuities	
c. Divid	s of fin tal stru end po	ancing cture policy (equity versu licy (external versus inte			
		ning outcomes			
(i) unde (ii) solv lues;	erstand e inves	ng the course "Investmen the fundamentals in fina tments decisions by mea re forms of financing and	nncial mathematics; ans of dynamic appro	aches, in particular	via capital plans and present va-
		number of weekly conta			n)
V (2) +		number of weekly conta			
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)					tion offered — if not every seme-
written	examir	nation (approx. 60 minute	es)		
Allocati	ion of p	laces			
Manage (BSc wi as well (60 ECT allocate will be ready a ved, pla applica	estrictionement at the 180 as Bace of the 180 as the 180	and Economics) (BSc with ECTS credits), Wirtschaft helor's students with the ts). (2) The remaining pla cordance with (2) and th ed according to the follow d in the respective degree Il be allocated by lot. b) ( ong applicants with the s	n 180 ECTS credits), V sinformatik (Busines minor Wirtschaftswi aces will be allocated e number of applicat ving quotas: a) Quota e subject; among app Quota 2 (25 % of plac ame number of subje	Virtschaftsmathema s Information System ssenschaft (Busines to students of other ions exceeds the nu a 1 (50 % of places): plicants with the san tes): number of subject semesters, place	schaftswissenschaft (Business tik (Mathematics for Economics) ns) (BSc with 180 ECTS credits) s Management and Economics) r subjects. (3) When places are mber of available places, places total number of ECTS credits al- ne number of ECTS credits achie- ect semesters of the respective s will be allocated by lot. c) Quo- allocated by lot as they become

#### **Additional information**

# Workload

150 h

# Teaching cycle

Teaching cycle: winter semester

Referred to in LPO I (examination regulations for teaching-degree programmes)

## Module appears in

Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Economathematics (2015) Bachelor's degree (1 major) Business Information Systems (2015) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015) Master's degree (1 major) China Business and Economics (2016) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) China Business and Economics (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019) Bachelor's degree (1 major) Business Information Systems (2020)

Module	title				Abbreviation
Manago	erial Ac	counting			12-IntUR-G-152-m01
Module	coord	inator		Module offered by	
holder and Acc		Chair of Business Manage	ement, Controlling	Faculty of Managen	nent and Economics
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites	i	
1 seme	ster	undergraduate			
Conten	ts				
	urse of	fers an introduction to ai	ms and methods of r	nanagerial accountir	ng (cost accounting).
2. Mana 3. Diffe 4. Cost 5. Job c 6. Cost 7. Budg 8. Cost 9. Cost Reading Coenen Friedl/H	agerial agerial rent typ centre osting centre geting a -volum- inform g: berg/F lofman	accounting and financial accounting: basic terms bes of costs accounting based on tot based on total costs accounting and job cost and cost-variance analysi e-profit analysis ation and operating deci	al costs ing based on direct/v s sions echnung und Kostena	analyse, Stuttgart.	ung.
		ditions) ning outcomes			
After co (i) set o (ii) defin the tern (iii) app	ompleti out the ne the ns; oly the	ng the course "Managem responsibilities of the co central concepts of intern basic methods of interna	mpany's internal acc nal enterprise compu l corporate accountir	ounting and control; ting restriction and c ng and control on a fi	
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V (2) +	T (2)				
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	examir	nation (approx. 60 minut	es)		
Allocat	ion of p	olaces			
Manage (BSc wi as well (60 ECT allocate	estricti ement a th 180 as Bac S credi ed in ac	and Economics) (BSc wit ECTS credits), Wirtschaft helor's students with the its). (2) The remaining pla ccordance with (2) and th	h 180 ECTS credits), V sinformatik (Busines minor Wirtschaftswi aces will be allocated e number of applica	Wirtschaftsmathema s Information System ssenschaft (Busines I to students of othe tions exceeds the nu	schaftswissenschaft (Business tik (Mathematics for Economics) ns) (BSc with 180 ECTS credits) s Management and Economics) r subjects. (3) When places are mber of available places, places total number of ECTS credits al-

ready achieved in the respective degree subject; among applicants with the same number of ECTS credits achie-

Bachelor's with 1 major Computer Science (2015)	JMU Würzburg • generated 18-Apr-2025 • exam. reg.
	data record Bachelor (180 ECTS) Informatik - 2015

ved, places will be allocated by lot. b) Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. c) Quota 3 (25 % of places): lottery. (4) A waiting list will be maintained and places re-allocated by lot as they become available.

