

Subdivided Module Catalogue for the Subject

Mathematics

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

> Examination regulations version: 2007 Responsible: Institute of Mathematics

JMU Würzburg • generated 11-Jan-2023 • exam. reg. data record 82|105|-|-|H|2007



Course of Studies - Contents and Objectives

No translation available.

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	data record Bachelor (180 ECTS) Mathematik - 2007	

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:

ASP02007

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

09-Dec-2008 (2008-31)

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.

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (95	ECTS credits)			
10-M-ANA-072-m01	Analysis	18	NUM	143
10-M-LNA-072-m01	Linear Algebra	18	NUM	166
10-M-VAN-072-m01	Advanced Analysis	7	NUM	184
10-M-AGZ-072-m01	Algebra, Geometry and Number Theory	22	NUM	141
10-M-DFT-072-m01	Ordinary Differential Equations and Complex Analysis	14	NUM	160
10-M-NM1-072-m01	Numerical Mathematics 1	8	NUM	170
10-M-ST1-072-m01	Stochastics 1	8	NUM	182
Compulsory Electives (55	ECTS credits)	•		
Mathematics 1 (5 ECTS of	redits)			
10-M-NM2-072-m01	Numerical Mathematics 2	5	NUM	171
10-M-ST2-072-m01	Stochastics 2	5	NUM	183
Mathematics 2 (5 ECTS	credits)		I	
10-M-EDM-072-m01	Introduction to Discrete Mathematics	5	NUM	162
10-M-FAN-072-m01	Introduction to Functional Analysis	5	NUM	164
10-M-ORS-072-m01	Operations Research	5	NUM	172
10-M-NLD-072-m01	Non-Linear Dynamics	5	NUM	168
Mathematics 3 (5 ECTS				
10-M-RCN-072-m01	Reading Course Numerical Mathematics	5	NUM	17
, 10-M-RCS-072-m01	Reading Course Stochastics	5	NUM	180
10-M-RCD-072-m01	Reading Course Discrete Mathematics	5	NUM	17
10-M-RCF-072-m01	Reading Course Functional Analysis	5	NUM	176
10-M-RCO-072-m01	Reading Course Operations Research	5	NUM	178
10-M-RCY-072-m01	Reading Course Dynamical Systems	5	NUM	18:
10-M-RCP-072-m01	Reading Course Optimisation	5	NUM	179
Mathematics 4 (5 ECTS				
10-M-BSA-072-m01	Seminar in Analysis	5	NUM	14
, 10-M-BSL-072-m01	Seminar in Linear Algebra	5	NUM	15
10-M-BSE-072-m01	Seminar in Algebra	5	NUM	150
10-M-BSG-072-m01	Seminar in Geometry	5	NUM	15
10-M-BSZ-072-m01	Seminar in Number Theory	5	NUM	158
, 10-M-BSW-072-m01	Seminar in Ordinary Differential Equations	5	NUM	157
10-M-BSC-072-m01	Seminar in Complex Analysis	5	NUM	148
10-M-BSN-072-m01	Seminar in Numerical Mathematics	5	NUM	154
10-M-BSS-072-m01	Seminar in Stochastics	5	NUM	150
10-M-BSF-072-m01	Seminar in Functional Analysis	5	NUM	15
10-M-BSO-072-m01	Seminar in Operation Research	5	NUM	15
10-M-BSD-072-m01	Seminar in Discrete Mathematics	5	NUM	149
Application-oriented Su		, ,		1 43
••	ubject Biology (35 ECTS credits)			
••	Subject Biology Compulsory Courses (10 ECTS credits)			
	1 Genetics, Neurobiology, Behaviour	6	NUM	46
, ,		-		<u> </u>

07-1A1Z-072-m01	Structure and Function of Cells ubject Biology Compulsory Electives (25 ECTS credits)	4	NUM	
o7-3A3Bl-072-m01	Bioinformatics	2	NUM	Т
07-3A30E-072-m01	Ecology of plants and animals	6	NUM	┢
	Developmental Biology for advanced students	-	NUM	╀
	Cell Biology for advanced students	5	NUM	┢
		5		╀
	Microbiology for advanced students	5	NUM	╀
	Bioinformatics for advanced students	5	NUM	╞
07-4BFMZ5-092-m01	Biotechnology I	5	NUM	╀
07-4BFN-	Neurobiology for advanced students	5	NUM	
VO1-092-m01				╀
07-4BFN-	Behavioural physiology and sociobiology for advanced stu-	5	NUM	
V02-092-m01	dents			╞
07-4BFN-	Ecology of Animals for advanced students	5	NUM	
V03-092-m01				╀
07-4BFPS1-092-m01	Specific Plant Physiology	5	NUM	╀
	Biophysics - Basic course	5	NUM	╀
	Biochemistry - Basic course	5	NUM	╞
	Basics plant Ecophysiology	5	NUM	╞
07-4BFPS5-092-m01	Pharmaceutical bio analytics	5	NUM	\perp
03-4S1HG-092-m01	Human Genetics	5	NUM	
03-4S1IM-092-m01	Immunology I	5	NUM	
03-4S1PC-092-m01	Physiological Chemistry I	5	NUM	
03-4S1VL-092-m01	Virology I	5	NUM	
07-4S1MZ1-092-m01	Advanced Light- and Electron-Microscopy	3	NUM	
07-4S1MZ2-092-m01	Analysis of Chromosomes	3	NUM	Т
07-4S1MZ3-092-m01	Ecology and Developmental Biology of marine organisms	5	NUM	Γ
07-4S1MZ4-092-m01	Methods in Biotechnology	2	NUM	Γ
07-4S1MZ5-092-m01	Aspects of modern Biotechnology	2	NUM	Γ
07-4S1MZ6-092-m01	Special Bioinformatics I	5	NUM	T
07-4S1N- VO1-092-m01	Neurobiology I	5	NUM	
07-4S1N-				┢
V02-092-m01	Aspects of Integrative Behavioural Biology	5	NUM	
07-4S1N- V03-092-m01	Functional Morphology of arthropods	5	NUM	
07-4S1N- VO4-092-m01	Ecology of insects	5	NUM	T
07-4S1N-	Ecology of populations	5	NUM	┢
V05-092-m01				\perp
07-4S1PS1-092-m01	Molecular modelling - From DNA to protein	5	NUM	
07-4S1PS2-092-m01	Introduction Methods in Plant Ecophysiology	5	NUM	
07-4S1PS3-092-m01	Pharmaceutical Drugs	5	NUM	
07-4S1PS4-092-m01	Methods Pharmaceutical Biology - practical course	5	NUM	
07-5S2N-	Neurobiology II		NUM	Г

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07-5S2N- VO2-092-m01	Integrative Behavioural Biology II	10	NUM	91
07-5S2N- VO3-092-m01	Ecology of animals II	10	NUM	92
	Methods in molecular cell - and developmental Biology	10	NUM	85
07-5S2MZ2-092-m01	Specific Microbiology II	10	NUM	87
	Specific Bioinformatics II	10	NUM	88
	Specific Biotechnology II	10	NUM	89
	Physiology of membrane transport mechanisms	10	NUM	94
	Molecular biology of plants	10	NUM	95
	Protein biochemistry and expression of recombinant proteins	10	NUM	96
	Specific ecophysiology of plants	10	NUM	97
	Molecular biological methods in pharmaceutical biology	10	NUM	98
	Biochemical methods in pharmaceutical Biology	10	NUM	99
03-5S2IM-092-m01	Immunology II	10	NUM	17
03-5S2VL-092-m01	Virology II	10	NUM	20
03-5S2PC-092-m01	Physiological Chemistry II	10	NUM	18
07-5EP-072-m01	External Practical Course	10	NUM	84
07-5AP-072-m01	Practical Course as exchange student		NUM	
		10		83
07-1A1E-072-m01	Evolution - Basics and Principles (Lecture and Practice)	1	NUM	42
07-1A1T-072-m01	The Animal Kingdom	4	NUM	44
07-1A1P-072-m01	he Plant Kingdom		NUM	43
07-3A3GE-072-m01	Genetics	2	NUM	49
08-BC-072-m01	Biochemistry	6	NUM	100
	bject Chemistry (35 ECTS credits)			
	ubject Chemistry Compulsory Courses (26 ECTS credits)			. <u> </u>
08-0C1-072-m01	Organic Chemistry 1	5	NUM	102
08-PC1-072-m01	Principles of quantum mechanics and spectroscopy	8	NUM	104
11-EFNF-072-m01	Introduction to Physics for Students of Non-physics-related Mi-	7	NUM	188
	nor Subjects			
08-CM1-072-m01	General Chemistry for Mathematics Majors	6	NUM	101
Application-oriented S	ubject Chemisty Compulsory Electives (9 ECTS credits)			
08-0C2-072-m01	Organic Chemistry 2	9	NUM	103
08-PC3-072-m01	Physical and Theoretical Chemistry 3: Symmetry and Quantum Chemistry	6	NUM	105
08-TC-072-m01	Theoretical Models in Chemistry	3	NUM	106
Application-oriented Su	bject Geography (35 ECTS credits)			
Application-oriented S	ubject Geography Compulsory Electives 1 (15 ECTS credits)			
09-HG1-072-m01	General Human Geography	15	NUM	108
09-PG1-072-m01	General Physical Geography	15	NUM	120
Application-oriented S	ubject Geography Compulsory Electives 2 (10 ECTS credits)	-		
09-KART-072-m01	Cartography and Geoinformation	10	NUM	111
09-FERN-072-m01	Remote Sensing	10	NUM	107
· ·	ubject Geography Compulsory Electives 3 (10 ECTS credits)		<u> </u>	<u> </u>
09-PG2-072-m01	Special Problems of Physical Geography	10	NUM	122
09-PG3-072-m01	Applied Physical Geography	10	NUM	124
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09-MT1-072-m01	· · ·	sition and Processing in Physical Geography	5	NUM	112
09-MT3-072-m01	Working M	ethods: Solid Earth System	10	NUM	114
09-MT5-072-m01	Working Methods of Physical Geography			NUM	117
09-HG2-072-m01	Special Iss	ues of Human Geography	10	NUM	109
09-HG3-072-m01	Applied Hu	ıman Geography	10	NUM	110
09-MT2-072-m01	Theories a	nd Methodology in Human Geography	5	NUM	113
09-MT4-072-m01	Quantitativ	ve and Qualitative Regional Analysis	10	NUM	116
09-MT6-072-m01	Methods o	f Planning in Human Geography	10	NUM	119
Application-oriented Su	bject Comp	uter Science (35 ECTS credits)			
Application-oriented S	ubject Com	puter Science Compulsory Electives (35 ECTS credits	5)		
10-l-lÜ-072-m01	Informatio	n transmission	8	NUM	129
10-I-RAL-072-m01	Digital com	nputer systems	8	NUM	135
10-I-TI-072-m01	Theoretica	l informatics	8	NUM	139
10-I-ADS-072-m01	Algorithm a	and data structures	8	NUM	125
10-I-AR-072-m01	Automatio	n and control technology	8	NUM	126
10-I-DB-072-m01	Data bases	5	5	NUM	127
10-I-GT-072-m01	Graphtheo	retical concepts and algorithms	8	NUM	128
10-I-KT-072-m01	Theory of c	omplexity	8	NUM	130
10-I-LOG-072-m01	Logic for in	formatics	5	NUM	131
10-I-00P-072-m01	Object orie	ented programming	5	NUM	132
10-I-PP-072-m01	Practical co	ourse in programming	9	B/NB	133
10-I-RAK-072-m01		architecture	5	NUM	134
10-I-RK-072-m01	· · ·	networks and communication systems	8	NUM	136
10-I-ST-072-m01	Software te		8	NUM	137
10-I-SWP-072-m01		Practical course in software		B/NB	138
10-I-WMS-072-m01		Knowledge management systems and data mining		NUM	140
Application-oriented Su	-		10		-40
		osophy Compulsory Courses (20 ECTS credits)			
06-B-P1-072-m01		of Philosophy	10	NUM	22
06-B-P2-072-m01		<i>i</i> and the sciences	10	NUM	24
	1	osophy Compulsory Electives (15 ECTS credits)			1
06-B-P3-072-m01	· ·	l philosophy	10	NUM	26
06-B-P4-072-m01	Practical P		10	NUM	27
06-B-P5-072-m01	History of p	1 /	10	NUM	28
06-B-P6-072-m01		search in philosophy	10	NUM	29
06-B-W1-072-m01		sis: Ancient Philosophy		NUM	31
06-B-W2-072-m01	· · ·	sis: Medieval Philosophy	5	NUM	
06-B-W3-072-m01	· · · ·	sis: modern philosophy	5	NUM	34
06-B-W4-072-m01	1	sis: contemporary philosophy	5	NUM	35
00-8-104-072-11101	· · · · ·	plines of theoretical philosophy: metaphysics and	5		36
06-B-W5-072-m01	epistemolo		5	NUM	37
06-R-W6-072-m01	· ·	sciplines of theoretical philosophy			28
06-B-W6-072-m01	-		5	NUM	38
06-B-W7-072-m01	action	Basic disciplines of practical philosophy: ethics and theory of action		NUM	39
06-B-W8-072-m01		sciplines of practical philosophy	5	NUM	40
06-B-W9-072-m01	Problems o	of Older Philosophy: Ancient/Medieval	5	NUM	41
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06-B-W10-072-m01	Problems o	of Modern/Contemporary Philosophy	5	NUM	30
06-B-W11-072-m01	Problems o	of Theoretical Philosophy	5	NUM	32
06-B-W12-072-m01	Problems o	Problems of Practical Philosophy			33
Application-oriented Su	bject Physi	cs (35 ECTS credits)			
Application-oriented S	ubject Phys	sics Compulsory Courses (16 ECTS credits)			
	Introductio	n to Physics Part 1 for students of Physics Related			
11-ENNF1-062-m01	Minor Subj	ects	7	NUM	190
	Introductio	n to Physics Part 2 for students of Physics Related			
11-ENNF2-062-m01	Minor Subj	ects	7	NUM	191
11-PFR-072-m01	Measurem	ents and Data Analysis	2	NUM	192
Application-oriented S	ubject Phys	sics Compulsory Electives 1 (3 ECTS credits)			
	Physics La	boratory Course for students of Physics Related Mi-		D /ND	
11-PNNF-062-m01	nor Subjec	ts	3	B/NE	195
11-PG-IAF-072-m01	Practical C	ourse	4	B/NE	3 193
Application-oriented S	ubject Phys	sics Compulsory Electives 2 (16 ECTS credits)			•
	Experimen	tal Physics 3 (Optics, Quantum Phenomena, Intro-	0		
11-E3-072-m01	duction Ate	omic Physics)	8	NUM	186
11-E4-072-m01	Experimen	perimental Physics 4 (Introduction to Solid State Physics)		NUM	187
11-T1-072-m01	Theoretica	Physics 1 (Theoretical Mechanics)	8	NUM	196
11 Ta 072 mol	Theoretica	Physics 2 (Theoretical Electrostatics and Electrody-	8	NUM	10
11-T2-072-m01	namics)		0	110/01	197
11-T3-072-m01	Theoretica	Physics 3 (Theoretical Quantum Mechanics)	8	NUM	198
11-T4-072-m01	Theoretica	Physics 4 (Theoretical Thermodynamics and Stati-	8	NUM	100
stics)			0	NOM	199
Application-oriented Su	bject Busin	ess Management and Economics (35 ECTS credits)			
Application-oriented S	ubject Busi	ness Management and Economics Compulsory Cour	ses (30 EC	TS credits)
12-IntUR-G-072-m01	Manageria	l Accounting	5	NUM	20
12-ExtUR-G-072-m01	Financial A	ccounting	5	NUM	20
12-EBWL-G-072-m01	Introductio	n to Business Administration	5	NUM	20
12-EVWL-G-072-m01	Introductio	n to Economics	5	NUM	20
12-Mak1-G-072-m01	Macroecor	omics 1	5	NUM	20
12-Mik1-G-072-m01	Microecon	omics 1	5	NUM	212
Application-oriented S	iubject Busi	ness Management and Economics Compulsory Elect	ives (5 ECT	S credits)	
12-Mark-G-072-m01	Introductio	n to Market-Oriented Management	5	NUM	210
12-BPL-G-072-m01	Supply, Pro tion	oduction and Operations Management. An Introduc-	5	NUM	20
12-I&F-G-072-m01	Investmen	t and Finance. An Introduction	5	NUM	20
12-Mak2-G-072-m01	Macroecor	omics 2	5	NUM	20
12-Mik2-G-072-m01	Microecon	omics 2	5	NUM	21/
12-WiPo-G-072-m01	Introductio	n to Economic Policy	5	NUM	21
Thesis (10 ECTS credits)					
10-M-BAM-072-m01	Thesis Mat	hematics (Bachelor Thesis)	10	NUM	146
Subject-specific Key Skills	6 (15 ECTS ci	redits)			
10-M-VKM-072-m01	Preparator	y Course Mathematics	2	B/NB	18
10-M-PRG-072-m01		ng Course for Mathematics and other students	3	B/NE	
10-M-COM-072-m01		riented Mathematics	3	B/NE	· ·
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10-M-BAK-072-m01	Defense of Bachelor Thesis in Mathematics	2	NUM	145

10-M-BAK-072-mo1 Defense of Bachelor Thesis in Mathematics 2 NUM 145
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Module title					Abbreviation		
Human	Geneti	cs			03-4S1HG-092-m01		
Module	e coord	inator		Module offered by			
holder of the Chair of of Human Genetic		cs	Faculty of Medicine				
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	By way of exception	, additional prerequi	isites are listed in the section on		
			assessments.				
Conten	ts						
		of and analytical metho ype and chromosome ab			Characterisation of the normal volution.		
		ning outcomes					
					actical experience in human cyto- critically interpret cytogenetic fin-		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)		
compo • co • co	 This module comprises 2 module components. Information on courses will be listed separately for each module component. 03-4S1HG-1HZ-092: V + Ü (no information on SWS (weekly contact hours) and course language available) 03-4S1HG-2HZ-092: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component 03-4S1HG-1HZ-092: Human Genetics (Lecture and Laboratory Practice) Hu-						
• 3 • 2 a • 0 Assess • 2 • p	 2 written examinations (multiple choice): mid-semester examination (15 minutes), end-of-semester examination (20 minutes) Other prerequisites: A basic knowledge of genetics is recommended. Assessment in module component 03-451HG-2HZ-092: Human Genetics (Seminar) 2 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) 						
Allocat	ion of p	olaces					
Additional information							
Worklo	ad						
Referre	d to in	LPOI (examination regu	lations for teaching	degree programmoc)			
Referre			lations for leaching-				
Module appears in Bachelor' degree (1 major) Biology (2007)							

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Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)

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Modul	Module title								
	ology I				03-4S1lM-092-m01				
Module coordinator				Module offered by					
holder	of the F	Professorship of Immuno	genetics	Faculty of Medicine					
ECTS		od of grading	Only after succ. con	Only after succ. compl. of module(s)					
5	<u> </u>	rical grade							
Duratio		Module level	Other prerequisites						
1 seme	ster	undergraduate							
Conter	Its								
dy reco ergies, on gen	This module gives an introduction to immunology. The following questions will be addressed: How does the bo- dy recognise and eliminate pathogens and tumour cells? How can the immune system damage its own body (all- ergies, autoimmunity)? Organs, cells and molecules of the immune system will be presented with an emphasis on genetic and molecular mechanisms of recognition and elimination of foreign substances by the immune sy- stem. The most important immunological techniques will be introduced and applied.								
Intend	ed learr	ning outcomes							
system mune s	i. The ai systems	acquire a practical knowl re familiar with the mech They acquire a fundam ctions and molecules.	anisms of self and no	on-self discrimination	n by the adaptive and	d innate im-			
Course	e s (type,	number of weekly conta	ct hours, language –	· if other than Germa	n)				
compo • c • c Metho ster, in	nent. 03-4S1I 03-4S1I 03-4S1I d of ass formati	omprises 2 module comp A-1IM-092: V + Ü (no info A-2IM-092: P (no informa essment (type, scope, la on on whether module ca	rmation on SWS (wee ation on SWS (weekly nguage — if other tha an be chosen to earn	ekly contact hours) a contact hours) and an German, examina a bonus)	nd course language course language ava tion offered — if not	available) ilable) every seme-			
low. Ui		this module comprises ated otherwise, successf nents.							
 Assessment in module component o3-4S1IM-1IM-092: Introduction into Immunology (Lecture and Practice) Introduction into Immunology (Lecture and Practice) 2 ECTS, Method of grading: numerical grade written examination (30 minutes) Language of assessment: German, English where required Assessment in module component o3-4S1IM-2IM-092: Immunology (Laboratory Course) 3 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Language of assessment: German, English where required 									
Allocat	ion of p	laces							
Additio	onal info	ormation							
Worklo	ad								
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)					
	Referred to in LPO I (examination regulations for teaching-degree programmes)								
Modul	e appea	rs in							
		ree (1 major) Biology (200	07)						
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Bachelor' degree (1 major) Mathematics (2007)

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Module title			Abbreviation		
Physiol	Physiological Chemistry I				03-4S1PC-092-m01
Module coordinator				Module offered by	
holder	of the C	hair of Physiological Che	emistry	Faculty of Medicine	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	r	rical grade			
Duratio		Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
model s tion of I on of se	System DNA an elected on of p	s (zebrafish, medaka, Xip d RNA in single-cell emb tissues and organs (neu roteins in-situ. Demonstr	phophorus) for biome ryos. Fluorescent mic ral tissues, cartilage)	dical research. Pher roscopy-based bioin . In-situ hybridisatio	ulness of the mainstream fish notyping of mutants. Microinjec- naging techniques. Visualisati- n of mRNA. Immunhistochemical croscopy. Behavioural analyses
Intende	d learr	ning outcomes			
tempora types of	al and : f devel	spatial RNA and protein e	expression in situ, ap	praise expression pa	able to delineate and describe atterns and recognise pheno- edicine for their usefulness to
Courses	s (type,	number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü (n	o infor	mation on SWS (weekly o	contact hours) and co	ourse language availa	able)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	examir	nation (60 minutes)			
Allocati	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	-	ree (1 major) Biology (200 ree (1 major) Mathematic			