#### Additional information

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Workload

150 h

#### **Teaching cycle**

Teaching cycle: summer semester

**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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## Module appears in

Bachelor's degree (1 major) Computer Science (2015)

Bachelor's degree (1 major) Mathematics (2015)

Bachelor's degree (1 major) Business Management and Economics (2015)

Bachelor's degree (1 major) Economathematics (2015)

Bachelor's degree (1 major) Business Information Systems (2015)

Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2015)

Master's degree (1 major) China Business and Economics (2016)

Bachelor's degree (1 major) Business Information Systems (2016)

Bachelor's degree (1 major) Economathematics (2017)

Bachelor's degree (1 major) Computer Science (2017)

Bachelor's degree (1 major) Computer Science (2019)

Master's degree (1 major) China Business and Economics (2019)

Bachelor's degree (1 major) Business Information Systems (2019)

Bachelor's degree (1 major) Business Management and Economics (2019)

Bachelor's degree (1 major, 1 minor) Business Management and Economics (Minor, 2019)

Bachelor's degree (1 major) Business Information Systems (2020)

Introdu	<u>title</u>			-	Abbreviation	
	ction t	o Business Administrat	tion - Minor		12-NW-EBWL-152-m	101
Module	e coord	inator		Module offered by		
holder	of the (	Chair of Business Mana	gement and Corporate		nent and Economics	
Finance			Sement and corborate			
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
modern on and Outline 1. What 2. Busin 3. Optir 4. Coop 5. Coord 6. Mark 7. Coord 8. Stak 9. Finar 10. Lega Intende	a busin solution of syll s is bus ness an mal decorration dination dination dination dination eholde ncial in al form	iness? nd its view of human be cisions in business adn n benefits n of conventional mark ure n in companies r value vs. shareholder nplementation of share	his context, we will als red areas of the subjec rings ninistration ets value holder value	o apply selected cor t.	iventional tools for t	he descripti-
tific dis techniq	cipline jues us	in its institutional econ and on the character of a	nomic expression and t an orientation session.	to master appropriat	e level in their probl	
		, number of weekly con	tact hours, language –	- if other than Germa	n)	
V (2) + I	d of ass	sessment (type, scope, ion on whether module			tion offered — if not	
Method			can be enosen to cam	a bonus)		every seme-
Methoo ster, inf		nation (approx. 60 mini		a bonus)		every seme-
<b>Method</b> ster, inf written	exami	nation (approx. 60 mini		a bonus)		every seme-
Methoc ster, inf written Allocat	exami ion of J	nation (approx. 60 mini <b>blaces</b>		a bonus)		every seme-
<b>Methoc</b> ster, inf written <b>Allocat</b> 200 pla	exami <b>ion of j</b> aces (lo	nation (approx. 60 mini <b>blaces</b>		a bonus)		every seme-
Methoc ster, inf written Allocat 200 pla	exami <b>ion of j</b> aces (lo	nation (approx. 60 mini <b>places</b> ottery)		a bonus)		every seme-
Methoc ster, inf written Allocat 200 pla Additio	examin ion of J aces (lo nal inf	nation (approx. 60 mini <b>places</b> ottery)		a bonus)		every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo	examin ion of J aces (lo nal inf	nation (approx. 60 mini <b>places</b> ottery)				every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h	examii ion of J aces (lo nal inf ad	nation (approx. 60 mini olaces ottery) ormation		a bonus)		every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h Teachir	examini ion of p aces (lo nal inf ad ng cycl	nation (approx. 60 mini olaces ottery) ormation	utes)	a bonus)		every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h Teachir Teachir	examin ion of J aces (lo nal inf ad ng cycle	nation (approx. 60 min olaces ottery) ormation e e: every year, winter ser	nester			every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h Teachir Teachir	examin ion of J aces (lo nal inf ad ng cycle	nation (approx. 60 mini olaces ottery) ormation e	nester			every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h Teachir Teachir Referre	examin ion of j aces (lo nal inf ad ng cycl ng cycl ed to in	nation (approx. 60 min olaces ottery) ormation e e: every year, winter ser LPOI (examination reg	nester			every seme-
Methoc ster, inf written Allocati 200 pla Additio  Worklo 150 h Teachir Teachir Referre  Bachelo	examin ion of p aces (lo nal inf ad ng cycl ng cycl ed to in e appea or's de	nation (approx. 60 min olaces ottery) ormation e e: every year, winter ser LPOI (examination reg	nester gulations for teaching-o			every seme-