Module	e title			Abbreviation		
Virolog	y I			03-4S1VL-092-m01		
Module	e coordinator		Module offered by			
	of the Chair of Virology		Faculty of Medicine			
ECTS	Method of grading	Only after succ. con	,			
5	numerical grade					
Duratio		Other prerequisites				
1 seme						
Conten		_				
	g safely in a BSL-2 laboratory; lysis of a viral quasispecies.	cell culture; virus prod	uction; virus titration	n; virus sequencing;	phylogene-	
Intende	ed learning outcomes					
on of vi	ts have developed a fundamer iruses, virus-host cell interactio and molecular techniques of v	ons and mechanisms o	of action of antiviral of			
Course	s (type, number of weekly cont	act hours, language –	if other than Germa	n)		
compo • 0	93-4S1VL-1VL-092: V (no inform	ation on SWS (weekly	contact hours) and c	course language ava	ilable)	
	93-4S1VL-3VL-092: P (no inform 93-4S1VL-2VL-092: S (no inform					
	d of assessment (type, scope, l formation on whether module			tion offered — if not	every seme-	
low. Ur vidual a Assess 1 • 1 • w • L Assess • 3 • w	Assessment in this module comprises the assessments in the individual module components as specified be- low. Unless stated otherwise, successful completion of the module will require successful completion of all indi- vidual assessments. Assessment in module component og-4S1VL-1VL-og2: Basic Virology (Lecture and Practice) • 1 ECTS, Method of grading: numerical grade • written examination (20 minutes) • Language of assessment: German, English where required Assessment in module component og-4S1VL-3VL-og2: Virology (Laboratory Course) • 3 ECTS, Method of grading: numerical grade • written examination (20 minutes) or oral examination (20 minutes)					
 Language of assessment: German, English Assessment in module component 03-4S1VL-2VL-092: Seminar on General Virology 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Language of assessment: German, English where required 						
Allocat	ion of places					
Additio	nal information					
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
	e appears in					
	or' degree (1 major) Biology (20					
Bachelor's	with 1 major Mathematics (2007)		g ● generated 11-Jan-2023 ● e: achelor (180 ECTS) Mathemat	-	page 15 / 216	



Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 16 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Immuno log south a simulation in gradeModule offered byRoutly of MedicineRoutly of MedicineRoutly of MedicineRoutly of MedicineConserve to gradingOnly after succ. compl. of module(s)Immuno log south a simulation colspan="2">Immuno log south a simulation colspan="2"Conset to sout colspan="2"Immuno log south a simulation colspan="2"Immuno log south a simulation colspan="2"Specific competerce about the function all mechanisms of the immuno system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature.Courses (type, number of weekly contact hours) and curse language available)Meter do fare- sinter to sout the sinter souther south cara a bours)Immuno log souther souther module can be chosen to earn a bours)Immuno log south a similation in group south o similation of group south o similation of one cara didate car (approx. 30 minutes) or d) or al examination in group south or souther souther souther module can be chosen to earn a bours)Immuno log souther souther module can be chosen to earn a bours)Immuno log souther souther module can be chosen to earn a bours)<	Module title				Abbreviation	
holder of the Professorship of Immunogenetics Faculty of Medicine ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents	Immunology II				03-5S2IM-092-m01	
ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contemts Specific problems in immunology such as immune modulation, immunogenetics, infection immunology, signal transduction in immune cells. Intended learning outcomes The students acquire specific competence about the functional mechanisms of the immune system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature. Courses (type, number of weekly contact hours, language — if other than German) V + P (no information on SWS (weekly contact hours) and course language available) 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) writter examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Alditotarian Information Referred to in LPO1 (examination regulations for teaching-degree programmes)	Module	e coord	inator		Module offered by	
10 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Specific problems in immunology such as immune modulation, immunogenetics, infection immunology, signal transduction in immune cells. Intended learning outcomes Intended learning outcomes The students acquire specific competence about the functional mechanisms of the immune system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature. Courses (type, number of weekly contact hours, language — if other than German) V + P (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earna a bonus) a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Additional information Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007) </td <td>holder</td> <td>of the F</td> <td>Professorship of Immuno</td> <td>genetics</td> <td>Faculty of Medicine</td> <td></td>	holder	of the F	Professorship of Immuno	genetics	Faculty of Medicine	
Duration Module level Other prerequisites 1 semester undergraduate Contents Specific problems in immunology such as immune modulation, immunogenetics, infection immunology, signal transduction in immune cells. Intended learning outcomes The students acquire specific competence about the functional mechanisms of the immune system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature. Courses (type, number of weekly contact hours, language if other than German) V + P (no information on SWS (weekly contact hours) and course language available) 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) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 20 to 30 minutes) Allocation of places	ECTS			Only after succ. com	pl. of module(s)	
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Specific problems in immunology such as immune modulation, immunogenetics, infection immunology, signal transduction in immune cells. Intended learning outcomes The students acquire specific competence about the functional mechanisms of the immune system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature. Courses (type, number of weekly contact hours, language — if other than German) V + P (no information on SWS (weekly contact hours) and course language available) 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. 6o minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 6o minutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Modulia information Module appears in Bachelor' degree (1 major) Biology (2007)	1 seme	ster	undergraduate			
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<pre>qualified to plan and perform experiments under supervision and present the data, taking into account current li- terature.</pre> Courses (type, number of weekly contact hours, language — if other than German) V + P (no information on SWS (weekly contact hours) and course language available) 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) a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one can- didate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 min- nutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	Intende	ed learr	ning outcomes			
V + P (no information on SWS (weekly contact hours) and course language available) 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) a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one can- didate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	qualifie	ed to pl				
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) a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one can- didate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Additional information Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)
ster, information on whether module can be chosen to earn a bonus) a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one can- didate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	V + P (n	infor	mation on SWS (weekly o	contact hours) and co	urse language availa	able)
didate each (approx. 30 minutes) or d) oral examination in groups (groups of up to 3 candidates, approx. 60 mi- nutes) or e) presentation (approx. 20 to 30 minutes) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)						tion offered — if not every seme-
Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	didate	each (a	pprox. 30 minutes) or d)	oral examination in g		
Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	Allocat	ion of p	olaces			
Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)						
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)	Additio	nal info	ormation			
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in Bachelor' degree (1 major) Biology (2007)						
Module appears in Bachelor' degree (1 major) Biology (2007)	Worklo	ad				
Module appears in Bachelor' degree (1 major) Biology (2007)						
Module appears in Bachelor' degree (1 major) Biology (2007)	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Bachelor' degree (1 major) Biology (2007)	-					
Bachelor' degree (1 major) Biology (2007)	Module appears in					
				07)		
		-				

Module	title				Abbreviation	
Physiol	ogical	Chemistry II			03-5S2PC-092-m01	
Module	coord	inator		Module offered by		
	holders of the Chairs of Physiological Chemistry, Develop- mental Biochemistry, Biochemistry and Molecular Biology			Faculty of Medicine		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10	numei	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Conten	ts					
from hu lecular	ıman b genetio	iochemistry. Physiologica	al processes are com ical networks are pre	pared with example	based on selected questions s of pathological aberrations. Mo- bles from developmental bioche-	
Intende	ed learr	ning outcomes				
mistry b	based o so have	on individually assigned t e developed skills in expe	tasks, using techniqu	ues of modern molec	problems in physiological che- ular biology and biochemistry. sis and the presentation of	
Courses	s (type,	, number of weekly conta	ct hours, language –	- if other than Germa	in)	
compor • o • o Method	nent. 3-5S2P <u>3-5S2P</u> 1 of ass	C-1HB1-092: Ü (no inform C-2HB-092: S (no inform essment (type, scope, la	nation on SWS (week ation on SWS (weekl nguage — if other tha	ly contact hours) and y contact hours) and an German, examina	sted separately for each module d course language available) course language available) tion offered — if not every seme-	
		on on whether module ca		·	e components as specified be-	
	less st	ated otherwise, successf			successful completion of all indi-	
 Assessment in module component 03-5S2PC-1HB1-092: Physiological chemistry 2 - Human biochemistry (laboratory course) 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups (groups of 2 or 3 candidates, approx. 60 minutes) or e) presentation (approx. 20 to 30 minutes) Language of assessment: German, English Assessment in module component 03-5S2PC-2HB-092: Physiological chemistry 2 - Seminar on human bioche- 						
• 1	 mistry 1 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) 					
Allocation of places						
Additional information						
Worklo	ad					
Poforro	d to in	LPOI (examination regu	lations for toaching	dogroo programmac)		
				aegree programmes)		

Module appears in

Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 19 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title			Abbreviation			
Virolog	Virology II 03-5S2VL-092-m01					
Module	e coordii	nator		Module offered by	·	
holder of the Chair of Virology		Faculty of Medicine				
ECTS	Metho	d of grading	Only after succ. cor	npl. of module(s)		
10	numeri	cal grade				
Duratio		Module level	Other prerequisites	i		
1 seme	ster	undergraduate				
Conten	ts					
action o	of viruse	es with host cells or th	ogical problems using s e complete host, new o pathogenesis of prion	developments in mol		
Intende	ed learn	ing outcomes				
			c knowledge of molect present them, taking in			erform experi-
Course	s (type,	number of weekly cor	itact hours, language –	– if other than Germa	n)	
compoi • 0	nent. 13-5S2Vl	1VL-092: V (no inforr	nponents. Information nation on SWS (weekly	contact hours) and	course language ava	ilable)
			mation on SWS (weekly mation on SWS (weekly			
			language — if other th can be chosen to earn		tion offered — if not	every seme-
low. Un		ted otherwise, succes	es the assessments in t soful completion of the			
 Assessment in module component o3-5S2VL-1VL-092: Virology 2 (lecture) 1 ECTS, Method of grading: numerical grade written examination (30 minutes) Language of assessment: German, English where required Assessment in module component o3-5S2VL-2VL-092: Virology 2 (seminar) 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Language of assessment: German, English Assessment in module component o3-5S2VL-2VL-092: Virology 2 (laboratory course) 8 ECTS, Method of grading: numerical grade 						
			es) or oral examination			
			nan, English where req	uneu		
Allocat	ion of p	aces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
		ee (1 major) Biology (2	.007)			
	-	r Mathematics (2007)	JMU Würzbur	g • generated 11-Jan-2023 • e Bachelor (180 ECTS) Mathema	_	page 20 / 216



Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 21 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title					Abbreviation	
Principles of Philosophy 06-B-P1-072-m01						
Modul	e coord	inator		Module offered by		
holder	of the (Chair of Practical Philos	sophy	Institute of Philoso	phy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Durati		Module level	Other prerequisites			
1 seme		undergraduate				
Conter						
	Introduction to the systems and the history of philosophy; introduction to academic writing and research in phi- losophy; introduction to formal logic; insight into a period in the history of philosophy.					
Intend	ed lear	ning outcomes				
phy - k maste (skills neral p	nowled ry of the to be te principle	ge of, and ability to ap fundamentals of form sted in assessments): s of argumentation su	t-related outcomes: - ir ply, methods in philoso al logic - insight into a - ability to apply the pr ch as transparency, con al issues in a structured	ophy and ability to fo period in the history inciples of logic to a nsistency, discursivit	ollow the rules of sch of philosophy Forma rgumentation - abilit ty, completeness, an	nolarly work - al outcomes by to apply ge- nd generalisa-
Course	es (type	, number of weekly cor	itact hours, language –	- if other than Germa	ın)	
compc • (• (onent. 06-B-P1 06-B-P1 06-B-P1	-1-072: Ü (no informati -2-072: Ü (no informati -3-072: Ü + Ü (no inforr	mponents. Information on on SWS (weekly con on on SWS (weekly cor nation on SWS (weekly	tact hours) and cour Itact hours) and cour contact hours) and c	se language availab rse language availab course language ava	le) vle) vilable)
			language — if other th can be chosen to earn		tion offered — if not	every seme-
low. U		ated otherwise, succes	es the assessments in t soful completion of the			
 Assessment in module component o6-B-P1-1-072: Introduction to academic working techniques 2 ECTS, Method of grading: (not) successfully completed 2 to 3 written assessments (approx. 1 page each) and/or oral assessments (approx. 5 minutes each) Assessment in module component o6-B-P1-2-072: Formal Logic 3 ECTS, Method of grading: (not) successfully completed written examination (90 minutes) Assessment in module component o6-B-P1-3-072: Principles of Philosophy: historical epochs, main works, authors Principles of Philosophy: historical epochs, main works, authors 						
-		Method of grading: nu mination (approx. 25 n	-			
Alloca	tion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appea	ars in				
Bachelor's	with 1 ma	or Mathematics (2007)		g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	-	page 22 / 216

Bachelor' degree (1 major) Geography (2008) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Philosophy (Minor, 2008) Bachelor's degree (1 major, 1 minor) Philosophy (2008) Bachelor's degree (2 majors) Philosophy (2008)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 23 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title	Abbreviation					
Philosophy and the sciences			06-B-P2-072-m01			
Module coordinator		Module offered by				
holder of the Chair of Theoretical Philo	sophy	Institute of Philoso	ohy			
ECTS Method of grading	Only after succ. con	pl. of module(s)				
10 numerical grade						
Duration Module level	Other prerequisites					
1 semester undergraduate						
Contents						
Introduction to the theory of intellectua sciences; philosophical bases of the n			humanities and the	social		
Intended learning outcomes						
Intended learning outcomes: Content-I al intellectual disciplines - ability to re- ability to organise topics into overarch limits of various intellectual discipline thought, culture, and knowledge Forma sophical texts and issues - ability to or schemata - ability to present philosopl	flect on the historical ing historical, social, s - knowledge of, and al outcomes (skills to ganise concepts and	and intellectual orig and political schema ability to criticise, b be tested in assess philosophical positi	ins of our knowledg ata - insight into the asic assumptions in ments): - ability to a ons into overarching	e culture - scope and systems of nalyse philo- g intellectual		
Courses (type, number of weekly conta	· · ·	-				
This module comprises 2 module comp component. • 06-B-P2-1-072: S (no information • 06-B-P2-2-072: S (no information	ponents. Information 1 on SWS (weekly con	on courses will be li tact hours) and cour	sted separately for e se language availab	le)		
Method of assessment (type, scope, la ster, information on whether module c	anguage — if other tha	an German, examina				
Assessment in this module comprises low. Unless stated otherwise, success vidual assessments.						
 5 ECTS, Method of grading: nume written examination (approx. 120 Assessment in module component of 	 Assessment in module component o6-B-P2-1-072: Philosophical principles of arts and humanities 5 ECTS, Method of grading: numerical grade written examination (approx. 120 minutes) Assessment in module component o6-B-P2-2-072: Philosophical principles of natural sciences and technology 5 ECTS, Method of grading: numerical grade 					
Allocation of places						
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
	0					
Module appears in						
Bachelor' degree (1 major) Geography Bachelor' degree (1 major) Mathematic Bachelor' degree (1 major) Mathematic Bachelor' degree (1 major) Business M	cs (2008) cs (2007)	omics (2009)				
Bachelor's with 1 major Mathematics (2007)	JMU Würzburg	g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathemat		page 24 / 216		

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Business Management and Economics (2007) Bachelor' degree (1 major) Business Management and Economics (2008) Bachelor' degree (1 major) Business Management and Economics (2010) Bachelor' degree (1 major) Business Information Systems (2007) Bachelor' degree (1 major) Business Information Systems (2009) Bachelor' degree (1 major) Business Information Systems (2008) Bachelor's degree (1 major, 1 minor) Philosophy (Minor, 2008) Bachelor's degree (1 major, 1 minor) Philosophy (2008) Bachelor's degree (2 majors) Philosophy (2008)

Module title				Abbreviation	
Theoretical philosophy					06-B-P3-072-m01
Module	coord	inator		Module offered by	
holder	of the Q	Chair of Theoretical Philos	sophy	Institute of Philoso	phy
ECTS		od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Content	ts				
		o theoretical philosophy,	using basic problem	s and paradigmatic t	texts.
Intende	ed learr	ning outcomes			
guish b argume cess of philoso	etweer entatior theore phical	n different methods in the n and justification within tical opinion formation Fo texts and issues - ability	eoretical philosophy theoretical philosoph ormal outcomes (skil to organise concepts	familiarity with, and ny - ability to reflect Is to be tested in the and philosophical p	ophy - ability to use and distin- d ability to evaluate, methods of on the factors involved in the pro- e assessment): - ability to analyse positions into overarching intel- linguistically appropriate man-
· · · · · ·		, number of weekly conta			
Ü + Ü +	S + S (no information on SWS (\	weekly contact hours)) and course languag	ge available)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	examir	nation (approx. 180 minu	tes)		
Allocati	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module appears in					
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Philosophy (Minor, 2008) Bachelor's degree (1 major, 1 minor) Philosophy (2008) Bachelor's degree (2 majors) Philosophy (2008)					

Module title				Abbreviation	
Practical Philosophy					06-B-P4-072-m01
Module coordinator				Module offered by	
holder	of the (Chair of Practical Philoso	ohy	Institute of Philoso	phy
ECTS		od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Introdu	ction to	o practical philosophy, us	sing basic problems a	and paradigmatic tex	xts.
Intende	ed learı	ning outcomes			
tical ph betwee tation a ral opin texts ar ta - abil Course Ü + Ü + Methoo ster, inf	Intended learning outcomes: Content-related outcomes: - an overview of basic problems and positions in prac- tical philosophy - an overview of systems and disciplines in practical philosophy - ability to use and distinguish between different methods in practical philosophy - knowledge of, and ability to evaluate, methods of argumen- tation and justification within practical philosophy - ability to reflect on the factors involved in the process of mo- ral opinion formation Formal outcomes (skills to be tested in the assessment): - ability to analyse philosophical texts and issues - ability to organise concepts and philosophical positions into overarching intellectual schema- ta - ability to present philosophical positions in a structured and linguistically appropriate manner Courses (type, number of weekly contact hours, language — if other than German) $\ddot{U} + \ddot{U} + S + S$ (no information on SWS (weekly contact hours) and course language available) 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. 180 minutes)				
		Jaces			
Additio	nal inf	ormation			
Worklo	ad		,		
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachel	Bachelor' degree (1 major) Mathematics (2008)				
	Bachelor' degree (1 major) Mathematics (2007)				
		gree (1 major, 1 minor) Ph		8)	
		gree (1 major, 1 minor) Ph			
Bachel	or's de	gree (2 majors) Philosopł	19 (2008)		

Module title				Abbreviation	
History of philosophy				06-B-P5-072-m01	
Module coordina	ator		Module offered by		
holder of the Cha	air of the History of Phi	losophy	Institute of Philosop	ohy	
ECTS Method	of grading	Only after succ. com	pl. of module(s)		
10 numerica	al grade				
Duration M	odule level	Other prerequisites			
1 semester 🛛 ur	ndergraduate				
Contents					
Introduction to th	he history of philosoph	iy, using basic proble	ems and paradigmati	ic texts.	
Intended learnin	g outcomes				
story of philosop understanding of ry of philosophy and issues - abili	hy - ability to use and f, and ability to evaluat Formal outcomes (skill	distinguish between te methods and ques ls to be tested in the s and philosophical	different methods of tions of scholarly in assessment): - abilit positions into overal	problems and positions in the hi- f historiography - familiarity with, quiry with respect to the histo- ty to analyse philosophical texts rching intellectual schemata - opriate manner	
	umber of weekly conta		o , 11	•	
	information on SWS (w				
	s ment (type, scope, la on whether module ca			tion offered — if not every seme-	
written examinat	tion (approx. 180 minu	tes)			
Allocation of place	ces				
Additional inform	nation				
Workload					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Philosophy (Minor, 2008) Bachelor's degree (1 major, 1 minor) Philosophy (2008) Bachelor's degree (2 majors) Philosophy (2008)					

Module title					Abbreviation
Issue of research in philosophy					06-B-P6-072-m01
Module coordinator				Module offered by	
holder	ofthe	Chair of the History of Phi	ilosophy	Institute of Philoso	phy
ECTS		od of grading	Only after succ. con	•	r 7
10		rical grade		, , , , , , , , , , , , , , , , , , , ,	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts	•	l		
Select	ed rese	arch issues in philosophy	y.		
Intend	ed lear	ning outcomes			
issues issues	- ability	y to follow the rules of sc	holarly work - ability t	to independently dev	analyse philosophical texts and velop and present philosophical
Course	es (type	, number of weekly conta	ect hours, language –	- if other than Germa	an)
V + S +	- <u>S (no i</u>	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
term p	aper (a	pprox. 12 pages)	-		
Alloca	tion of _l	places			
Additi	onal inf	ormation			
Worklo	bad				
Referr	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module appears in					
Bachelor' degree (1 major) Mathematics (2008)					
Bachelor' degree (1 major) Mathematics (2007)					
Bachelor's degree (1 major, 1 minor) Philosophy (Minor, 2008)					
		gree (1 major, 1 minor) Ph			
Bache	lor's de	gree (2 majors) Philosopl	hy (2008)		

Module title					Abbreviation					
Proble	ms of N	Modern/Contemporary Ph	ilosophy		06-B-W10-072-m01					
Modul	e coord	linator		Module offered by	<u> </u>					
holder	of the	Chair of the History of Phi	losophy	Institute of Philoso	phy					
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)						
5	nume	erical grade								
Durati	on	Module level	Other prerequisites							
1 seme	ester	undergraduate								
Conter	nts									
Proble	ms in e	arly modern and contemp	oorary philosophy.							
Intend	ed lear	ning outcomes								
discur: guistic	sivity, c ally and		alisability - ability to p way	present philosophica	ch as transparency, consistency, al issues in a structured and lin- an)					
		tion on SWS (weekly cont								
					ation offered — if not every seme-					
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)						
oral ex	aminat	ion (approx. 25 minutes)								
Alloca	tion of	places								
Additio	onal inf	formation								
Worklo	oad									
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)						
Modul	e appea	ars in								
Bachelor' degree (1 major) Mathematics (2008)										
Bachelor' degree (1 major) Mathematics (2007)										
	Bachelor's degree (1 major, 1 minor) Philosophy (2008)									
Bache	lor's de	gree (2 majors) Philosopl	ny (2008)		Bachelor's degree (2 majors) Philosophy (2008)					

Module title					Abbreviation
Text analysis: Ancient Philosophyo6-B-W					06-B-W1-072-m01
Module coordinator				Module offered by	
holder	of the (Chair of the History of Phi	losophy	Institute of Philoso	phy
ECTS	1	od of grading	Only after succ. com		,
5		rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
Ancien	t philos	sophical texts.			
		ning outcomes			
the ass (when intelled	sessme writing ctual sc	nt): - ability to analyse pl	nilosophical texts and organise historical co endently develop and	l issues - ability to fo oncepts and philoso I present philosophi	
		tion on SWS (weekly cont			
ster, in	formati	ion on whether module ca			tion offered — if not every seme-
		pprox. 12 pages)			
Allocal	ion of p	JIACES			
	1. 6				
Additio	onal Inf	ormation			
Worklo	ad				
			lationa fanto - 1.1.	\	
Kererre		LPO I (examination regu	tations for teaching-o	legree programmes)	
		1			
	e appea		c (2008)		
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007)					
Bachelor' degree (1 major) Business Management and Economics (2009)					
Bachelor' degree (1 major) Business Management and Economics (2007)					
Bachelor' degree (1 major) Business Management and Economics (2008)					
	-	ree (1 major) Business M	-		
	-	ree (1 major) Political and		8)	
Bachel	or's de	gree (1 major, 1 minor) Ph	ilosophy (2008)		

Module title				Abbreviation		
Problems of Theoretical Philosophy					06-B-W11-072-m01	
Module	coord	inator		Module offered by		
holder o	of the C	Chair of Theoretical Philo	sophy	Institute of Philoso	ohy	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Content	ts					
Problem	ns in th	eoretical philosophy.				
Intende	ed learr	ning outcomes				
sophy F mentati comple [:]	ormal ion - ab teness	outcomes (skills to be te vility to apply general prir	sted in the assessme nciples of argumentat	nt): - ability to apply tion such as transpa	of problems in theoretical philo- the principles of logic to argu- rency, consistency, discursivity, structured and linguistically and	
Courses	s (type,	number of weekly conta	ct hours, language —	· if other than Germa	n)	
S (no in	Iformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
oral exa	aminati	on (approx. 25 minutes)				
Allocati	ion of p	olaces				
Additio	nal info	ormation				
Workloa	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachelor' degree (1 major) Mathematics (2008)						
	Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Philosophy (2008)					

Module title					Abbreviation
Problems of Practical Philosophy 06-B-W12-072-m01					06-B-W12-072-m01
Module	e coord	inator		Module offered by	
holder	of the (Chair of Practical Philoso	ohy	Institute of Philosop	ohy
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Probler	ns in p	ractical philosophy.			
Intende	ed learı	ning outcomes			
phy For tation - pletene	mal ou ability ess, and	tcomes (skills to be teste to apply general principl	ed in the assessment) es of argumentation): - ability to apply th such as transparenc	of problems in practical philoso- ne principles of logic to argumen- y, consistency, discursivity, com- ctured and linguistically and rhe-
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
S (no in	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-
oral exa	aminati	on (approx. 25 minutes)			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachel	Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Philosophy (2008)				

Module title				Abbreviation	
Text Analysis: Medieval Philosophy					06-B-W2-072-m01
Module coordinator				Module offered by	
holder	of the (Chair of the History of Phi	losophy	Institute of Philosop	ohy
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Mediev	al phile	osophical texts.			
Intende	ed learr	ning outcomes			
taking i basic a sted in	nto aco ssump the ass	count the historical and i tions in pre-modern syste	ntellectual context of ems of thought, cultu alyse philosophical te	their origin - knowle re, and knowledge F exts and issues - abil	s of medieval philosophy while edge of, and ability to criticise, ormal outcomes (skills to be te- lity to follow the rules of scholar-
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
S (no in	Iformat	ion on SWS (weekly cont	act hours) and course	e language available)
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-
term pa	per (ap	oprox. 12 pages)			
Allocat	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
Module appears in					
Bachelor' degree (1 major) Mathematics (2008)					
Bachelor' degree (1 major) Mathematics (2007)					
	Bachelor' degree (1 major) Business Management and Economics (2009)				
	Bachelor' degree (1 major) Business Management and Economics (2007)				
	Bachelor' degree (1 major) Business Management and Economics (2008)				
	-	ree (1 major) Business Ma	-		
	-	ree (1 major) Political and		8)	
Bachelor's degree (1 major, 1 minor) Philosophy (2008)					

Module title				Abbreviation	
Text analysis: modern philosophy					06-B-W3-072-m01
Module coordinator				Module offered by	
holder	of the Q	Chair of Practical Philosop	ohy	Institute of Philosop	bhy
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
Modern	philos	sophical texts.			
Intende	ed learn	ning outcomes			
ledge o ty Form ability t them in	f, and a al outc o follo a lingu	ability to criticise, basic a omes (skills to be tested w the rules of scholarly w uistically appropriate ma	issumptions of system in the assessment): ork - ability to independent nner	ns of thought, cultur - ability to analyse p endently develop ph	s of modern philosophy - know- re, and knowledge of moderni- hilosophical texts and issues - ilosophical issues and to present
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
term pa	iper (ap	oprox. 12 pages)			
Allocati	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	appea	irs in			
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Business Management and Economics (2009) Bachelor' degree (1 major) Business Management and Economics (2007) Bachelor' degree (1 major) Business Management and Economics (2008) Bachelor' degree (1 major) Business Management and Economics (2010)					
Bachelo	or' degi	ree (1 major) Business Ma ree (1 major) Political anc gree (1 major, 1 minor) Ph	l Social Studies (200		

Module title				Abbreviation		
Text analysis: contemporary philosophy					06-B-W4-072-m01	
Module	coord	inator		Module offered by		
holder	of the Q	Chair of Practical Philosop	ohy	Institute of Philosop	bhy	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Conten	ts					
Contem	porary	philosophical texts.				
Intende	ed learn	ning outcomes				
knowle contem texts ar	dge of, porary 1d issu	and ability to criticise, b world Formal outcomes (asic assumptions of s (skills to be tested in ules of scholarly work	systems of thought, the assessment): - a < - ability to indepen	s of contemporary philosophy - culture, and knowledge of the bility to analyse philosophical dently develop philosophical is-	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
S (no in	format	ion on SWS (weekly cont	act hours) and course	e language available)	
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
term pa	iper (ap	oprox. 12 pages)				
Allocati	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regu	lations for teaching-d	legree programmes)		
Module appears in						
	-	ree (1 major) Mathematic				
	Bachelor' degree (1 major) Mathematics (2007)					
	Bachelor' degree (1 major) Business Management and Economics (2009)					
	Bachelor' degree (1 major) Business Management and Economics (2007) Bachelor' degree (1 major) Business Management and Economics (2008)					
	-	ree (1 major) Business Ma ree (1 major) Business Ma	-			
		ree (1 major) Business Ma				
	-	gree (1 major, 1 minor) Ph		~,		
	Bachelol S degree (1 major, 1 minor) Finiosophy (2008)					

Module	e title				Abbreviation
Basic d	iscipli	nes of theoretical philos	ophy: metaphysics a	nd epistemology	06-B-W5-072-m01
Module	e coord	inator		Module offered by	· · · · · · · · · · · · · · · · · · ·
holder	of the (Chair of Theoretical Philo	sophy	Institute of Philoso	phy
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				
Probler	ns in a	nd theoretical models of	basic disciplines of t	heoretical philosopł	ιу.
Intende	ed lear	ning outcomes			
philoso issues present	ophy Fo - ability t them	rmal outcomes (skills to / to follow the rules of sc in a linguistically approp	be tested in the asse holarly work - ability t riate manner	ssment): - ability to to independently de	mental disciplines of theoretical analyse philosophical texts and velop philosophical issues and to
Course	s (type	, number of weekly conta	act hours, language —	- if other than Germa	an)
S (no ir	format	ion on SWS (weekly cont	tact hours) and cours	e language available	e)
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-
term pa	aper (aj	oprox. 12 pages)			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad		-		
Referre	d to in	LPOI (examination regu	llations for teaching-o	degree programmes)	
Module	e appea	urs in			
Bachel	or' deg	ree (1 major) Mathematic ree (1 major) Mathematic gree (1 major, 1 minor) Pł	cs (2007)		
Bachol	or's de	gree (2 majors) Philosop	hv (2008)		

Modul	e title				Abbreviation
Specific disciplines of theoretical philosophyo6-B-W6-072-m01			06-B-W6-072-m01		
Modul	e coord	inator		Module offered by	<u> </u>
holder	of the (Chair of Theoretical Philo	sophy	Institute of Philoso	phy
ECTS		od of grading	Only after succ. con		
5	nume	rical grade		•	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
Proble	ms in a	nd theoretical models of	special disciplines o	f theoretical philoso	phy.
		ning outcomes	· ·	•	
ability them in	to follo n a ling	w the rules of scholarly w uistically appropriate ma	vork - ability to indep nner	endently develop ph	e philosophical texts and issues - ilosophical issues and to presen
		, number of weekly conta			
		tion on SWS (weekly cont			•
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
term p	aper (a	oprox. 12 pages)			
Allocat	tion of _l	olaces			
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
				_ , ~ ,	
Modul	e appea	ars in			
		ree (1 major) Mathematic	s (2008)		
	-	ree (1 major) Mathematic			
		gree (1 major, 1 minor) Pł			
Bachel	lor's de	gree (2 majors) Philosopl	hy (2008)		

Modul	e title				Abbreviation
Basic o	discipli	nes of practical philosop	hy: ethics and theory	/ of action	06-B-W7-072-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Practical Philoso	phy	Institute of Philos	ophy
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	ester	undergraduate			
Conter	nts				
Proble	ms in a	nd theoretical models of	basic disciplines of p	practical philosophy	у.
Intend	ed lear	ning outcomes			
issues presen	- ability it them	y to follow the rules of sch in a linguistically approp	holarly work - ability riate manner	to independently de	o analyse philosophical texts and evelop philosophical issues and to
		, number of weekly conta			
S (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language availab	le)
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-
term pa	aper (a	pprox. 12 pages)			
Allocat	tion of _l	olaces			
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes	5)
Modul	e appea	ars in			
Bachel	lor' deg	ree (1 major) Mathematic ree (1 major) Mathematic	s (2007)		
		gree (1 major, 1 minor) Ph			
Bachel	lor's de	gree (2 majors) Philosopl	ny (2008)		

Modul	e title				Abbreviation
Specif	ic disci	plines of practical philos	ophy		06-B-W8-072-m01
Modul	e coord	inator		Module offered by	1
holder	ofthe	Chair of Practical Philoso	phy	Institute of Philoso	phy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
Proble	ms in a	nd theoretical models of	special disciplines o	f practical philosoph	ıy.
		ning outcomes	· ·		
ability them i	to follo n a ling		vork - ability to indep nner	endently develop ph	e philosophical texts and issues - ilosophical issues and to presen
-		tion on SWS (weekly cont			•
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
term p	aper (a	pprox. 12 pages)			
Alloca	tion of _l	olaces			
Additi	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
Bache Bache Bache	lor' deg lor' deg lor's de	ree (1 major) Mathematic ree (1 major) Mathematic gree (1 major, 1 minor) Ph gree (2 majors) Philosopl	rs (2007) nilosophy (2008)		
bache	ior s de	gree (2 majors) Philosopi	iy (2008)		

Modul	e title				Abbreviation
Problems of Older Philosophy: Ancient/Medieval 06-B-W9-072-m01		06-B-W9-072-m01			
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of the History of Phi	losophy	Institute of Philoso	phy
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
Proble	ms in a	ncient and medieval phil	osophy.		
Intend	ed lear	ning outcomes			
pleten torical	ess, an ly appro		to present philosoph	nical issues in a stru	ry, consistency, discursivity, com- ctured and linguistically and rhe- an)
		tion on SWS (weekly cont			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
-	-	ion (approx. 25 minutes)			
	tion of				
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Modul	e appea	ars in			
		ree (1 major) Mathematic	s (2008)		
Ducite			5 (2000)		
	lor' deg	ree (1 major) Mathematic			
Bache			s (2007)		

Modul	e title				Abbreviation
Evolution - Basics and Principles (Lecture and Practice)					07-1A1E-072-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Zoology II		Faculty of Biology	
ECTS		od of grading	Only after succ. con	npl. of module(s)	
1	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
		vill address one of the ce scussed and students wil			nental mechanisms and hypothe- onstruction methods.
Intend	ed lear	ning outcomes			
		gnise evolution as the dr ic relationships between		e phylogeny of speci	es. Familiarity with the concepts
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)
Ü (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language availabl	e)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
writter	ı exami	nation (30 minutes)			
Alloca	tion of _l	places			
Additio	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
	,				
Modul	e appea	ars in			
Bache	lor' deg	ree (1 major) Mathematic	s (2008)		
	-	ree (1 major) Mathematic			
Bache	lor' deg	ree (1 major) Computatio	nal Mathematics (20	09)	

Module title					Abbreviation
The Pla	nt King	gdom			07-1A1P-072-m01
Module	e coord	inator		Module offered by	
holder	of the (Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)	
4	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			regular attendance of exercises respective exercises.
Conten	ts				
of grou	ps in th and fun	ne plant kingdom, studer ctions of plant organism	nts will acquire the fu	ndamental knowledg	versity of eukaryotes. At the level ge necessary to understand the scussed in an evolutionary and
Intende	ed lear	ning outcomes			
that are copes. Fundan	e most Fundar nental	suitable for particular sci mental skills in the interp preparation skills.	ientific issues. Famili pretation of macrosco	arity with the compo pic and histologic pr	y to select those plant organisms nents and functioning of micros- reparations by light microscopy.
		, number of weekly conta			
V + Ü (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
written	exami	nation (approx. 60 minut	es)		
Allocat	ion of p	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	llations for teaching-o	legree programmes)	
Module	e appea	ars in			
		ree (1 major) Mathematic	:s (2008)		
Bachel	or' deg	ree (1 major) Mathematic	:s (2007)		
Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009)					

Modu	le title				Abbreviation
The A	nimal K	ingdom			07-1A1T-072-m01
Modu	Module coordinator			Module offered by	<u> </u>
	r of the onmicro		gy at the Department of	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
4	nume	rical grade			
Durati	ion	Module level	Other prerequisites		
1 sem	ester	undergraduate		s as well as success	regular attendance of and parti- ful completion of the respective of the course.
Conte	nts	•			
the fo and e	rms and				wledge necessary to understand ing discussed in an evolutionary
nisms micros crosco	s that are scopes. opy. Fun	e most suitable for part Fundamental skills in t damental preparation	icular scientific issues. he interpretation of ma skills.	Familiarity with the croscopic and histo	lity to select those animal orga- components and functioning of logic preparations by light mi-
Cours	es (type	, number of weekly cor	ntact hours, language –	- if other than Germa	an)
V + Ü	(no info	rmation on SWS (week	y contact hours) and co	ourse language avai	lable)
			language — if other the can be chosen to earn		ation offered — if not every seme-
writte	n exami	nation (approx. 60 min	utes)		
Alloca	ation of	places			
Additi	ional inf	ormation			
Workl	load				
Referr	red to in	LPOI (examination re	gulations for teaching-o	legree programmes)
Modu	le appe	ars in			
Bache	elor' deg	rree (1 major) Mathema rree (1 major) Mathema rree (1 major) Computat		09)	

Module title				Abbreviation	
Structu	Structure and Function of Cells				07-1A1Z-072-m01
Module coordinator				Module offered by	
holder	of the (Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
4	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			regular attendance of exercises
					tive exercises as specified at the
			beginning of the cou	irse.	
Conten	ts				
re moving on to its microscopic structure. It will point out differences and similarities between prokaryotic cells (bacteria, archaebacteria) and eukaryotic cells (animals, plants).] [Version 2: The first part of the module will acquaint students with the elementary building blocks of life as well as biological categories. Building on this knowledge, the course will then discuss the cell, the smallest unit of life, starting with its macroscopic structure before moving on to its microscopic structure. It will point out differences and similarities between prokaryotic cells (bacteria, archaebacteria) and eukaryotic cells (animals, plants).]					e first part of the module will al categories. Building on this g with its macroscopic structure
		ning outcomes			
ge of th	ie spec		intracellular and extr	acellular structures	gical) macromolecules. Knowled- of prokaryotes as well as animal 5.
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	exami	nation (60 minutes)			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	nrs in			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic		`	
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (200	09)	

Modul	e title				Abbreviation
Geneti	ics, Neu	robiology, Behaviour			07-2A2GNV-072-m01
Modul	e coord	inator		Module offered by	
				Faculty of Biology	
ECTS	ean of Studies Biologie (Biology) TS Method of grading Or		Only after succ. com		
6		rical grade			
Durati		Module level	Other prerequisites		
1 seme	_	undergraduate		, additional prerequi	sites are listed in the section on
		-	assessments.		
Conter	nts				
Fundai	mental	principles of genetics, ne	urobiology and beha	vioural biology.	
		ning outcomes			
proces bases cal me	sses inv of inhei chanisr	olved in animal behaviou itance.] [Version 2: Stud	ur and will be able to u ents will understand t ed in animal behaviou	relate animal behavi hat there are molect	m biological mechanisms and our to the molecular and formal ular, cellular and system biologi- relate animal behaviour to the
Course	es (type	, number of weekly conta	Ict hours, language —	if other than Germa	n)
• (• (Metho	07-2A20 07-2A20 07-2A20 07-2A20	5NV-2N-072: V + Ü (no inf 5NV-3V-072: V + Ü (no inf 5essment (type, scope, la	ormation on SWS (we ormation on SWS (we onguage — if other tha	ekly contact hours) a ekly contact hours) a an German, examina	nd course language available) nd course language available) nd course language available) tion offered — if not every seme-
Assess low. U	sment ir	ated otherwise, successf	the assessments in tl	ne individual module	e components as specified be- successful completion of all indi-
• 2 • (• (• (• (• (• (• (• (• (• (2 ECTS, written of Other p cessful of sment in 2 ECTS, written of Other p cessful of sment in 2 ECTS, written of Other p	completion of the respect n module component o7- Method of grading: nume examination (approx. 30 rerequisites: Admission completion of the respect n module component o7- Method of grading: nume examination (approx. 30 rerequisites: Admission	erical grade minutes) prerequisite to asses tive exercises as spec 2A2GNV-2N-072: Bas erical grade minutes) prerequisite to asses tive exercises as spec 2A2GNV-3V-072: Beh erical grade minutes, word proble prerequisite to asses	esment: regular atte cified at the beginnin ic Neurobiology Bas esment: regular atte cified at the beginnin avioural Biology Beh ems and/or multiple esment: regular atte	ndance of exercises and suc- ng of the course. ic Neurobiology ndance of exercises and suc- ng of the course. navioural Biology choice questions) ndance of exercises and suc-
	tion of p	completion of the respec	uve exercises as spec	lineu at the beginnir	
		f "spezielles Studienang	ebot": 10 places		
		ormation	esset . 10 places.		
World	ad				
Worklo	uad				

Bachelor's with 1 major Mathematics (2007)	
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Referred to in LPO I (examination regulations for teaching-degree programmes)

Module appears in

Bachelor' degree (1 major) Biology (2011)
Bachelor' degree (1 major) Biology (2007)
Bachelor' degree (1 major) Biology (2010)
Bachelor' degree (1 major) Mathematics (2008)
Bachelor' degree (1 major) Mathematics (2012)
Bachelor' degree (1 major) Mathematics (2013)
Bachelor' degree (1 major) Mathematics (2007)
Bachelor' degree (1 major) Computational Mathematics (2009)
Bachelor' degree (1 major) Computational Mathematics (2012)
Bachelor' degree (1 major) Computational Mathematics (2013)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)
No final examination (2010)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 47 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title				Abbreviation		
	Bioinformatics 07-3A3BI-072-m01					
Module coordinator				Module offered by		
holder	of the (Chair of Bioinformatics		Faculty of Biology		
ECTS	1	od of grading	Only after succ. con	npl. of module(s)		
2	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conter	ts					
Fundar	nental	principles of bioinformati	cs.			
Intend	ed lear	ning outcomes				
Studer	its are p	proficient in methods for	the analysis of DNA a	and protein database	25.	
		, number of weekly conta	· · · · · ·	•		
					sted separately for each module	
compo						
				-	ourse language available)	
• (97-3A3E	BI-2B-072: S (no informati	on on SWS (weekly o	contact hours) and co	ourse language available)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
low. Ur		ated otherwise, successf			e components as specified be- successful completion of all indi-	
• 1 • v Assess • 1	ECTS, vritten e ment i ECTS,	n module component o7- Method of grading: nume examination (approx. 20 n module component o7- Method of grading: (not) per (approx. 5 to 10 pages	rical grade minutes) 3A3BI-2B-072: Bioint successfully complet	formatics (Seminar)		
Allocat	ion of p	olaces				
Only as	s part o	f Biochemistry Master's:	5 places. Places will	be allocated by lot.		
		ormation				
Worklo						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachel Bachel Bachel Bachel Bachel Master	Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2009) Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009) Master's degree (1 major) Biochemistry (2012)					
Баспе	Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)					