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Political and Social Studies (2015) Master's degree (1 major) Media Communication (2015) Master's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Computer Science (2017) Master's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Computer Science (2019) Master's degree (1 major) Media Communication (2019) Master's degree (1 major) Diversity management, religion and education (2019) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Geography (2023)

Module	title				Abbreviation	
Introdu	ction t	o Economics - Minor			12-NW-EVWL-152-m	01
Module				Module offered by		
holder nal Fina		Chair of Monetary Econo Applicate	omics and Internatio-	Faculty of Managen	nent and Economics	
ECTS				n of modulo(s)		
		od of grading rical grade	Only after succ. con	ipt. of module(s)		
5 Duratio	L	Module level	Other preveruisites			
Duratio		undergraduate	Other prerequisites			
	I	undergraduate				
Conten						
mers fo econom ronmen In addit	orm the nies, wo ntal issu tion to	ers basic insights into t ir demand and how sup e analyse why governm ues and minimum wage micro topics, we also fo yment, inflation) and lo	pliers make productio ents might want to inte s in labour markets. ocus on macroeconom	n decisions. On the ervene. In this contex ic aspects and analy	basis of first insights kt, we focus on mono se why we observe b	s into market opoly, envi- ousiness cy-
		the euro area.				
		ning outcomes				
ships. 1	They ca	nave a basic knowledge n deal critically with cu y mathematical technic	rrent economic policy	issues and make an	independent judgm	ent. In additi-
Course	<b>s</b> (type,	number of weekly con	tact hours, language –	- if other than Germa	n)	
V (2) +	Ü (2)					
		essment (type, scope, on on whether module			tion offered — if not	every seme-
written	examir	nation (approx. 60 minu	ites)			
Allocat	ion of p	olaces				
Wirtsch schafts	aftswis inform	es. Modules 12-NW-EB\ ssenschaft (Business M atik (Business Informat natics for Economics) B	anagement and Econc ion Systems) Bachelor	omics) Bachelor's (BS 's (BSc with 180 ECT	Sc with 180 ECTS cre	dits), Wirt-
Additio	nal info	ormation				
Worklo	ad					
150 h						
Teachir		2				
			actor			
		e: every year, winter ser	h.			
Referre	a to in	LPOI (examination reg	utations for teaching-	legree programmes)		
		•				
Module						
		gree (1 major) Geograph				
		gree (1 major) Compute gree (1 major) Political a		15)		
		gree (1 major) Compute		- ,,		
Bachel		,,,				
	or's deg	gree (1 major) Compute	r Science (2019)			
Bachelo		gree (1 major) Compute ee (1 major) Diversity m	-	nd education (2019)		
Bachelo Master'	's degre		anagement, religion a	-		
Bachelo Master' Bachelo Bachelo	's degré or's deg or's deg	ee (1 major) Diversity m	anagement, religion an and Social Studies (20 ntelligence and Data S	20)		page 113 / 114



Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Geography (2023)