Module	e title				Abbreviation
Geneti	cs				07-3A3GE-072-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Neurobiology and	d Genetics	Faculty of Biology	
ECTS	1	od of grading	Only after succ. con	,	
2	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
Molecu	ular and	l classical genetics.			
Intend	ed lear	ning outcomes			
	nts are f / as a w		sms of inheritance th	nat are essential for o	developing an understanding of
Course	e s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
V + S (I	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
written	exami	nation (30 minutes)			
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Biology (200	07)		
	Bachelor' degree (1 major) Mathematics (2008)				
	Bachelor' degree (1 major) Mathematics (2007)				
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (20	09)	

Module title					Abbreviation		
	Ecology of plants and animals 07-3A30E-072-m01						
Module	e coord	inator		Module offered by	-		
	1	es Biologie (Biology)		Faculty of Biology			
ECTS	1	od of grading	Only after succ. con	npl. of module(s)			
6	L	rical grade					
Duration		Module level	Other prerequisites				
Conten		undergraduate					
This me and bio as on t model	This module will provide students with an overview of the interactions of plants and animals with their abiotic and biotic environments. The module will focus on the functional adaptation to environmental conditions as well as on the structure and dynamics of populations and ecosystems. Students will be introduced to fundamental model concepts of ecology, will become familiar with examples of research findings and will acquire the fundamental knowledge necessary to develop an understanding of current ecological problems.						
		ning outcomes					
portan their ei	t abiotio	amiliar with the fundan c and biotic factors that nent. In addition, they u ues.	influence the distribu	tion and frequency o	of occurrence of orga	nisms in	
Course	s (type,	, number of weekly con	tact hours, language –	- if other than Germa	n)		
compo • c	nent. 07-3A3C	omprises 2 module con)E-1T-072: V + Ü (no info)E-2P-072: V + Ü (no inf	ormation on SWS (wee	kly contact hours) ar	nd course language a	available)	
Metho	d of ass	essment (type, scope, on on whether module	language — if other th	an German, examina			
Assess low. Ur	ment ir	n this module comprise ated otherwise, succes	s the assessments in t	he individual modul			
 Assessment in module component o7-3A3OE-1T-072: Ecology of Animals (Lecture and Practice) Ecology of Animals (Lecture and Practice) 3 ECTS, Method of grading: numerical grade written examination (45 minutes) Assessment in module component o7-3A3OE-2P-072: Ecology of Plant (Lecture and Practice) Ecology of Plant (Lecture and Practice) 3 ECTS, Method of grading: numerical grade written examination (60 minutes) 							
Allocat	ion of p	olaces					
Additional information							
Worklo	ad						
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	Module appears in						
		ree (1 major) Biology (2					
	-	ree (1 major) Mathemat or Mathematics (2007)	JMU Würzbur	g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	_	page 50 / 216	



Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 51 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title					Abbreviation
Develo	pment	al Biology for advanced s	tudents		07-4BFMZ1-092-m01
Module	e coord	inator		Module offered by	ļ
holder logy	ofthe	Chair of Cell Biology and	Developmental Bio-	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	1	rical grade			
Duratio	on .	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
animal	s. Parti		aced on providing st	udents with an oppo	cular developmental biology of rtunity to become proficient in
Intend	ed lear	ning outcomes			
Studen	its are	able to use fundamental	methods to approach	n simple problems in	animal developmental biology.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
V + Ü (ı	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
didate	each (a		oral examination in		r c) oral examination of one can- to 3 candidates, approx. 60 mi-
Allocat					
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Biology (200 ree (1 major) Mathematic			

Modul	Module title Abbreviation						
Cell Bi	ology f	or advanced students			07-4BFMZ2-092-m01		
Modul	e coord	inator		Module offered by			
holder logy	ofthe	Chair of Cell Biology and	Developmental Bio-	Faculty of Biology			
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
5		rical grade					
Durati	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conter	nts						
placed	l on pro		pportunity to becom	e proficient in funda	ogy. Particular emphasis will be mental methods and applicati-		
Intend	ed lear	ning outcomes					
Studer	nts are a	able to use fundamental	methods to approach	n simple problems in	ı cell biology.		
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)		
V + Ü (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	lable)		
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-		
writter	n exami	nation (60 minutes)					
Alloca	tion of _l	places					
Additi	onal inf	ormation					
Workle	oad						
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)			
	e appea						
	Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2007)						

Module title Abbreviation					Abbreviation
Microb	oiology	for advanced students		07-4BFMZ3-092-m01	
Modul	e coord	linator		Module offered by	<u> </u>
holder	ofthe	Chair of Microbiology		Faculty of Biology	
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	ster	undergraduate			
Conten	its				
This m microo			h the fundamental pr	inciples of the phys	iology and molecular biology of
Intend	ed lear	ning outcomes			
		able to use fundamental microbiology.	methods to approach	n simple problems ir	n microbiology. They are familiar
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V + P (r	10 info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
written	exami	nation (60 minutes)			
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination regu	llations for teaching-	degree programmes)	
Module	e appe	ars in			
Bachel	or' deg	ree (1 major) Biology (20	07)		
Bachel	or' deg	ree (1 major) Mathematic	cs (2007)		

Modul	e title				Abbreviation
Bioinfo	ormatic	s for advanced students		07-4BFMZ4-092-m01	
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Bioinformatics		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	, , ,	
5		rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
					ver the following topics: se- tworks as well as gene regulati-
Intend	ed lear	ning outcomes			
Studer their re		able to use appropriate	bioinformatic algorith	ms to address simpl	e problems as well as to interpret
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, l ion on whether module			tion offered — if not every seme-
-		o to 20 pages)			
	tion of	· · ·			
Additio	onal inf	ormation			
			_		
Worklo	bad				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
Modul	e appea	ars in			
		ree (1 major) Biology (20	007)		
	-	ree (1 major) Mathemati			
	-	ree (1 major) Mathemati			
	0	ree (1 major) Computati			

Module title				Abbreviation		
Biotechnology I					07-4BFMZ5-092-m01	
Module	e coord	inator		Module offered by		
	of the C	Chair of Biotechnology an	d Biophysics	Faculty of Biology		
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	L	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	I	undergraduate				
Conten						
During	this pra	actical course, students v	vill acquire an insight	into a variety of top	ics in biotechnology.	
Intende	ed learr	ning outcomes				
Studen	ts are a	able to apply advanced m	ethods in biotechnol	ogy.		
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)	
This mo	odule c	omprises 2 module comp	onents. Information	on courses will be li	sted separately for each module	
compo						
					d course language available) d course language available)	
	<u>· ·</u>		· · · · ·		tion offered — if not every seme-	
		on on whether module ca				
	less st	ated otherwise, successf			e components as specified be- successful completion of all indi-	
• 4 • lo • A Assess • 1 • p	 Assessment in module component o7-4BFMZ5-1BT-092: Biotechnology 1 (Lecture and Laboratory Practice) 4 ECTS, Method of grading: numerical grade log (approx. 10 to 20 pages) Assessment offered: once a year, summer semester Assessment in module component o7-4BFMZ5-2BT-092: Seminar to Advanced Biotechnology 1 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Assessment offered: once a year, summer semester 					
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Bachel	or' deg	ree (1 major) Biology (200	(70			
Bachel	Bachelor' degree (1 major) Mathematics (2007)					

Bachelor's with 1 m	ajor Mathematics (2007)
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Module	e title				Abbreviation
Neurobiology for advanced students 07-4BFNV01-092-m01					
Module	e coord	inator		Module offered by	·
holder	of the (Chair of Neurobiology and	d Genetics	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		principles of neurobiolog ndations of the function			control behaviour? Cellular and cations of neurobiology.
Intend	ed lear	ning outcomes			
		e acquired an advanced k in neurobiology have to n		of neurobiology and	d recognise the relevance rese-
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)
1) Ü + V	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	exami	nation (60 minutes)			
Allocat	ion of p	olaces			
	-				
Additio	nal inf	ormation			
Worklo	ad				
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachel	or' deg	ree (1 major) Biology (200	70)		
Bachel	or' deg	ree (1 major) Mathematic	s (2007)		

Module title					Abbreviation	
Behavioural physiology and sociobiology for advanced studer				dents	07-4BFNVO2-092-m01	
Module coordinator				Module offered b	y	
holder	ofthe	Chair of Neurobiology an	d Genetics	Faculty of Biology	,	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	erical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conter	nts					
Specifi physio		comparative animal phys	iology with a focus or	n neurophysiology	as well as sensory and behavioural	
Intend	ed lear	ning outcomes				
		e acquired knowledge ar l are proficient in methoc			ysiology. They are familiar with hy-	
Course	es (type	e, number of weekly cont	act hours, language –	- if other than Gern	nan)	
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language ava	ailable)	
		sessment (type, scope, l ion on whether module o			nation offered — if not every seme-	
written	exami	nation (60 minutes)				
Allocat	tion of	places				
Additio	onal in	formation				
Worklo	ad					
Referre	ed to in	LPOI (examination reg	ulations for teaching-o	degree programme	s)	
Modul	e appe	ars in				
Bachel	or' deg	gree (1 major) Biology (20	07)			
Bachel	or' des	gree (1 major) Mathemati	(2007)			

Modul	e title				Abbreviation
Ecology of Animals for advanced students			lents		07-4BFNV03-092-m01
Modul	e coord	inator		Module offered by	Į
holder	ofthe	Chair of Zoology III		Faculty of Biology	
ECTS		od of grading	Only after succ. con		
5	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
Selecto logy.	ed topio	cs in autecology and syn	ecology; experimenta	l design, data collec	tion and analysis in animal eco-
	ed lear	ning outcomes			
		e acquired an advanced and field experiments a			They are able to design simple dings.
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	an)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, l ion on whether module			tion offered — if not every seme
writter	n exami	nation (60 minutes)			
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	oad				
			_		
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
			3		
Modul	e appea	ars in			
		ree (1 major) Biology (20	007)		
	-	ree (1 major) Mathemati			
	-	ree (1 major) Mathemati			
Bache	lor' deg	ree (1 major) Computati	onal Mathematics (20	09)	

Modul					Abbreviation
Specif	ic Plant	Physiology			07-4BFPS1-092-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Durati	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate			
Conter	nts				
sed an applie	d the m d.	olecular techniques for			۱ plant physiology will be discus- and other techniques) will be will be
		ning outcomes			
		e acquired fundamental methods in experimenta		utrient cycles and a	re proficient in molecular and
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	an)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, l ion on whether module of			tion offered — if not every seme-
writter	ı exami	nation (60 minutes)			
Allocat	tion of _l	olaces			
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
	e appea				
	-	ree (1 major) Biology (20			
Bache	lor' deg	ree (1 major) Mathemati	cs (2007)		

Modul	e title				Abbreviation
Biophysics - Basic course					07-4BFPS2-092-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	of the (Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS		od of grading	Only after succ. con		
5	nume	rical grade		-	
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
metho molecu	ds with ular bio	which it can be characte logy and imaging as well	rised. For this purpos	e, students will be i	nne transport and the biophysical ntroduced to modern methods of
Intend	ed lear	ning outcomes			
		erstand basic membrane tact plants, isolated plan			experimental methods in experi- ms.
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	in)
V + Ü (no infoi	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	exami	nation (60 minutes)			
Allocat	tion of p	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
				<u> </u>	
Modul	e appea	urs in			
Bachel	lor' deg	ree (1 major) Biology (200	07)		
		ree (1 major) Mathematic			
Bachel	lor' deg	ree (1 major) Mathematic	s (2007)		
Bachel	lor' deg	ree (1 major) Computatio	nal Mathematics (20	09)	

Modul	e title				Abbreviation
Bioche	emistry	- Basic course			07-4BFPS3-092-m01
Modul	e coord	linator		Module offered by	ļ
holder	of the	Chair of Plant Physiology	y and Biophysics	Faculty of Biology	·
ECTS		od of grading	Only after succ. con	, .,	
5	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
recept	ors and		ntal principles of the b	iochemical and mole	, biological and microbial photo- ecular biological methods for the n of receptors.
Intend	ed lear	ning outcomes			
		familiar with the bioche se these using appropria		ogy and function of b	oiological photoreceptors and are
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, ion on whether module			tion offered — if not every seme-
writter	n exami	nation (60 minutes)			
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
Modul	e appea	ars in			
Bache	lor deg	ree (1 major) Biology (20	007)		

Module	e title				Abbreviation
Basics	Basics plant Ecophysiology				07-4BFPS4-092-m01
Module	e coord	inator		Module offered by	<u> </u>
holder gy	ofthe	Chair of Ecophysiology ar	d Vegetation Ecolo-	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade		-	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
the inte	eractio		ir environment and w	vill make students fa	the theoretical fundamentals of miliar with the molecular biologi- tigate this interaction.
Intend	ed lear	ning outcomes			
		be able to recognise, des ble to perform basic expe			plants and their environment.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V + Ü (I	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
written	exami	nation (60 minutes)			
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Module					
	-	ree (1 major) Biology (200			
Bachel	or' deg	ree (1 major) Mathematic	s (2007)		

Module title					Abbreviation
Pharmaceutical bio analytics					07-4BFPS5-092-m01
Module	e coord	inator		Module offered by	
holder	ofthe	Chair of Pharmaceutical B	liology	Faculty of Biology	
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	undergraduate			
Conten	ts				
analysi compu med or	s. It wi tationa 1, for ex	ll include an introduction I chemistry. Qualitative a cample, complex drug, pl	to chromatographic nd quantitative analy	methods of analysis /ses of active agents	nentals of drug and metabolite as well as modern methods in and metabolites will be perfor-
		ning outcomes			
		e developed fundamental hromatographic methods		s in the area of drug	and metabolite analysis and are
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
compo • 0	nent. 97-4BFF	2S5-1BA-092: P (no inform	ation on SWS (weekl	y contact hours) and	sted separately for each module d course language available) d course language available)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
	nless st	ated otherwise, successf			e components as specified be- successful completion of all indi-
 Assessment in module component o7-4BFPS5-1BA-092: Pharmaceutical Bioanalytics (practical course) 4 ECTS, Method of grading: numerical grade written examination (45 minutes) Assessment in module component o7-4BFPS5-2BA-092: Seminar Pharmaceutical Bio Analytics 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Assessment offered: once a year, summer semester 					
Allocat		· · ·	-		
Additio	nal inf	ormation			
/laureio	<u></u>				
Workload					
Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	ars in			
		ree (1 major) Biology (200	07)		
	-	ree (1 major) Mathematic			

Module	e title				Abbreviation
Advand	ed Lig	ht- and Electron-Microsco	ру		07-4S1MZ1-092-m01
Module	e coord	inator		Module offered by	
head o	f the D	epartment of Electronmic	roscopy	Faculty of Biology	
ECTS	r	od of grading	Only after succ. com	, 0,	
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Fundar	nental	principles of confocal las	er scanning microsco	ppy and electron mic	croscopy.
Intende	ed lear	ning outcomes			
Studen	its have	e acquired theoretical kno	owledge and practica	l skills in the area o	f light and electron microscopy.
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	an)
V + Ü (r	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	lable)
		s essment (type, scope, la ion on whether module ca			ation offered — if not every seme-
written	exami	nation (45 minutes)			
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
			· · · · · · · · · · · · · · · · · · ·		
Referre	ed to in	LPO I (examination regu	lations for teaching-o	legree programmes)	
				· - ·	
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Biology (200	07)		
	-	ree (1 major) Mathematic			
Bachel	or's de	gree (1 major, 1 minor) Bi	ology (Minor, 2008)		

Module title					Abbreviation
Analys	is of Ch	romosomes			07-4S1MZ2-092-m01
Module	e coord	inator		Module offered by	
head o	f the De	epartment of Electronmic	roscopy	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Overvie	ew of th	e structure of chromosor	nes of somatic and m	eiotic cells.	
Intende	ed learı	ning outcomes			
Studen	ts are a	able to analyse chromoso	mal structures.		
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	exami	nation (45 minutes)			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Biology (200	7)		
	•	ree (1 major) Mathematic			
Bachel	or's de	gree (1 major, 1 minor) Bi	ology (Minor, 2008)		

Module	e title				Abbreviation
Ecology	y and D	evelopmental Biology of	marine organisms		07-4S1MZ3-092-m01
Module	e coord	inator		Module offered by	
		epartment of Electronmic	roscopy	Faculty of Biology	
ECTS		od of grading	Only after succ. com	, -,	
5		rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	By way of exception assessments.	, additional prerequ	isites are listed in the section on
Conten	ts				
					h an insight both into the organis- e island of Helgoland in the North
Intende	ed lear	ning outcomes			
Studen marine			ogy, developmental b	oiology, physiology a	and ecology of organisms in a
Course	s (type	, number of weekly conta	ict hours, language —	· if other than Germa	an)
• 0 Method ster, in Assess	o7-4S1N d of ass formation ment in	NZ3-2MO-092: S (no infor sessment (type, scope, la on on whether module ca n this module comprises	mation on SWS (wee inguage — if other tha an be chosen to earn the assessments in t	kly contact hours) a an German, examina a bonus) he individual modul	nd course language available) nd course language available) ation offered — if not every seme- e components as specified be- successful completion of all indi-
nisms	ment in ECTS, og (app ssessr Other p essful	n module component o7- Method of grading: nume rox. 10 to 20 pages) nent offered: once a year	erical grade , summer semester prerequisite to asses tive exercises as spec	ssment: regular atte	
		Method of grading: (not) ation (approx. 20 to 30 m	, ,	ed	
		nent offered: once a year			
Allocat	ion of _l	olaces			
• o a tl o d ir c (I a q	7-4S1N vailabl he Bac ther su legree n total) redits Mather s pote juota e	e places, places will be helor's degree subject B ubjects, there will be two subject Biologie (Biology) will be allocated to stud- and to students of the Ba natics), each with 180 E0 ntially to students of oth sceed the number of app	f places: 18. Should f allocated as follows iologie (Biology) with quotas: 95% of plac with 180 ECTS credit dents of the Bachelor chelor's degree subj CTS credits, as part o er 'importing' subjec lications, the remain	the number of appli Places will primari 180 ECTS credits. S es will be allocated ts and 5% of places 's degree subject B ects Computational f the application-ori ts). Should the num ing places will be al	e component. Ications exceed the number of ily be allocated to students of Should the module be used in I to students of the Bachelor's (a minimum of one participant iologie (Biology) with 60 ECTS Mathematics and Mathematik ented subject Biology (as well uber of places available in one clocated to applicants from the ses with a restricted number of

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 67 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

• 07-4S1MZ3-2MO-092: --

Additional information

UNIVERSITÄT

WÜRZBURG

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Workload

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

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Module appears in

Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008) First state examination for the teaching degree Grundschule Biology (2009) First state examination for the teaching degree Hauptschule Biology (2009) First state examination for the teaching degree Realschule Biology (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Mittelschule Biology (2013)

Bachelor's with 1 major Mathematics (2007)	
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Module	e title		Abbreviation			
Methods in Biotechnology 07-4S1MZ4-092-m01						
Module coordinator				Module offered by		
holder of the Chair of Biotechnology an			nd Biophysics	ics Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. compl. of module(s)			
2	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	Its					
This module will provide students with an overview of instrument-based methods in biotechnology and biome- dicine. In particular, imaging methods as well as single-cell technologies will be discussed. Publications on the methodology of biotechnology will be analysed.						
Intend	ed lear	ning outcomes				
		able to select the instrum	ent-based method in	biotechnology and	biomedicine that is appropriate	
Course	e s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
 Courses (type, number of weekly contact hours, language — if other than German) This module comprises 2 module components. Information on courses will be listed separately for each module component. o7-4S1MZ4-1AB-092: V (no information on SWS (weekly contact hours) and course language available) o7-4S1MZ4-2AB-092: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o7-4S1MZ4-1AB-092: Methods in Biotechnology (Lecture) 1 ECTS, Method of grading: numerical grade written examination (20 minutes) Assessment in module component o7-4S1MZ4-2AB-092: Seminar on Methods in Biotechnology 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) Assessment offered: once a year, summer semester 						
Allocation of places						
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachelor' degree (1 major) Biology (2007)						
Bachelor' degree (1 major) Mathematics (2007)						

Module	<u>title</u>		Abbreviation				
Aspects of modern Biotechnology					07-4S1MZ5-092-m01		
Module	e coord	inator		Module offered by			
holder	of the C	Chair of Biotechnology ar	d Biophysics	Faculty of Biology			
ECTS Method of grading			Only after succ. compl. of module(s)				
2	nume	rical grade					
Duratio	n	Module level	Other prerequisites				
1 semester undergraduate							
	Contents						
Theoret	tical as	pects of modern molecul	ar biotechnology.				
Intende	ed learn	ning outcomes					
Studen	ts have	e acquired knowledge and	d skills in the area of	molecular biotechno	ology.		
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)		
This mo	odule c	omprises 2 module comp	oonents. Information	on courses will be li	sted separately for each module		
compoi							
					nd course language available) Ind course language available)		
	<u> </u>			•	tion offered — if not every seme-		
		on on whether module ca					
Assess	ment ir	this module comprises	the assessments in th	ne individual modul	e components as specified be-		
			ul completion of the I	module will require s	successful completion of all indi-		
vidual a	assessi	ments.					
Assess	ment ir	n module component 07-	4 S1MZ5-1MB-092: As	pects of Modern Bio	otechnology (Lecture)		
• 1	ECTS, I	Method of grading: nume	erical grade				
		examination (20 minutes)					
		n module component o7-			Biotechnology		
	 1 ECTS, Method of grading: (not) successfully completed presentation (approx. 20 to 30 minutes) 						
• A	 Assessment offered: once a year, summer semester 						
Allocation of places							
Additional information							
Workload							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Bachelor' degree (1 major) Biology (2007)							
Bachelor' degree (1 major) Mathematics (2007)							

Modul	Module title Abbreviation					
Special Bioinformatics I 07-4S1MZ6-092-m01					07-4S1MZ6-092-m01	
Module coordinator				Module offered by	<u> </u>	
holder of the Chair of Bioinformatics				Faculty of Biology		
ECTS			Only after succ. con			
5	nume	rical grade				
Duration Module level Oth		Other prerequisites				
1 semester undergraduate						
Conter	nts					
damer		ciples of evolutionary bio			ics (methods and markers), fun- structure prediction, phylogene	
Intend	ed lear	ning outcomes				
	nts are econstr		databases for seque	nce analysis, RNA st	ructure prediction and phyloge-	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)	
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme	
log (ap	prox. 1	o to 20 pages)				
Alloca	tion of	places				
Additi	onal inf	ormation	-			
Worklo	oad					
Poforr	ed to in	LPOI (examination regu	lations for teaching	degree programmoc		
Refeit				acsiec programmes)		
Madel						
	e appea		o)			
Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2008)						
	-	-				
Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009)						
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)						
Dacile		<u>giee (1 majoi, 1 minoi) di</u>	010gy (Million, 2008)			

Module title Abbreviation						
Neurobiology I 07-4S1NVO1-092-m01					07-4S1NVO1-092-m01	
Module coordinator				Module offered by		
holder	of the	Chair of Neurobiology an	d Genetics	Faculty of Biology		
ECTS				mpl. of module(s)		
5	nume	rical grade				
Duration Module level Other pr		Other prerequisites	er prerequisites			
1 semester undergraduate						
Conter	nts					
Neurot	piology	and methods in neurobi	ology, using Drosoph	ila as a neurogenetio	c model system.	
Intend	ed lear	ning outcomes				
		e acquired an advanced nethods in neurobiology.		robiology of a mode	l organism and are able to apply	
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	in)	
P (no ii	nforma	tion on SWS (weekly con	tact hours) and cours	e language available	e)	
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)						
log (approx. 10 to 20 pages)						
Allocat	tion of	places				
		<u>.</u>				
Additio	onal inf	ormation				
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachelor' degree (1 major) Biology (2007)						
Bachelor' degree (1 major) Mathematics (2008)						
Bachelor' degree (1 major) Mathematics (2007)						
Bachelor' degree (1 major) Computational Mathematics (2009)						
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)						

Aspect	e title				Abbreviation	
Aspects of Integrative Behavioural Biology					07-4S1NVO2-092-n	101
Module coordinator				Module offered by		
		Chair of Zoology II		Faculty of Biology		
ECTS	T	od of grading	Only after succ. cor	, , ,		
5		rical grade		•		
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	By way of exception assessments.	n, additional prerequ	isites are listed in th	e section on
Conten	nts					
sing of	olfacto		om, neuroethology and ganisation of behaviou nechanisms.			
Intend	ed learı	ning outcomes				
		e acquired an advance current studies on rele	d knowledge in the area evant topics.	a of behavioural biol	ogy and are able to o	deliver pre-
Course	es (type	, number of weekly cor	ntact hours, language –	– if other than Germa	an)	
compo • c	onent. 07-4S1N	IVO2-1IV-092: V (no inf	mponents. Information formation on SWS (wee formation on SWS (wee	kly contact hours) ar	nd course language a	available)
			language — if other th can be chosen to earn		ation offered — if not	every seme-
vidual a Assess and Pra 2 w 0 v 0 L	assessi actice) 2 ECTS, written e Languag Other pr	ments. n module component o Method of grading: nu examination (30 minut ge of assessment: Gerr rerequisites: A good co n module component o	es)	spects of Integrative language is recomm	Behavioural Biology ended.	
• 3 • p • A • L	oresenta Assessn Languag	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr	minutes) ar, summer semester			
• 3 • p • A • L • C	oresenta Assessn Languag	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co	minutes) ar, summer semester nan or English			
• 3 • p • A • L • C	oresenta Assessn Languag Other pr	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co	minutes) ar, summer semester nan or English			
 3 p A L C Allocat	oresenta Assessn Languag Other pr t ion of p	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co	minutes) ar, summer semester nan or English			
 3 p A L C Allocat	oresenta Assessn Languag Other pr t ion of p	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co blaces	minutes) ar, summer semester nan or English			
 3 p A L C Allocat	oresenta Assessn Languag Other pr tion of p	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co blaces	minutes) ar, summer semester nan or English			
 3 p A L C Allocat Additio	oresenta Assessn Languag Other pr tion of p	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co blaces	minutes) ar, summer semester nan or English			
 3 p A C Allocat Addition Workloo 	oresenta Assessn Languag Other pr tion of p onal inf oad	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co places ormation	minutes) ar, summer semester nan or English	language is recomm	ended.	
 3 p A C Allocat Addition Worklo Referre 	oresenta Assessn Languag Other pr tion of p onal info oad	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co places ormation	minutes) ar, summer semester nan or English mmand of the English	language is recomm	ended.	
 3 p A L C Allocat Addition Worklo Referre Module 	oresenta Assessn Languag Other pr tion of p tion of p onal info oad ed to in	ation (approx. 20 to 30 nent offered: once a ye ge of assessment: Gerr rerequisites: A good co places ormation	minutes) ar, summer semester nan or English mmand of the English gulations for teaching-	language is recomm	ended.	



Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 74 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title					Abbreviation	
Functional Morphology of arthropods					07-4S1NVO3-092-m01	
Module	e coord	linator		Module offered by		
holder	ofthe	Chair of Zoology III		Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	i		
1 semester undergraduate Admission prerequisite to assessment: regularity and successful completion of the respective beginning of the course.		-				
Conten	Contents					
Morph	Morphology anatomy phylogeny and ecology of arthropods					

Morphology, anatomy, phylogeny and ecology of arthropods.

Intended learning outcomes

Students are able to explain arthropod radiations in a functional context as well as to explain the importance of arthropods to ecosystems.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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)

term paper (approx. 5 to 10 pages)

Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

Workload

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

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Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major, 1 minor) Biology (Minor, 2008) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Module title Abbreviation						
Ecology of insects 07-4S1NVO4-092-m01						
Modul	e coord	inator		Module offered by		
holder	ofthe	Chair of Zoology III		Faculty of Biology		
ECTS	1	od of grading	Only after succ. con	, ,,		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
	omy, ec b work.		icular) and behaviou	ral biology of insects	s, including experimental field	
Intend	ed lear	ning outcomes				
		proficient in insect diagno and behavioural biology.	ostics and are able to	apply appropriate r	nethods for experiments on in-	
Course	es (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)	
V + Ü (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
written	exami	nation (60 minutes)				
Allocat	tion of _l	places				
Additio	onal inf	ormation				
Worklo	bad					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Modul	e appea	ars in				
		ree (1 major) Biology (200	7)			
Bachel	lor' deg	ree (1 major) Mathematic	s (2007)			
Bachel	lor's de	gree (1 major, 1 minor) Bi	ology (Minor, 2008)			

Module title				Abbreviation		
	Ecology of populations 07-4S1NV05-092-m01					
Module coordinator				Module offered by		
holder		Chair of Zoology III		Faculty of Biology		
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate				
Conter	-					
		discussion of the structunanagement.	ure and dynamics of h	numan and animal p	opulations; regulation of popula-	
Intend	ed learr	ning outcomes				
					etapopulations on the basis of quantitative analysis to these.	
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)	
This m compo		omprises 2 module comp	oonents. Information	on courses will be li	sted separately for each module	
• c k	07-4S1N ole)				5) and course language availa-	
• (07-4S1N	V05-2P0-092: S (no info	rmation on SWS (wee	ekly contact hours) a	nd course language available)	
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
low. Ur		ated otherwise, successf			e components as specified be- successful completion of all indi-	
Ecolog • 2 • 7 Assess • 1	y of Pop ECTS, vritten e ment in ECTS, I	n module component o7- bulations (Lecture, Practic Method of grading: nume examination (45 minutes) n module component o7- Method of grading: (not) ation (approx. 20 to 30 m	ce) erical grade 4 S1NVO5-2PO-092: E successfully complet	cology of Population	ulations (Lecture, Practice) Basic ns (Seminar)	
Allocat	ion of p	olaces				
Additio	onal info	ormation				
Worklo	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachelor' degree (1 major) Biology (2007)						
	-	ree (1 major) Mathematic				
	-	ree (1 major) Mathematic				
	-	ree (1 major) Computation		09)		
Bachel	Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)					

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 78 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title Abbreviation					
Molecular modelling - From DNA to protein 07-4S1PS1-092					07-4S1PS1-092-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	-	od of grading	Only after succ. con	, ,,	
5		rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
proteir		ell as on the search for ar			function of nucleic acids and molecules using databases and
Intend	ed lear	ning outcomes			
		e acquired a specialist kn rk with relevant database		ture-function relation	nships of macromolecules and
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
V + Ü (no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
compu	Iterised	practical examination (4	hours)		
Alloca	tion of p	olaces			
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	e appea	urs in			
		ree (1 major) Biology (200	07)		
Bachelor' degree (1 major) Mathematics (2008)					
	-	ree (1 major) Mathematic			
	-	ree (1 major) Computatio		09)	
	-	gree (1 major, 1 minor) Bi		-	

Module	Module title Abbreviation						
Introdu	Introduction Methods in Plant Ecophysiology 07-4S1PS2-092-m01						
Module	e coord	inator		Module offered by			
holder	of the (Chair of Plant Physiology	and Biophysics	Faculty of Biology			
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						
		riments to introduce stue perimental findings in a c			lant ecophysiology as well as dis-		
Intend	ed lear	ning outcomes					
		able to use current metho in a scientific context.	ods in plant ecophysi	ology as well as to d	ocument experimental findings		
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)		
V + Ü (I	no infoi	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-		
log (ap	prox. 1	o to 20 pages)					
Allocat	ion of j	olaces					
Additio	onal inf	ormation					
Worklo	ad		-				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)			
Module	e appea	ars in					
		ree (1 major) Biology (20	07)				
	-	ree (1 major) Mathematic					
Bachel	or's de	gree (1 major, 1 minor) Bi	ology (Minor, 2008)				

Module title					Abbreviation		
Pharmaceutical Drugs					07-4S1PS3-092-m01		
Module	e coord	inator		Module offered by			
holder	of the (Chair of Pharmaceutical B	iology	Faculty of Biology			
ECTS	<u> </u>	od of grading	Only after succ. com	pl. of module(s)			
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	ts						
cals as	well as		narmacy. Microscopic	and phytochemical	al plants and phytopharmaceuti- analyses will be performed and ed.		
Intende	ed learı	ning outcomes					
		e acquired a specialist kn s on the requirements and			plants and phytopharmaceuti- ia.		
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)		
compo • c	nent. 97-4S1P	S3-1PD-092: Ü (no inform	nation on SWS (weekl	y contact hours) and	sted separately for each module d course language available) d course language available)		
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-		
	nless st	ated otherwise, successf			e components as specified be- successful completion of all indi-		
• 3 • w Assess • 2	ECTS, vritten e ment i ECTS,	n module component o7- Method of grading: nume examination (45 minutes) n module component o7- Method of grading: (not) ation (approx. 20 to 30 m	4S1PS3-2PD-092: Se successfully complet	minar on Pharmaceu			
Allocat	ion of p	olaces					
	r						
Additio	nal inf	ormation					
Additio							
Workload							
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module							
		ree (1 major) Biology (200					
		ree (1 major) Mathematic					
Dachel	Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)						

Module title				Abbreviation
Methods Pha	maceutical Biology - pra	ctical course		07-4S1PS4-092-m01
Module coordinator			Module offered by	
holder of the (Chair of Pharmaceutical E	Biology	Faculty of Biology	
ECTS Metho	od of grading	Only after succ. com		
5 nume	rical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate			
Contents				
	vill provide students with iology and drug analysis		thodological introdu	uction to fundamental techniques
Intended learn	ning outcomes			
Students are a	able to analyse groups of	drugs, using a variety	y of methods.	
Courses (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
component. • 07-4S1P	S4-1PB-092: P (no inform	ation on SWS (weekl	y contact hours) and	sted separately for each module d course language available) d course language available)
	essment (type, scope, la on on whether module ca			tion offered — if not every seme-
Drugs (Labora • 4 ECTS, • written of Assessment in ceutical Drugs • 1 ECTS, • presenta	n module component o7- tory Course) Method of grading: nume examination (45 minutes) n module component o7-	erical grade 4 S1PS4-2PB-092: Set successfully complet inutes)	minar on Analytics a	r Biology of Pharmaceutical nd Molecular Biology of Pharma-
Allocation of p				
Additional inf	ormation			
Workload				
Referred to in	LPO I (examination regu	lations for teaching-d	legree programmes)	
 M = dc:1-				
Module appea				
	ree (1 major) Biology (200 ree (1 major) Mathematic			
-	gree (1 major, 1 minor) Bi			

Module title Abbreviation					Abbreviation	
Practi	cal Coui	se as exchange student		07-5AP-072-m01		
Modu	le coord	inator		Module offered by		
Coord	inator B	ioCareers		Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con			
10	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conte	nts					
chang	e progra	ammes such as Erasmus	etc. Contents of the c	ourse should corres	e this course in the context of ex- pond to the contents of <i>Spezielle</i> ent coordinator in advance.	
Intend	led lear	ning outcomes				
		amiliar with working met nal competencies as wel			an Germany. They have develo-	
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
P (no i	informat	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
didate	e each (a		oral examination in g		r c) oral examination of one can- to 3 candidates, approx. 60 mi-	
Alloca	tion of	olaces				
Additi	onal inf	ormation				
Workl	oad					
Referr	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modu	le appea	ars in				
Bache	Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2007)					

Modul	Module title Abbreviation						
Extern	al Pract	tical Course			07-5EP-072-m01		
Modul	e coord	inator		Module offered by			
Coordi	nator B	ioCareers		Faculty of Biology			
ECTS	Meth	od of grading	Only after succ. con				
10	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conter	Its						
		complete a placement a ned by the respective in:		iniversity research ir	nstitution or a business. Contents		
Intend	ed lear	ning outcomes					
		familiar with the structur o work in their professic		ions and businesses	and have developed skills which		
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	n)		
P (no ii	nformat	tion on SWS (weekly cor	itact hours) and cours	e language available	2)		
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-		
didate	each (a) oral examination in g		r c) oral examination of one can- to 3 candidates, approx. 60 mi-		
	ion of						
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination reg	ulations for teaching-o	degree programmes)			
Modul	e appea	ars in					
		ree (1 major) Biology (20	007)				
	Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2007)						

Module Method		olecular cell - and develo	opmental Biology		Abbreviation
			Pinentat BiotoSy		07-5S2MZ1-092-m01
Module	e coord	inator		Module offered by	
		Chair of Zoology I		Faculty of Biology	
ECTS		od of grading	Only after succ. con	pl. of module(s)	
10	l	rical grade			
Duratio		Module level undergraduate	Other prerequisites		
1 seme	I	undergraduate			
Conten In this I logy.		, students will acquire a	n in-depth insight int	o approaches and m	nethods in molecular and cell bio-
Intende	ed learn	ning outcomes			
		acquired knowledge ab endently perform scientifi		s and methods of m	olecular and cell biology. They are
Course	s (type,	number of weekly conta	ct hours, language –	- if other than Germa	an)
compo • 0 • 0	nent. 7-5S2N 7-5S2N	1Z1-1ZE-092: V + Ü (no inf 1Z1-2ZE-092: Ü (no inforr	ormation on SWS (we nation on SWS (week	ekly contact hours) a	isted separately for each module and course language available) nd course language available) nd course language available)
ster, in	formati	on on whether module ca	an be chosen to earn	a bonus)	ation offered — if not every seme-
	less st	ated otherwise, successf			le components as specified be- successful completion of all indi-
Data pr gy - Dat	ocessii ta proce		ecture and practice) I ls (lecture and practi	Methods in molecula	cell - and developmental Biology ar cell - and developmental Biolo-
o a	ne can pprox.		minutes) or d) oral ex tation (approx. 20 to	kamination in group	ages) or c) oral examination of s (groups of 2 or 3 candidates,
Assess (labora	ment ir tory co	n module component 07- urse)	5S2MZ1-2ZE-092: M	ethods in molecular	cell - and developmental Biology
• a 0 a) writte ne can pprox.		60 minutes) or b) log minutes) or d) oral ex tation (approx. 20 to	kamination in group	ages) or c) oral examination of s (groups of 2 or 3 candidates,
Assess Biology	ment ir (semir	n module component 07- nar)	5 S2MZ1-3ZE-092: Cu	·	cular cell - and developmental
•_p	resenta	Method of grading: (not) ation (approx. 20 to 30 m		ed	
Allocat	ion of p	olaces			
Additio	nal info	ormation			

Workload

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

Module appears in

Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 86 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module					Abbreviation
Specific Microbiology II 07-5S2MZ2-092-m01					
Module	Module coordinator Module offered by				
holder	of the Chair of Mic	crobiology		Faculty of Biology	
ECTS	Method of gradi	ng	Only after succ. com	pl. of module(s)	
10	numerical grade				
Duratio			Other prerequisites		
1 seme	ster undergrad	luate			
Conten	ts				
In this	module, students	will acquire ar	n in-depth insight inte	o approaches and m	ethods in microbiology.
Intend	ed learning outco	mes			
	ts have acquired l ntly perform scient			s and methods of mi	crobiology. They are able to inde-
Course	s (type, number o	f weekly conta	ct hours, language —	- if other than Germa	n)
compo • c	nent. 97-5S2MZ2-1MI-09	02: V + Ü (no inf	ormation on SWS (we	ekly contact hours) a	sted separately for each module Ind course language available) d course language available)
Metho	d of assessment (t	type, scope, la		an German, examina	tion offered — if not every seme-
low. Ur vidual Assess ture an 7 a a c a a b c a a b c a a b c a a c c a a c c a a c c a a c c a a c c a a c c a a c c a a c c a a c c a c a c c a c c a c c a c	assessments. ment in module of d laboratory course ECTS, Method of written examina one candidate eac approx. 60 minutes anguage of asses ment in module of ECTS, Method of presentation (appr	wise, successf omponent o7- se) Specific mi grading: nume tion (approx. 6 h (approx. 30 s) or e) presen sment: Germa omponent o7- grading: (not)	ul completion of the 5S2MZ2-1MI-092: Sp crobiology 2 - molecu- erical grade 50 minutes) or b) log minutes) or d) oral ex- tation (approx. 20 to n or English 5S2MZ2-2MI-092: Ac successfully complet	module will require s becific microbiology 2 ular microbiology (lea (approx. 10 to 20 pa kamination in groups 30 minutes) dvanced microbiolog	e components as specified be- successful completion of all indi- 2 - molecular microbiology (lec- cture and laboratory course) ages) or c) oral examination of 5 (groups of 2 or 3 candidates, ay 2 - Seminar in molecular micro-
Allocat	ion of places				
 Additic Worklo	onal information ad				
 Doform	d to in LDO L (ave	mination	lations for taashing		
kererre	eu lo in LPUT (exa	mination regu	lations for teaching-o	legree programmes)	
Module	e appears in				
	or' degree (1 majo	r) Biology (200	07)		
	or' degree (1 majo				

Modul	e title				Abbreviation
Specif	ic Bioin	formatics II			07-5S2MZ3-092-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	of the	Chair of Bioinformatics		Faculty of Biology	
ECTS	-	od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
quenc	e analy:		olution - gene expres		from the following list: - se- ein structure analysis - program-
Intend	ed lear	ning outcomes			
		e acquired knowledge abo perform scientific laborate		s and methods of bio	pinformatics. They are able to in-
Course	es (type	, number of weekly conta	ct hours, language —	if other than Germa	in)
V + Ü (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
didate	each (a		oral examination in §		r c) oral examination of one can- to 3 candidates, approx. 60 mi-
	tion of	· · · ·	<u> </u>		
Additi	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)	
Modul	e appea	ars in			
Bache Bache Bache	lor' deg lor' deg lor' deg	ree (1 major) Biology (200 ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Computatio	s (2008) s (2007)	09)	

Modul	e title				Abbreviation
Specif	Specific Biotechnology II 07-5S2MZ4-092-m01				
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Biotechnology an	d Biophysics	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
In this	module	e, students will acquire ar	n in-depth insight int	o approaches and m	ethods in biotechnology.
Intend	ed lear	ning outcomes			
		e acquired knowledge abo perform scientific laborato		s and methods of bio	otechnology. They are able to in-
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
					sted separately for each module
compo • (onent. 07-5S2N	NZ4-1BT-092: P (no inform	nation on SWS (week	ly contact hours) an	d course language available) d course language available)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
low. U vidual Assess borato	nless st assess sment in ry cours 3 ECTS, a) writte one can approx. anguag sment in 2 ECTS, oresent	ated otherwise, successf ments. n module component 07 -9 Se) Method of grading: nume en examination (approx. 6 didate each (approx. 30 60 minutes) or e) presen ge of assessment: Germa n module component 07 -9 Method of grading: (not) ation (approx. 20 to 30 m	ul completion of the 5 S2MZ4-1BT-092: Specical grade 50 minutes) or b) log minutes) or d) oral es tation (approx. 20 to n or English 5 S2MZ4-2BT-092: Sp successfully comple	module will require s becific Biotechnology (approx. 10 to 20 pa kamination in groups 30 minutes) becific Biotechnolog	e components as specified be- successful completion of all indi- y 2 - Practical Biotechnology 2 (la- ages) or c) oral examination of s (groups of 2 or 3 candidates, y 2 - Seminar Biotechnology 2
Alloca	tion of _l	places			
 Additio Workle		ormation			
Referr	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)	
		Li o i (examination regu			
Modul	e appea	ars in			
		ree (1 major) Biology (200	07)		
	-	ree (1 major) Mathematic			
	0				

Modul	e title				Abbreviation
Neurot	biology	II			07-5S2NVO1-092-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Neurobiology and	d Genetics	Faculty of Biology	
ECTS	1	od of grading	Only after succ. con	· · · · ·	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
		vill provide students with ms, learning and memory	, –	the following topics	: the neuronal bases of cognition,
Intend	ed lear	ning outcomes			
		able to acquaint themselv unt current literature.	ves with and deliver (presentations on adv	vanced topics in neurobiology, ta-
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
compo • c ł	onent. 07-5S2N ole)	IVO1-1NB-092: V + Ü (no i	nformation on SWS (weekly contact hour	sted separately for each module s) and course language availa- nd course language available)
ster, in Assess low. Ui	iformati sment i	on on whether module can this module comprises ated otherwise, successf	an be chosen to earn the assessments in t	a bonus) he individual modul	tion offered — if not every seme- e components as specified be- successful completion of all indi-
biology • 7 • a • a • b • b • b • b • b • b • a • a • a • a • a • a • a • a	y 2 (lect z ECTS, a) writte one can approx. anguag sment in 3 ECTS,	ure and practical course) Method of grading: nume en examination (approx. 6	erical grade 50 minutes) or b) log minutes) or d) oral ex tation (approx. 20 to n or English 5 52NV01-2NB-092: I successfully comple	(approx. 10 to 20 pa kamination in groups 30 minutes) Neurobiology 2 (sem	are and practical course) Neuro- ages) or c) oral examination of s (groups of 2 or 3 candidates, inar)
Allocat	tion of	olaces			
Additio	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPO I (examination regu	lations for teaching.	legree programmes)	
Modul	e appea	ars in			
		ree (1 major) Biology (200	לדר		
	-	ree (1 major) Biology (200 ree (1 major) Mathematic			

Modul	e title				Abbreviation
Integr	ative Be	ehavioural Biology II			07-5S2NVO2-092-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Zoology II		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
		e, students will acquire a us on the biology of socia		o behavioural physic	ology and sociobiology with a
Intend	ed lear	ning outcomes			
		e acquired knowledge an hypotheses and are profi			ology and sociobiology. They are al insects.
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	n)
V + P (no infoi	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		s essment (type, scope, la ion on whether module c			tion offered — if not every seme-
didate	each (a) oral examination in g		r c) oral examination of one can- to 3 candidates, approx. 60 mi-
Alloca	tion of	places			
Additi	onal inf	ormation			
Workl	oad				
Referr	ed to in	LPUI (examination regi	ilations for teaching-	degree programmes)	
Referr	ed to in	LPOT (examination regu	ulations for teaching-o	degree programmes)	
			llations for teaching-o	legree programmes)	
 Modul	e appea			legree programmes)	

Module	e title				Abbreviation
Ecology of animals II 07-5S2NV03-092-m01					
	e coordinator			Module offered by	
	of the Chair of Zoology	/ 111	r	Faculty of Biology	
ECTS	Method of grading		Only after succ. con	pl. of module(s)	
10	numerical grade				
Duratio		_	Other prerequisites		
1 seme		5			
Conten					
	module, students will animal ecology.	acquire a	n in-depth insight int	o experiment design	and the statistical analysis of
Intend	ed learning outcomes				
	ts are able to design a erpret the results.	ppropriat	e experiments to add	ress a scientific issu	e as well as to analyse, present
Course	s (type, number of we	ekly conta	ct hours, language –	if other than Germa	n)
compo • c t	nent. 97-5S2NVO3-10E-092: 9le)	V + Ü (no i	information on SWS (weekly contact hour	sted separately for each module s) and course language availa- nd course language available)
				•	tion offered — if not every seme-
	formation on whether				tion onered — if not every seme-
low. Ur vidual Assess Statisti ce) • c • a • c • a • L Assess minar) • 1 • f • A Allocat	Iless stated otherwise assessments. ment in module comp ics (lecture and practic p ECTS, Method of grac) written examination one candidate each (ap pprox. 60 minutes) or anguage of assessme ment in module comp ECTS, Method of grad presentation (approx. 2 assessment offered: or ion of places	onent o7- ce) Ecolog ling: nume (approx. o oprox. 30 e) presen nt: Germa onent o7- ing: (not) 20 to 30 m	Tul completion of the 5S2NVO3-10E-092: E y of Animals 2 - Planr erical grade 60 minutes) or b) log minutes) or d) oral ex- tation (approx. 20 to n or English 5S2NVO3-20E-092: E successfully complete inutes)	module will require s cology of Animals 2 ing of experiments a (approx. 10 to 20 pa camination in groups 30 minutes) Ecology of Animals 2	e components as specified be- successful completion of all indi- - Planning of experiments and and Statistics (lecture and practi- ages) or c) oral examination of s (groups of 2 or 3 candidates, - Analysis of ecological data (se-
Additio	onal information				
	ed to in LPO I (examin	ation regu	lations for teaching-o	legree programmes)	
	e appears in				
Bachel	or' degree (1 major) Bi	ology (200	07)		
Bachelor's	with 1 major Mathematics (200	7)		s • generated 11-Jan-2023 • ex	



Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 93 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module coordination holder of the Ch ECTS Method 10 numeric Duration N 1 semester u Contents u The module will biological and b physiology will b Intended learning Students are far used. They are a Courses (type, n) This module concomponent. 07-5S2PS: 07-5S2PS: 07-5S2PS: Method of assessiter, information Assessment in t low. Unless stat vidual assessmet Assessment in r on a) written one candia approx. 60	air of Plant Physiology of grading al grade lodule level ndergraduate address topics in cont iophysical methods. O be presented and discu- ng outcomes niliar with current rese- ble to interpret and de umber of weekly conta nprises 2 module comprises con whether module co- his module comprises ed otherwise, successf	and Biophysics Only after succ. cor Other prerequisites temporary research o On the basis of curren ussed in English. earch in the field of pl eliver presentations o act hours, language – ponents. Information mation on SWS (weel mation on SWS (weel mation on SWS (weel anguage — if other th can be chosen to earr the assessments in the	s on plant membrane transpont scientific publication lant membrane transpont scientific publication – if other than German n on courses will be list kly contact hours) and kly contact hours) and han German, examination n a bonus) the individual module	n) sted separately for each module d course language available) d course language available) tion offered — if not every seme- e components as specified be-
holder of the Ch ECTS Method 10 numeric Duration N 1 semester u Contents u The module will biological and b physiology will be the set of th	air of Plant Physiology of grading al grade lodule level ndergraduate address topics in cont iophysical methods. O be presented and discu- ng outcomes niliar with current rese- ble to interpret and de umber of weekly conta nprises 2 module comprises con whether module co- his module comprises ed otherwise, successf	Only after succ. cor Other prerequisites temporary research o On the basis of curren ussed in English. earch in the field of pl eliver presentations o act hours, language – ponents. Information mation on SWS (weel mation on SWS (weel mation on SWS (weel anguage — if other th can be chosen to earr the assessments in the	Faculty of Biology mpl. of module(s) s on plant membrane transpont on scientific publicatio – if other than German n on courses will be list kly contact hours) and kly contact hours) and nan German, examination n a bonus) the individual module	ns, different aspects of plant oort as well as with the methods ons. n) sted separately for each module d course language available) d course language available) tion offered — if not every seme-
holder of the Ch ECTS Method 10 numeric Duration N 1 semester u Contents u The module will biological and b physiology will be the the the the the the the the the th	air of Plant Physiology of grading al grade lodule level ndergraduate address topics in cont iophysical methods. O be presented and discu- ng outcomes niliar with current rese- ble to interpret and de umber of weekly conta nprises 2 module comprises con whether module co- his module comprises ed otherwise, successf	Only after succ. cor Other prerequisites temporary research o On the basis of curren ussed in English. earch in the field of pl eliver presentations o act hours, language – ponents. Information mation on SWS (weel mation on SWS (weel mation on SWS (weel anguage — if other th can be chosen to earr the assessments in the	Faculty of Biology mpl. of module(s) s on plant membrane transpont on scientific publicatio – if other than German n on courses will be list kly contact hours) and kly contact hours) and nan German, examination n a bonus) the individual module	ns, different aspects of plant oort as well as with the methods ons. n) sted separately for each module d course language available) d course language available) tion offered — if not every seme-
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1 semester u Contents The module will biological and b physiology will b Intended learnin Students are far used. They are a Courses (type, n This module con component. • 07-5S2PS: • 07-5S2	address topics in cont iophysical methods. O be presented and discu ag outcomes niliar with current rese ble to interpret and de umber of weekly conta nprises 2 module comp -1MT-092: Ü (no inform -2MT-092: S (no inform sment (type, scope, la non whether module comprises ed otherwise, successf	 temporary research o On the basis of curren ussed in English. earch in the field of pl eliver presentations o act hours, language – ponents. Information mation on SWS (weel mation on SWS (weel anguage — if other th can be chosen to earr the assessments in t	on plant membrane tra at scientific publicatio lant membrane transp on scientific publicatio — if other than German n on courses will be lis kly contact hours) and kly contact hours) and nan German, examinat n a bonus) the individual module	ns, different aspects of plant oort as well as with the methods ons. n) sted separately for each module d course language available) d course language available) tion offered — if not every seme-
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biological and b physiology will b Intended learnin Students are far used. They are a Courses (type, n This module cor component. • 07-5S2PS: • 07-5S2	iophysical methods. O be presented and discu- ing outcomes niliar with current rese- ble to interpret and de umber of weekly conta nprises 2 module comp 1-1MT-092: Ü (no inform 1-2MT-092: S (no inform 55ment (type, scope, la n on whether module comprises ed otherwise, successf	on the basis of curren ussed in English. earch in the field of pl eliver presentations of act hours, language – ponents. Information mation on SWS (weel mation on SWS (weel anguage — if other th can be chosen to earr the assessments in t	ant scientific publicatio lant membrane transpon scientific publicatio — if other than German n on courses will be lis kly contact hours) and kly contact hours) and nan German, examinat n a bonus) the individual module	ns, different aspects of plant oort as well as with the methods ons. n) sted separately for each module d course language available) d course language available) tion offered — if not every seme-
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This module con component. • 07-5S2PS: • 07-5S2PS: Method of asses ster, information Assessment in t low. Unless stat vidual assessme Assessment in r tory course) • 9 ECTS, M • a) written one candi approx. 60	nprises 2 module comp -1MT-092: Ü (no inform -2MT-092: S (no inform ssment (type, scope, la n on whether module co his module comprises ed otherwise, successf	ponents. Information mation on SWS (week mation on SWS (week anguage — if other th can be chosen to earr the assessments in t	n on courses will be lis kly contact hours) and kly contact hours) and nan German, examinat n a bonus) the individual module	sted separately for each module d course language available) d course language available) tion offered — if not every seme-
component. • 07-5S2PS: • 07-5S2PS: Method of assession ster, information Assessment in t low. Unless stat vidual assessment tory course) • 9 ECTS, M • a) written one candia approx. 60	1-1MT-092: Ü (no inform 1-2MT-092: S (no inform 1-2MT-092: Ü (no inform 1-2MT-092: S (no inform)) 1-2MT-092: S (no	mation on SWS (weel mation on SWS (weel anguage — if other th an be chosen to earr the assessments in t	kly contact hours) and kly contact hours) and nan German, examinat n a bonus) the individual module	d course language available) d course language available) tion offered — if not every seme-
ster, information Assessment in t low. Unless stat vidual assessme Assessment in r tory course) • 9 ECTS, M • a) written one candi approx. 60	on whether module c his module comprises ed otherwise, successf	an be chosen to earn the assessments in t	n a bonus) the individual module	e components as specified be-
low. Unless stat vidual assessment Assessment in r tory course) • 9 ECTS, M • a) written one candi approx. 60	ed otherwise, successf			
tory course) • 9 ECTS, M • a) written one candi approx. 60				
0 0	ethod of grading: num examination (approx. date each (approx. 30 o minutes) or e) presen of assessment: Germa	erical grade 60 minutes) or b) log minutes) or d) oral e ntation (approx. 20 to an or English	g (approx. 10 to 20 pa examination in groups o 30 minutes)	ne transport mechanisms (labora ages) or c) oral examination of 5 (groups of 2 or 3 candidates,
gress in plant pl • 1 ECTS, Me	nodule component o7- hysiology (seminar) ethod of grading: (not) on (approx. 20 to 30 m	successfully comple	,	ne transport mechanisms - Pro-
Allocation of pla	ces			
Additional infor	mation			
Workload				
Referred to in LF	POI (examination regu	ulations for teaching-	degree programmes)	
Module appears	in			
Bachelor' degree Bachelor' degree	(.) =: : : :	07)		

Modul	e title				Abbreviation
Molec	Molecular biology of plants 07-5S2PS2-092-m01				
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS		od of grading	Only after succ. con		
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
stions metho	of plan ds the s	t physiology. Every stude	nt will perform a phy	siological experimen	ues of molecular biology for que- It that will be analysed using the If plant physiology will be presen-
Intend	ed lear	ning outcomes			
		able to perform advanced scientific publications.	l experiments in plan	t physiology as well	as to interpret and deliver pre-
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
compo	onent.				sted separately for each module d course language available)
					id course language available)
		s essment (type, scope, la ion on whether module ca			tion offered — if not every seme-
low. U		ated otherwise, successf			e components as specified be- successful completion of all indi-
• •	9 ECTS, a) writte one can approx.		erical grade 60 minutes) or b) log minutes) or d) oral ex tation (approx. 20 to	(approx. 10 to 20 pa xamination in groups	lants (laboratory course) ages) or c) oral examination of s (groups of 2 or 3 candidates,
logy (s	eminar 1 ECTS,) Method of grading: (not)	successfully complet		olants - Progress in plant physio-
· · · ·	•	ation (approx. 20 to 30 m	inutes)		
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPO I (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
		ree (1 major) Biology (200	07)		
	-	ree (1 major) Mathematic			

Protein biochemistry and expression of recombinant protein	Abbreviation
	ns 07-5S2PS3-092-m01
Module coordinator	Module offered by
	Faculty of Biology
ECTS Method of grading Only after succ. com	· -·
10 numerical grade	
Duration Module level Other prerequisites	
1 semester undergraduate	
Contents	
In this module, students will acquire a knowledge of method tion and protein purification as well as the biophysical and b publications on these topics will be presented and discusse	piochemical analysis of proteins. Current scientific
Intended learning outcomes	
Students have acquired knowledge and skills in the areas of purification as well as protein analysis. They are able to intertions.	
Courses (type, number of weekly contact hours, language $-$	if other than German)
 This module comprises 2 module components. Information of component. 07-552PS3-1PP-092: Ü (no information on SWS (weekly) 07-552PS3-2PP-092: S (no information on SWS (weekly) 	y contact hours) and course language available)
Method of assessment (type, scope, language — if other tha ster, information on whether module can be chosen to earn a	
low. Unless stated otherwise, successful completion of the n vidual assessments. Assessment in module component 07-5S2PS3-1PP-092: Pro	
 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log one candidate each (approx. 30 minutes) or d) oral ex approx. 60 minutes) or e) presentation (approx. 20 to Language of assessment: German or English Assessment in module component 07-5S2PS3-2PP-092: Pro proteins - Progress in plant physiology (seminar) 	(approx. 10 to 20 pages) or c) oral examination of amination in groups (groups of 2 or 3 candidates, 30 minutes) otein biochemistry and expression of recombinant
 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log one candidate each (approx. 30 minutes) or d) oral ex approx. 60 minutes) or e) presentation (approx. 20 to 2 Language of assessment: German or English Assessment in module component 07-5S2PS3-2PP-092: Pro proteins - Progress in plant physiology (seminar) 1 ECTS, Method of grading: (not) successfully complete 	(approx. 10 to 20 pages) or c) oral examination of amination in groups (groups of 2 or 3 candidates, 30 minutes) otein biochemistry and expression of recombinant
 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log one candidate each (approx. 30 minutes) or d) oral exa approx. 60 minutes) or e) presentation (approx. 20 to Language of assessment: German or English Assessment in module component 07-552PS3-2PP-092: Pro proteins - Progress in plant physiology (seminar) 1 ECTS, Method of grading: (not) successfully complete presentation (approx. 20 to 30 minutes) 	(approx. 10 to 20 pages) or c) oral examination of amination in groups (groups of 2 or 3 candidates, 30 minutes) otein biochemistry and expression of recombinant
 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log one candidate each (approx. 30 minutes) or d) oral exa approx. 60 minutes) or e) presentation (approx. 20 to Language of assessment: German or English Assessment in module component 07-552PS3-2PP-092: Pro proteins - Progress in plant physiology (seminar) 1 ECTS, Method of grading: (not) successfully complete presentation (approx. 20 to 30 minutes) 	(approx. 10 to 20 pages) or c) oral examination of amination in groups (groups of 2 or 3 candidates, 30 minutes) otein biochemistry and expression of recombinant
 9 ECTS, Method of grading: numerical grade a) written examination (approx. 60 minutes) or b) log one candidate each (approx. 30 minutes) or d) oral exa approx. 60 minutes) or e) presentation (approx. 20 to Language of assessment: German or English Assessment in module component 07-552PS3-2PP-092: Pro proteins - Progress in plant physiology (seminar) 1 ECTS, Method of grading: (not) successfully complete presentation (approx. 20 to 30 minutes) Allocation of places 	(approx. 10 to 20 pages) or c) oral examination of amination in groups (groups of 2 or 3 candidates, 30 minutes) otein biochemistry and expression of recombinant
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Module title					Abbreviation
Specific ecophysiology of plants 07-5S2PS4-092-m01					07-5S2PS4-092-m01
Module coordinator Module offered			Module offered by		
		Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	1	od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
ecologi	ical me				biological, chemical analytical or ocumented in the context of the
Intende	ed lear	ning outcomes			
		able to independently per in the context of the curre			plant ecophysiology, to interpret ent these.
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	n)
compo • C	nent. 17-5S2F	254-10P-092: Ü (no inform	nation on SWS (week	ly contact hours) and	sted separately for each module d course language available) d course language available)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
	iless st	ated otherwise, successf			e components as specified be- successful completion of all indi-
• 9 • a 0 a • L Assess • 1	ECTS,) written ne can pprox. anguag ment in ECTS,	Method of grading: nume en examination (approx. 6	erical grade 50 minutes) or b) log minutes) or d) oral ex tation (approx. 20 to n or English 5 52PS4-20P-092: Sp successfully complet	(approx. 10 to 20 pa camination in groups 30 minutes) pecific ecophysiology	gy of plants (laboratory course) ages) or c) oral examination of 5 (groups of 2 or 3 candidates, 7 of plants (seminar)
Allocat					
Additio	nal inf	ormation			
/ luartic					
Worklo	he				
WORKIO					
Deferme	d to 10	IDO I (oversidentier	lations for to a him a		
Reieffe		LPOI (examination regu	tations for teaching-0	iegree programmes)	
		•			
Module			```		
	-	ree (1 major) Biology (200 ree (1 major) Mathematic			
Dachel	or deg	ree (1 major) Mathematic	5 (2007)		

	e title				Abbreviation	
Molecular biological methods in pharmaceutical biology			narmaceutical biology		07-5S2PS5-092-m01	
Module	e coord	linator		Module offered by	Module offered by	
holder	ofthe	Chair of Pharmaceutic	al Biology	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. cor	mpl. of module(s)		
10	nume	rical grade				
Duratio	on	Module level	Other prerequisites	5		
1 seme	ster	undergraduate				
Conten	nts					
			n project, students will b /, biochemistry or cell cu		advanced methods in molecular	
Intend	ed lear	ning outcomes				
			l methods in pharmaceunducting research in the		focus on molecular biology and projects.	
Course	s (type	, number of weekly co	ontact hours, language -	– if other than Germa	an)	
• c Methor ster, in Assess low. Ur	07-5S2F 07-5S2F d of as format ment i nless st	PS5-2MB-092: S (no in sessment (type, scope ion on whether modul n this module compris	nformation on SWS (wee e, language — if other th le can be chosen to earr ses the assessments in t	ekly contact hours) an nan German, examina n a bonus) the individual modu	nd course language available) nd course language available) ation offered — if not every seme- le components as specified be-	
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Assess gy (Lab • 9 • a o a • L Assess gy (sen • 1 • p Allocat Additio	ment i poratory ECTS, a) writte one car approx. angua sment i ninar) ECTS, present tion of pnal inf	ments. n module component y course) Method of grading: ne en examination (approx. do minutes) or e) pre ge of assessment: Ger n module component Method of grading: (n ation (approx. 20 to 3 places	07-5S2PS5-1MB-092: N umerical grade bx. 60 minutes) or b) log 30 minutes) or d) oral e sentation (approx. 20 to rman or English 07-5S2PS5-2MB-092: N not) successfully comple	Aolecular biological r g (approx. 10 to 20 p examination in group o 30 minutes) Aolecular biological r eted	nethods in pharmaceutical biolo- ages) or c) oral examination of s (groups of 2 or 3 candidates, methods in pharmaceutical biolo-	
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D'	e title				Abbreviation
Biochemical methods in pharmaceutical Biology					07-5S2PS6-092-m01
Module coordinator				Module offered by	
		Chair of Pharmaceutical I	Biology	Faculty of Biology	
ECTS	1	od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	
10		rical grade			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Conter	nts				
		d in a current research pr protein chemistry or me		ecome proficient in	advanced methods in molecular
Intend	ed lear	ning outcomes			
		proficient in advanced m he skills necessary for co			focus on molecular biochemistry arch projects.
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germ	an)
compo • c	onent. 07-5S2F	PS6-1BC-092: P (no inform	nation on SWS (week	ly contact hours) ar	isted separately for each module nd course language available) nd course language available)
		s essment (type, scope, la ion on whether module c			ation offered — if not every seme-
					le components as specified be- successful completion of all indi-
vidual Assess gy (Lab • g • a c • L Assess nar) • 1	assess sment i poratory 9 ECTS, 9 ECTS, 9 writte one can approx. Langua sment i 1 ECTS,	ments. n module component 07 - / course) Method of grading: num en examination (approx. Ididate each (approx. 30 60 minutes) or e) preser ge of assessment: Germa	ful completion of the •5S2PS6-1BC-092: Mo erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English •5S2PS6-2BC-092: Bi successfully complet	module will require olecular biological n g (approx. 10 to 20 p xamination in group g 30 minutes)	le components as specified be- successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of os (groups of 2 or 3 candidates,
vidual Assess gy (Lab • a • a • a • L Assess nar) • 1	assess sment i poratory 9 ECTS, 9 ECTS, 9 writte one can approx. Langua sment i 1 ECTS,	ments. n module component 07 - / course) Method of grading: num en examination (approx. didate each (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component 07 - Method of grading: (not) ation (approx. 20 to 30 n	ful completion of the •5S2PS6-1BC-092: Mo erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English •5S2PS6-2BC-092: Bi successfully complet	module will require olecular biological n g (approx. 10 to 20 p xamination in group g 30 minutes)	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of s (groups of 2 or 3 candidates,
vidual Assess gy (Lab • a • a • a • L Assess nar) • 1	assess sment i poratory 2 ECTS, 2 ECTS, 2 writte one can approx. Languag sment i 1 ECTS, present	ments. n module component 07 - / course) Method of grading: num en examination (approx. didate each (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component 07 - Method of grading: (not) ation (approx. 20 to 30 n	ful completion of the •5S2PS6-1BC-092: Mo erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English •5S2PS6-2BC-092: Bi successfully complet	module will require olecular biological n g (approx. 10 to 20 p xamination in group g 30 minutes)	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of s (groups of 2 or 3 candidates,
vidual Assess gy (Lab • g • a • c • a • L Assess nar) • 1 • p Allocat	assess sment i poratory ECTS, a) writte one can approx. Languag sment i t ECTS, present tion of	ments. n module component 07 - / course) Method of grading: num en examination (approx. didate each (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component 07 - Method of grading: (not) ation (approx. 20 to 30 n	ful completion of the •5S2PS6-1BC-092: Mo erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English •5S2PS6-2BC-092: Bi successfully complet	module will require olecular biological n g (approx. 10 to 20 p xamination in group g 30 minutes)	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of us (groups of 2 or 3 candidates,
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vidual Assess gy (Lab • g • a • a • b • c • c Assess nar) • 1 • p Allocat Additio Worklo	assess sment i poratory ECTS, eCTS, eCTS, ecan approx. Languag sment i teCTS, present tion of p onal inf	ments. n module component 07 - / course) Method of grading: num en examination (approx. ididate each (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component 07 - Method of grading: (not) ation (approx. 20 to 30 n places	ful completion of the -5S2PS6-1BC-092: Ma erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English -5S2PS6-2BC-092: Bi successfully completent ninutes)	module will require olecular biological n (approx. 10 to 20 p xamination in group 30 minutes) fochemical methods ted	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of os (groups of 2 or 3 candidates, in pharmaceutical Biology (semi-
vidual Assess gy (Lab • gy • a • a • L Assess nar) • 1 • F Allocat Additio Referre 	assess sment i poratory ECTS, a) writte one can approx. Langua sment i t ECTS, present tion of onal inf pad	ments. n module component o7- / course) Method of grading: num en examination (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component o7- Method of grading: (not) ation (approx. 20 to 30 n places formation LPO I (examination regu	ful completion of the -5S2PS6-1BC-092: Ma erical grade 60 minutes) or b) log minutes) or d) oral ex- ntation (approx. 20 to an or English -5S2PS6-2BC-092: Bi successfully completent ninutes)	module will require olecular biological n (approx. 10 to 20 p xamination in group 30 minutes) fochemical methods ted	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of os (groups of 2 or 3 candidates, in pharmaceutical Biology (semi-
vidual Assess gy (Lab • c • a • c • c Assess nar) • 1 • c Assess nar) • 1 • c Assess nar) • 1 • c Assess nar) • 1 • c Assess nar) • 1 • c • c • c • c • c • c • c • c • c • c	assess sment i poratory ECTS, a) writte one can approx. Langua; sment i ECTS, present tion of p onal inf pad	ments. n module component o7- / course) Method of grading: num en examination (approx. 30 60 minutes) or e) preser ge of assessment: Germa n module component o7- Method of grading: (not) ation (approx. 20 to 30 n places formation LPO I (examination regu	ful completion of the •5S2PS6-1BC-092: Ma erical grade 60 minutes) or b) log minutes) or d) oral ex- nation (approx. 20 to an or English •5S2PS6-2BC-092: Bi successfully completent inutes)	module will require olecular biological n (approx. 10 to 20 p xamination in group 30 minutes) fochemical methods ted	successful completion of all indi- nethods in pharmaceutical biolo- pages) or c) oral examination of os (groups of 2 or 3 candidates, in pharmaceutical Biology (semi-

Modul	e title				Abbreviation
Bioche	emistry				08-BC-072-m01
Module coordinator Module offered by					ļ
holder	of the	Chair of Biochemistry		Chair of Biochemis	trv
ECTS	1	od of grading	Only after succ. con		,
6		rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	Registration for asse	essment: Yes, as spe	ecified.
Conte	nts				
Compr mistry	-	ctures and exercises, this	s module acquaints s	tudents with the fur	damental principles of bioche-
Intend	ed lear	ning outcomes			
		e become familiar with th cal processes in cellular s		ples of biochemistry	. They are able to describe the
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)
V + Ü +	+ V + Ü ((no information on SWS (weekly contact hours) and course langua	ge available)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
writter	ı exami	nation (90 minutes)			
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPOI (examination regu	lations for teaching-	degree programmes	
Modul	e appea	ars in			
		ree (1 major) Chemistry (2	2007)		
	-	ree (1 major) Chemistry (2	• •		
	-	ree (1 major) Mathematic			

Modul	e title				Abbreviation
Genera	al Chem	istry for Mathematics Ma	ajors		08-CM1-072-m01
Modul	Module coordinator			Module offered by	<u> </u>
lecture Chemis		ture "Experimentalchemi	e" (Experimental	Institute of Inorgan	ic Chemistry
ECTS		od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
les, me	etals, a		eriodic table, chemic	al equilibrium and co	of chemistry. It focuses on partic- omplexometry. In addition, the c chemistry.
Intend	ed lear	ning outcomes			
are abl Course V (no in Metho	le to de es (type nformat d of ass	scribe the main quantitat , number of weekly conta tion on SWS (weekly cont	ive and qualitative a ct hours, language – act hours) and cours nguage — if other th	nalytical methods ar - if other than Germa e language available an German, examina	
written	exami	nation (approx. 60 minut	es)		
Allocat	tion of _l	places			
Additio	onal inf	ormation			
Worklo	bad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
Bachel Bachel	lor' deg lor' deg	ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Computatio	s (2007)	09)	

Module	e title				Abbreviation	
Organic Chemistry 1 08-0C1-072-m01			08-0C1-072-m01			
Module	e coord	inator		Module offered by		
holder	of the l	Professorship of Organic	Chemistry	Institute of Organic	Chemistry	
ECTS	Metho	od of grading	Only after succ. com	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate	Registration for asse	essment: Yes, as spe	ecified.	
Conten	ts					
the bor organic	nding s comp	ituation of carbon and in	troduces students to discusses the fundan	the nomenclature of nental principles of s	of organic chemistry. It examines f simple and moderately complex stereochemistry, substitution, ad-	
Intende	ed lear	ning outcomes				
that pu synthe	rpose, ses.		tegorise the character	ristic reaction condit	actions in organic chemistry. For ions and can use them for simple n)	
v + Ü (r	no infoi	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
written	exami	nation (90 minutes)				
Allocat		-	-			
Additio	nal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Module	e appea	ars in				
	Bachelor' degree (1 major) Chemistry (2007) Bachelor' degree (1 major) Chemistry (2008) Bachelor' degree (1 major) Mathematics (2008)					
Bachel	-		cs (2008)			

Module title				Abbreviation	
Organio	c Chem	istry 2			08-0C2-072-m01
Module coordinator				Module offered by	
holder	of the (Chair of Physically Organi	c Chemistry	Institute of Organic	Chemistry
ECTS		od of grading	Only after succ. com	pl. of module(s)	
9	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
the exa on reac well as py, mas	mple o tions to rearrar ss spec	f carbonyl compounds, it o complex reaction mech ngement. In addition, it ir trometry and NMR spectr	extends the student anisms. The course a ptroduces students to	s' knowledge of sub lso focuses on oxida	fic reactions of aromatics. Using stitution, elimination and additi- ation and reduction reactions as nethods of infrared spectrosco-
		ning outcomes			
bonyl c they ca unknov	ompou n plan vn reac	nds. They are able to des and formulate multi-stag	scribe specific reactio e syntheses with com to describe important	ons of carbonyls and applex reaction mecha	e the varying reactivity of car- aromatics. For that purpose, anisms and can transfer them to nods, to evaluate a spectrum and
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü +	V (no i	nformation on SWS (wee	kly contact hours) and	d course language a	vailable)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
					ninations: 60 or 90 minutes 5 (groups of 2, approx. 30 minu-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-d	legree programmes)	
Keleffe		LIOT (examination regu			
Modulo		ve in			
Module		ree (1 major) Chemistry (2	2007)		
	-	ree (1 major) Chemistry (2 ree (1 major) Chemistry (2			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic			
		· · ·	••		

Modul	e title				Abbreviation	
Princip	Principles of quantum mechanics and spectroscopy				08-PC1-072-m01	
Modul	e coord	inator		Module offered by		
			ntonmochonik and		Land Theoretical Chamistry	
		ture "Grundlagen der Qua e" (Principles of Quantum		Institute of Physica	l and Theoretical Chemistry	
Spektroskopie" (Principles of Quantum Mechanics and Spectroscopy)						
ECTS	1	od of grading	Only after succ. con	pl. of module(s)		
8		rical grade		• • • •		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	nts					
the bas the mo UV-VIS	sis of th dule fo spectro differe	ne following models: part cuses on vibrational spe oscopy. In addition, the r	icle in a box, harmon ctroscopy, angular m nodule discusses line	ic oscillator and rigi omentum quantisati ear operators, eigen	chanics. It analyses molecules on d rotor. As regards spectroscopy, on, microwave spectroscopy and value problems, matrix represen- thematical bases of the topics li-	
		ning outcomes				
to desc	cribe di				em to molecules. They are able apply the mathematical bases of	
		, number of weekly conta	·			
V + Ü +	<u>V+Ü(</u>	no information on SWS (weekly contact hours) and course langua	ge available)	
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
					ninations: 60 or 90 minutes s (groups of 2, approx. 30 minu-	
Allocat	tion of p	olaces				
Additic	onal inf	ormation				
Worklo	ad					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
			-			
		ars in				
 Module	e appea		2007)			
 Module Bachel	e appea lor' deg	ree (1 major) Chemistry (:				
 Module Bachel Bachel	e appea or' deg or' deg		2008)			

Module title					Abbreviation
Physic	al and	Theoretical Chemistry	3: Symmetry and Quan	tum Chemistry	08-PC3-072-m01
Module	e coord	linator		Module offered b	by
lecture	r of lec	ture "Quantenchemie"	I	Institute of Physi	cal and Theoretical Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	Registration for asse	essment: Yes, as s	pecified.
Conten	ts				
This mo	odule o	discusses the fundame	ental principles of quant	um chemistry and	symmetry in chemistry.
Intend	ed lear	ning outcomes			
			the fundamental princi wledge they have devel		hemistry and symmetry in che-
Course	s (type	, number of weekly co	ntact hours, language –	- if other than Geri	man)
V + Ü +	V + Ü	(no information on SW	S (weekly contact hours) and course lang	uage available)
			, language — if other tha e can be chosen to earn		nation offered — if not every seme
written	exami	nation (90 minutes)			
Allocat	ion of	places			
	,				
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination re	egulations for teaching-	degree programme	es)
Module	e appe	ars in			
		ree (1 major) Chemistr	y (2007)		
Bachel	or' deg	ree (1 major) Mathema	atics (2007)		

Module title					Abbreviation
Theore	tical M	odels in Chemistry			08-TC-072-m01
Module coordinator Module offered by				<u> </u>	
lecture	r of lec	ture "Quantenchemie"		Institute of Physica	l and Theoretical Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate			
Conter	nts				
spin, tl	he Paul		inants, the Hartree-Fe	ock method, correlat	antum chemistry. It focuses on ion energy, configuration interac- dels of H2+.
Intend	ed lear	ning outcomes			
Studer	nts are a	able to describe excited s	states of molecules w	vith the help of key c	oncepts and models.
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	n)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
					minations: 60 or 90 minutes s (groups of 2, approx. 30 minu-
Allocat	tion of	places			
Additio	onal inf	ormation			
			_		
Worklo	ad				
Referre	ed to in	LPO I (examination regu	lations for teaching-	degree programmes)	
	e appea				
	-	ree (1 major) Chemistry (
Bachel	or' deg	ree (1 major) Mathematic	cs (2007)		

Module	e title				Abbreviation
Remote Sensing				09-FERN-072-m01	
Module coordinator				Module offered by	
holder	of the (Chair of Remote Sensing		Institute of Geograp	ohy and Geology
ECTS	1	od of grading	Only after succ. com	- ,	
10	nume	rical grade		•	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
Introdu	uction to	o "Geographical Remote S	Sensing", application	s of "Remote Sensir	ng" to Geography.
		ning outcomes			
geogra	phical				ing System, knowledge of current ng in the light of different sensor
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)
compo • c	nent. 09-FERN	I-1-072: V + T (no informa	tion on SWS (weekly	contact hours) and o	sted separately for each module course language available) course language available)
					tion offered — if not every seme-
		ion on whether module ca			
low. Ur		ated otherwise, successf			e components as specified be- successful completion of all indi-
Geogra • 5 • v Assess Remote	phical 5 ECTS, vritten 6 ment i 8 Sensi 5 ECTS,	Remote Sensing Method of grading: nume examination (45 minutes)	erical grade FERN-2-072: Applicat erical grade		l Remote Sensing Introduction to ing in Geography Application of
Allocat	ion of j	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Reieffe		LPOI (examination regu		legree programmes)	
	e appea				
	-	ree (1 major) Geography (
	-	ree (1 major) Computer So ree (1 major) Computer So	_		
	-	ree (1 major) Computer S			

Module title				Abbreviation			
Genera	al Huma	n Geography			09-HG1-072-m01		
Modul	e coord	inator		Module offered by			
holder	of the (Chair of Economic Geogra	aphy	Institute of Geograp	ohy and Geology		
ECTS	1	od of grading	Only after succ. con		, ,,		
15		rical grade		•			
Durati	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conte	Contents						
Introd	uction to	o basic ideas and particu	llar sub-areas of "Hur	nan Geography".			
Intend	ed lear	ning outcomes					
techni	cal cond	sess the following skills: ception to Human Geogra graphy, Social Georgaph	aphy. This includes U	rban Geography, Geo	ography of Rural Sett	tlements,	
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)		
compc • (onent. 09-HG1- 09-HG1-	omprises 3 module comp 1-072: V + T (no informat 2-072: V + T (no informat 3-072: V + T (no informat	ion on SWS (weekly c ion on SWS (weekly c	contact hours) and co contact hours) and c	ourse language avai ourse language avai	lable) lable)	
		s essment (type, scope, la on on whether module c			tion offered — if not	every seme-	
low. U vidual Assess troduc Assess Geogra Massess to Soc	sment in assession tion to to ECTS, written of sment in aphy ECTS, written of sment in al and ECTS, written of sects, written of sects,	n module component og- the Geography of cities, t Method of grading: nume examination (45 minutes) n module component og- Method of grading: nume examination (45 minutes) n module component og- Population Geography Method of grading: nume examination (45 minutes)	ful completion of the HG1-1-072: Introduct owns and villages erical grade) HG1-2-072: Introduct erical grade) HG1-3-072: Introduct erical grade	module will require s ion to the Geography	successful completion y of cities, towns and ography Introduction	on of all indi- d villages In- 1 to Economic	
Alloca	tion of p	olaces					
		-					
Additi	onal inf	ormation					
Workle	oad						
Referr	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)			
Modul	e appea	in and a second s					
Bache	lor' deg	ree (1 major) Geography	(2007)				
		ree (1 major) Mathematic					
Bachelor's	with 1 ma	or Mathematics (2007)		g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	-	page 108 / 216	

Module titl		Abbreviation				
	ues of Human Geography			09-HG2-072-m01		
Module coo	ordinator		Module offered by			
holder of th	e Professorship of Social G	eography	Institute of Geograp	bhy and Geology		
ECTS Me	thod of grading	Only after succ. con	pl. of module(s)			
10 nur	nerical grade	two module compor	nents of 09-HG1			
Duration	Module level	Other prerequisites				
1 semester	undergraduate					
Contents						
	e deals with and consolidat b-areas of "Human Geograp		'Theoretical and App	lied Human Geography" from two		
Intended le	arning outcomes					
their applic		tion. They are able to	issue a seminar pap	b-areas of Human Geography and er on the basis of independent li- be held freely.		
Courses (ty	pe, number of weekly conta	ict hours, language –	- if other than Germa	n)		
 Courses (type, number of weekly contact hours, language — if other than German) This module comprises 2 module components. Information on courses will be listed separately for each module component. o9-HG2-1-072: S (no information on SWS (weekly contact hours) and course language available) o9-HG2-2-072: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component og-HG2-1-o72: Special issues of Human Geography 1 5 ECTS, Method of grading: numerical grade presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1 Assessment in module component og-HG2-2-o72: Special issues of Human Geography 2 						
	S, Method of grading: nume entation (approx. 30 minute		ation (approx 20 pa	aes) weighted 1.1		
Allocation			ation (approx. 20 pa	500, Weighten 1.1		
Allocation	n places					
Additional	information					
Additional	iniormation					
Workload						
Referred to	in LPO I (examination regu	lations for teaching-o	legree programmes)			
Module app		()				
	egree (1 major) Geography egree (1 major) Mathematic					
Dachelor u	egree (1 major) Mathematic	.5 (2007)				

Module title					Abbreviation	
Applie	Applied Human Geography 09-HG3-072-m01					
Modul	e coord	inator		Module offered by		
holder	of the l	Professorship of Social G	eography	Institute of Geograp	bhy and Geology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
		choose a topic of "Humar ion of explored issues.	n Geography" and att	end a project semina	ar: data collection, data analysis	
Intend	ed lear	ning outcomes				
-Applic phical -Elabor -Preser -Knowl	cation o plannir ration o ntation ledge co	ng and development using f action-oriented solution of results;	g empirical research is; irical survey and ana	methods; lysis methodology, p	ctice-oriented issues of geogra- project work, team spirit, re-	
		· · · ·		*	n)	
 Courses (type, number of weekly contact hours, language — if other than German) This module comprises 2 module components. Information on courses will be listed separately for each module component. 09-HG3-1-072: S (no information on SWS (weekly contact hours) and course language available) 09-HG3-2-072: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component og-HG3-1-072: Project oriented Seminar 1 for Applied Human Geography 5 ECTS, Method of grading: numerical grade 						
Assess	 presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1 Assessment in module component 09-HG3-2-072: Project oriented Seminar 2 for Applied Human Geography 5 ECTS, Method of grading: numerical grade presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1 					
Allocat	tion of _l	olaces				
Additio	onal inf	ormation				
Worklo	oad					
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)		
Modul	e appea	ars in				
1	-	ree (1 major) Geography (
Bachel	Bachelor' degree (1 major) Mathematics (2007)					

Module title			Abbreviation			
					09-KART-072-m01	
Module	e coord	inator		Module offered by		
holder	of the F	Professorship of Cultural	Geography	Institute of Geograp	bhy and Geology	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
10	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
		o "Cartography and to the ns" (GIS).	e Collection and Proce	essing of Geodata", i	introduction to "Geographic Infor-	
Intende	ed learı	ning outcomes				
		sess the following skills: ealing with geodata and G			data, acquisition of abilities con-	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
This mo compor • 0	odule c nent. 9-KART	omprises 2 module comp	oonents. Information tion on SWS (weekly	on courses will be lis contact hours) and c	sted separately for each module course language available)	
Method	d of ass	-	nguage — if other tha	an German, examina	tion offered — if not every seme-	
	less st	ated otherwise, successf			e components as specified be- successful completion of all indi-	
 Assessment in module component o9-KART-1-072: Cartography and Geodata Cartography and Geodata 5 ECTS, Method of grading: numerical grade written examination (approx. 75 minutes) or practice work (creating approx. 3 maps or diagrams, approx. 30 hours total), weighted 1:1 Assessment in module component o9-KART-2-072: Geographical Information Systems (GIS) 5 ECTS, Method of grading: numerical grade practice work (approx. 5 pieces of practice work to be completed in approx. 30 hours) 						
Allocat			<u> </u>	<u></u>		
Additio	nal inf	ormation				
Auditio						
WOIKIO	Workload					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module						
	-	ree (1 major) Geography (
Bachelor' degree (1 major) Mathematics (2007)						

Module title					Abbreviation			
Data A	cquisit	ion and Processing in Ph	ysical Geography		09-MT1-072-m01			
Modul	e coord	inator		Module offered by				
holder	ofthe	Chair of Physical Geograp	ohy	Institute of Geogra	phy and Geology			
ECTS		od of grading	Only after succ. com	pl. of module(s)				
5	nume	rical grade						
Duratio	on	Module level	Other prerequisites					
1 seme	ster	undergraduate						
Conten	Its							
studen delling	ts can , geopl	attend alternative semina	ars, in which applicati	ions from the areas	natural environment; Advanced ground climatology, climate mo- eographic information system)			
Intend	ed lear	ning outcomes						
der to t softwa Course	teach tl re appl s (type		geophysical measure act hours, language —	ment methods as v if other than Germ				
Metho	d of as	· ·	anguage — if other tha	an German, examin	ation offered — if not every seme-			
presen	tation	(15 minutes) with written	elaboration (15 pages	s), weighted 1:1				
Allocat	ion of	places						
Additio	onal inf	ormation						
Worklo	ad							
Referre	ed to in	LPOI (examination regu	llations for teaching-c	legree programmes)			
Modul	e appea	ars in						
	-	ree (1 major) Geography	Bachelor' degree (1 major) Geography (2007)					
Bachelor' degree (1 major) Mathematics (2007)								

Module title Abbreviation					Abbreviation
Theories and Methodology in Human Geography09-MT2-072-m01					09-MT2-072-m01
Modul	e coord	inator		Module offered by	<u>.</u>
holder	ofthe	Professorship of Cultural	Geography	Institute of Geogra	ohy and Geology
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
	nt pers				al specific theory, discussion of in analytical and prescriptive
Intend	ed lear	ning outcomes			
		sess knowledge of theor nods as well as models a			ts are acquainted with empirical
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
S (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language available	2)
		s essment (type, scope, la ion on whether module c			tion offered — if not every seme-
writter	ı exami	nation (45 minutes) and	presentation (approx	. 20 minutes), weigh	ted 1:1
Alloca	tion of	places	· · ·		
Additi	onal inf	ormation			
Workle	bad				
	-				
Referr	ed to in	LPOI (examination reg	lations for teaching-	degree programmes)	
Module appears in					
MOUIII					
		ree (1 major) Geography	(2007)		

Module title			Abbreviation								
Working Methods: Solid Earth System 09-MT3					09-MT3-072-m01						
Module	e coord	inator		Module offered by	<u> </u>						
holder	ofthe	Chair of Geodynamics a	and Geomaterials Re-	Institute of Geograp	ohy and Geology						
search	n										
ECTS		od of grading	Only after succ. con	npl. of module(s)							
10	I	rical grade									
Duratio		Module level	Other prerequisites								
1 seme		undergraduate									
Conten											
terpreta will be cally re mentar piece id dimens differer simple	ation o provide levant y, igne dentifia sional c nt rock structu	f geological processes, ed with distinctive feat minerals by means of o ous and metamorphic able mineral existence lisplay of three-dimens	terials that can already which took place, as w ures and characteristic chosen visuals. Subsec rock types will be eluci- and structure. In the fo sional display of geolog tures will be developed to.	vell as the creation o s of the most importa uently, the classifica dated and practised llowing modular sect ical phenomena like	f value of geomateri ant rock-forming and ation of the most imp on the basis of their tion, the understand the geographical di	als. Students d economi- portant sedi- r in the hand- ling of two- istribution of					
rock sa	mples	without analytical tool	st important mineral typ s. Moreover, they are a form, profiles and suit	ble to interpret geolo							
Course	s (type	, number of weekly cor	ntact hours, language –	- if other than Germa	ın)						
compo • o	nent. 9-MT3	-1-072: S (no informatio	mponents. Information on on SWS (weekly con on on SWS (weekly con	tact hours) and cours	se language availabl	le)					
			language — if other th can be chosen to earn		tion offered — if not	every seme-					
	nless st	ated otherwise, succes	es the assessments in t ssful completion of the								
 Assessment in module component og-MT3-1-072: Mineral an Rock Identification 5 ECTS, Method of grading: numerical grade written or oral examination of one candidate each (30 minutes each) Assessment in module component og-MT3-2-072: Geological Maps and Structures 5 ECTS, Method of grading: numerical grade written or oral examination of one candidate each (30 minutes each) 											
Allocat	ion of _l	places									
Additional information											
 Workload											
WUIKIUdu											
Doforro	d to in	IPOL (ovamination ra	gulations for toaching	dogroo programmes)							
Reieffe			gulations for teaching-	regree programmes)							
Module		· · · · · · · · · · · · · · · · · · ·									
Bachelor's	with 1 ma	jor Mathematics (2007)			-	chelor's with 1 major Mathematics (2007) JMU Würzburg • generated 11-Jan-2023 • exam. reg. page 114 / 216 data record Bachelor (180 ECTS) Mathematik - 2007					

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 115 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title				Abbreviation			
Quantitative and Qualitative Regional Analysis					09-MT4-072-m01		
Module	e coord	inator		Module offered by			
holder	of the I	Professorship of Social Ge	eography	Institute of Geograp	ohy and Geology		
ECTS		od of grading	Only after succ. com				
10	nume	rical grade	o9-MT2 as well as of STAT each	ne module compone	nt of modules 09-KART and 09-		
Duratio	n	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	ts						
of geog	raphic		ion. Processes of qua	litative social and re	statistical processes, processes ogional research. Presentation I on typical examples.		
Intende	ed lear	ning outcomes					
	hods a				e applied to regional and analyti- he processes application and ef-		
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)		
 This module comprises 2 module components. Information on courses will be listed separately for each module component. o9-MT4-1-072: S (no information on SWS (weekly contact hours) and course language available) o9-MT4-2-072: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o9-MT4-1-072: Quantitative Regional Analysis 5 ECTS, Method of grading: numerical grade presentation (30 minutes) with written elaboration (approx. 20 pages), weighted 1:1 							
• 5	ECTS,	n module component og- Method of grading: nume ation (30 minutes) with w	rical grade				
Allocat				,			
Additio	nal inf	ormation					
Worklo	ad						
Workload							
Deferre	d to in	LPOI (examination regu	lations for toaching a	lagraa programmee)			
Kelelle				legree programmes)			
Module	annes	urs in					
		ree (1 major) Geography (2007)				
	-	ree (1 major) Mathematic	-				

Module title					Abbreviation	
Worki	Working Methods of Physical Geography 09-MT5-072-m01					
Modul	e coord	inator		Module offered by	·	
holder	of the (Chair of Physical Geogra	aphy	Institute of Geograp	ohy and Geology	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
10		rical grade				
Durati		Module level	Other prerequisites		••• •• •• •	
1 seme	ester	undergraduate	By way of exception	, additional prerequi	isites are listed in th	e section on
Conte	nte		assessments.			
		acia principlas of phys		manning and maas	uring mothod (goog	arphology
soil ge data p	ograph [.] reparat	basic principles of phys y, vegetation geography ion, analysis and interp of the GIS discussion an	y, hydro geography, cli retation; Synthesis of	matology); 10 days o partial results, visua	of fieldwork. Practica	l exercise:
Intend	ed lear	ning outcomes				
skills o tion po	of the di ossibilit	sess the fundamental p ifficulties of field, meas ies of the acquired fielc ability of networked cor	urement and lab works I and lab data. They po	s and possess an ove ossess the visualisat	erview of analysis ar ion and presentatior	nd interpreta-
Course	es (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)	
compo • (onent. 09-MT5 [.]	omprises 2 module con 1-072: P (no informatio 2-072: S (no informatio	n on SWS (weekly con	tact hours) and cours	se language availabl	e)
Metho	d of ass	sessment (type, scope, ion on whether module	language — if other th	an German, examina		
low. U		n this module comprise ated otherwise, succes ments.				
 Assessment in module component og-MT5-1-072: Introduction to physiogeographical Fieldwork Skills, Field Mapping and Measuring 5 ECTS, Method of grading: numerical grade placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 15 pages) Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended. Assessment in module component og-MT5-2-072: Data management, -analysis and -interpretation 5 ECTS, Method of grading: numerical grade presentation of project (approx. 30 minutes) and written elaboration (approx. 20 pages); weighted 1:1 Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended. 						
Alloca	tion of p	olaces				
Additional information						
 Workload						
Referr	ed to in	LPOI (examination reg	ulations for teaching	degree programmoc)		
Modul	0 30000	are in				
	e appea		[BALL \ \ A72;	a concreted to los esce	vam rog	page 117 / 21/
Dachelor's	Inchelor's with 1 major Mathematics (2007) JMU Würzburg • generated 11-Jan-2023 • exam. reg. page 117 / 216 data record Bachelor (180 ECTS) Mathematik - 2007 Date 117 / 216					

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 118 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title					Abbreviation	
Methods of Planning in Human Geography					09-MT6-072-m01	
Module	coord	inator		Module offered by		
holder	of the F	Professorship of Cultural	Geography	Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
10	nume	rical grade	09-MT2 as well as o STAT each	ne module compone	ent of modules 09-KART and 09-	
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
		empirical research meth meth of action-oriented			aphical planning and develop- lts.	
Intende	ed learı	ning outcomes				
gional o sult-ori	develop ented r	oment planning and region nethods, communicative	onal or spatial develo techniques.	pment, project work	sis methodology concerning re- , the ability to work in a team, re-	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
 This module comprises 2 module components. Information on courses will be listed separately for each module component. o9-MT6-1-072: S (no information on SWS (weekly contact hours) and course language available) o9-MT6-2-072: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o9-MT6-1-072: Methods of Planning in Human Geography 1 5 ECTS, Method of grading: numerical grade 						
 paper (approx. 20 pages) or c) several small assessments (total length/expenditure of time comparable to a) and/or b)), weighted 1:1 Assessment in module component og-MT6-2-072: Methods of Planning in Human Geography 2 5 ECTS, Method of grading: numerical grade a) presentation (approx. 25 minutes) with written elaboration (approx. 12 pages), weighted 1:1 or b) term paper (approx. 20 pages) or c) several small assessments (total length/expenditure of time comparable 						
		d/or b)), weighted 1:1				
Allocat		Jaces				
Additional information						
Worklo	ad					
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module			× ×			
Bachelo	Bachelor' degree (1 major) Geography (2007)					

Bachelor' degree (1 major) Mathematics (2007)

Module title			Abbreviation		
Genera	General Physical Geography 09-PG1-072-m01				
Modul	e coord	inator		Module offered by	
holder	of the (Chair of Physical Geograp	hy	Institute of Geograp	ohy and Geology
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
15	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	By way of exception	, additional prerequi	isites are listed in the section on
			assessments.		
Conter	nts				
Introdu	uction t	o "Physical Geography": I	pasics of exogenous	dynamics, endogend	ous dynamics and climatology.
Intend	ed lear	ning outcomes			
domin mate, mics o	ating th soil, wa f the na	e landscape on the Earth ter, flora and fauna. They	's surface and which are important for the opogenic transforma	are driven by the ge e understanding of th tion (i.e. the environ	standing of processes that are ological factors rocks, relief, cli- ne structure, function and dyna- ment, which has been shaped
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
compo • (onent. 09-PG1-	1-072: V + T (no informati	on on SWS (weekly c	ontact hours) and co	sted separately for each module ourse language available) ourse language available)
					ourse language available)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
low. U		ated otherwise, successf			e components as specified be- successful completion of all indi-
 Assessment in module component og-PG1-1-072: General Physical Geography 1 (Earth System: Endogenic Dynamics) General Physical Geography 1 (Earth System: Endogenic Dynamics) 5 ECTS, Method of grading: numerical grade written examination (45 minutes) Assessment in module component og-PG1-2-072: General Physical Geography 2 (Earth System: Climate System) General Physical Geography 2 (Earth System: Climate System) 					
 5 ECTS, Method of grading: numerical grade written examination (45 minutes) Other prerequisites: Registration for assessment: Yes, as specified. Assessment in module component og-PG1-3-072: General Physical Geography 3 (Earth System: Endogenic Dynamics) General Physical Geography 3 (Earth System: Endogenic Dynamics) 5 ECTS, Method of grading: numerical grade written examination (45 minutes) Other prerequisites: Registration for assessment: Yes, as specified. 					
Alloca	tion of _l	olaces			
Additi	onal inf	ormation			
Workle	ad				

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

Module appears in

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 121 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title				Abbreviation	
Special Problems of Physical Geography				09-PG2-072-m01	
Module	e coord	inator		Module offered by	
holder	ofthe	Chair of Physical Geograp	phy	Institute of Geograp	ohy and Geology
ECTS		od of grading	Only after succ. con		
10	nume	rical grade	two module compor	ients of 09-PG1, 09-l	KART, 09-FERN, 09-STAT
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
approa global	iches a change	nd particularly on the bas	sis of the human imp	act: geomorphology,	n the light of different methodical , climate, soil, hydro geography, osystem prediction as well as the
Intende	ed lear	ning outcomes			
Students are acquainted with the synthesis and interconnectedness of skills that have already been acquired concerning the processes on Earth's surface, which are dominating the landscape on Earth's surface and are driven by the geological factors rock, relief, climate, soil, water, flora and fauna. These processes determine structure, function and dynamics of the natural environment and its anthropogenic transformation (the environment that has been shaped from humans by land utilisation, settlements, transport routes etc.). Through the quantitative acquisition of current process structures, Physical Geography is not only able to derive predications for the capability and capacity of geological systems, but also to predict changes in future by analysing the development and change of geographical territories in the past. These important planning decision-making bases concerning the management as well as the sustainable use and development, are given weight to the task of Physical Geography in the practical area.					
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
compo • c	nent. 09-PG2-	omprises 2 module comp -1-072: V (no information -2-072: S (no information	on SWS (weekly cont	act hours) and cours	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
	nless st	ated otherwise, successf			e components as specified be- successful completion of all indi-
 Assessment in module component og-PG2-1-072: Special Problems of Physical Geography 1 (Earth System: Man and environment) 5 ECTS, Method of grading: numerical grade written examination (approx. 45 minutes) Assessment in module component og-PG2-2-072: Special Problems of Physical Geography 2 (Earth System: Man and environment) 5 ECTS, Method of grading: numerical grade presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1 					
Allocation of places					
Additional information					
Worklo	ad				
	au				

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

Module appears in

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 123 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title			Abbreviation			
Applie	Applied Physical Geography 09-PG3-072-m01					
Modul	e coord	inator		Module offered by	<u> </u>	
holder	of the (Chair of Physical Geogr	aphy	Institute of Geogra	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme		undergraduate				
Conte	nts					
		choose a topic of "Phys ion of explored issues.	sical Geography" and a	ttend a project semi	nar: data collection,	data analysis
Intend	ed lear	ning outcomes				
der to ject, p data c graphi	implem rocess s ollection c visual	ent them practically. B steps of geographical ro n in the field or the mo	s, which they have alre ased on a specific issu esearch and method w delling at the computer on in form of lectures, p	e, which is partly int ill be undergone. Stu r, the application of s	egrated in a current i idents are acquainte statistical processes	research pro- ed with the , the carto-
Course	es (type	, number of weekly cor	itact hours, language –	- if other than Germa	ın)	
 Courses (type, number of weekly contact hours, language — if other than German) This module comprises 2 module components. Information on courses will be listed separately for each module component. o9-PG3-1-072: S (no information on SWS (weekly contact hours) and course language available) o9-PG3-2-072: S (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o9-PG3-1-072: Project Seminar: Establishing Current Status and Data Acquisition 5 ECTS, Method of grading: numerical grade presentation (30 minutes) with written elaboration (20 pages), weighted 1:1 Assessment in module component o9-PG3-2-072: Project Seminar: Data Evaluation, Data Visualisation and Presentation 5 ECTS, Method of grading: numerical grade presentation (30 minutes) with written elaboration (20 pages), weighted 1:1 						
Alloca	tion of p	olaces				
Additi	onal inf	ormation				
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Bachelor' degree (1 major) Geography (2007)						
	-	ree (1 major) Mathema				
Bachelor's	s with 1 ma	or Mathematics (2007)		g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	-	page 124 / 216

Module	e title				Abbreviation
Algorithm and data structures					10-l-ADS-072-m01
Module coordinator				Module offered by	
			C.:	•	
		es Informatik (Computer :		Institute of Comput	ter Science
ECTS		od of grading	Only after succ. com	ipl. of module(s)	
8	L	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
-		-			ods, data structures, abstract da-
ta type	s, lists,	trees, graphs, basic grap	oh algorithms, progra	mming in Java.	
Intende	ed learı	ning outcomes			
[Versio	n 1: The	e students are able to ind	ependently design al	gorithms as well as	to precisely describe and ana-
lyse the	em. The	y are able to apply recur	sion in algorithms an	d data structures. Th	ne students are familiar with the
					grams.] [Version 2: The students
					d analyse them. The students are
					ply them in practical programs.
		are able to estimate the r		· ·	
		number of weekly conta			•
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
		nation (80 minutes) or or o minutes)	al examination (one o	andidate each: 20 r	minutes, groups of 2: 30 minutes,
- /					
Allocat		naces			
		ormation			
		ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module					
	-	ree (1 major) Computer S			
Bachelor' degree (1 major) Mathematics (2008)					
Bachelor' degree (1 major) Mathematics (2007)					
	-	ree (1 major) Economathe			
	-	ree (1 major) Economathe			
Bachelor' degree (1 major) Business Information Systems (2007)					
	Bachelor' degree (1 major) Business Information Systems (2008)				
Bachel	or' deg	ree (1 major) Business In ree (1 major) Computatio	formation Systems (2	008)	

Module title Abbreviation				Abbreviation	
Autom	ation a	nd control technology			10-I-AR-072-m01
Modul	e coord	inator		Module offered by	<u> </u>
		Chair of Computer Scienc	e VII	Institute of Comput	er Science
ECTS	1	od of grading	Only after succ. con		
8		rical grade		• • • •	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
ring, a putatio system	utomata on mach ns, proc	a, structure of Petri nets, nines, communication be ess synchronisation, pro	Petri nets for automis tween process comp	sation, machine-rela uters and periphery	I principles of control enginee- ted structure of processing com- devices, software for automation systems, real-time planning.
		ning outcomes			
The stu	udents	master the fundamentals	of automation and c	ontrol.	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
V + Ü (no info	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
writter	ı exami	nation (80 minutes)			
Allocat	tion of _l	olaces			
Additio	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Module appears in					
Bachelor' degree (1 major) Computer Science (2007)					
	Bachelor' degree (1 major) Mathematics (2008)				
	Bachelor' degree (1 major) Mathematics (2007)				
Bache	lor' deg	ree (1 major) Computatio	nal Mathematics (20	09)	

Module title			Abbreviation		
Data bases				10-l-DB-072-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	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
	-	ebra and complex SQL st gement.	atements; database	olanning and norma	l forms; xml data modelling; tran-
Intende	ed lear	ning outcomes			
The stu	dents		out database modelli	ng and queries in SC	L, transactions as well as easy
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü (r	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
ster, in written	formati examii	on on whether module ca nation (50 minutes) or ora	an be chosen to earn	a bonus)	tion offered — if not every seme- ninutes, groups of 2: 20 minutes,
Allocat		5 minutes)			
Allocal		Jaces			
Additio	natini	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Computer S			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic			
	Bachelor' degree (1 major) Technology of Functional Materials (2009)				
	Bachelor' degree (1 major) Technology of Functional Materials (2010) Bachelor' degree (1 major) Business Information Systems (2007)				
	-	ree (1 major) Business Int	-	•	
	-	ree (1 major) Business Int ree (1 major) Computatio	-		
	-	ree (1 major) Computation		•	

Module title				Abbreviation	
Grapht	Graphtheoretical concepts and algorithms 10-I-GT-072-m01				
Module	e coord	inator		Module offered by	
holder	of the (Chair of Computer Scienc	e l	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)	
8	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
forests work d graph p with pl miliar v	and m esign a problen anar gr with ne	atroids, depth first searc nd routing, planar graph ns: we solve round trip p aphs and find out how th	h, breadth first searcl s, graph transformati roblems, calculate ma le ranking algorithm o amples of graph prob	h, shortest paths, flo ons] [Version 2: On t aximal flows, find ma of Google works. On ilems, for example h	Ill and irreducible kernel, trees, ws and streams, matchings, net- he one hand, we handle typical atchings and colourings, work the other hand, we become fa- ow we model problems as linear
Intend	ed lear	ning outcomes			
rithms: rests, r sign ar blems the lec	: paths, natroid nd routi of com ture he	, cycles and components, s, depth first search, bre ng, planar graphs, graph puter science as graph pr	, colourings and mate adth first search, sho transformations.] [Ve oblems. In addition, roblem algorithmical	thing, transitive hull rtest path, flows and ersion 2: The student the participants are	heoretical concepts and algo- and irreducible kernel, trees, fo- d streams, matching, network de- es are able to model typical pro- able to decide which tool from idents learn in detail how to esti-
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
V + Ü (I	no infoi	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
		nation (80 minutes) or or o minutes)	al examination (one o	candidate each: 20 n	ninutes, groups of 2: 30 minutes,
Allocat	ion of _l	places			
Additio	onal inf	ormation			
Worklo	ad		-		
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachelor' degree (1 major) Computer Science (2007)					
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic ree (1 major) Computatio		00)	
Bachelor' degree (1 major) Computational Mathematics (2009)					

Module title	Module title			Abbreviation	
Information transmission				10-l-lÜ-072-m01	
Module coordinator			Module offered by		
holder of the Chair of Comp	outer Scienc	e III	Institute of Comput	er Science	
ECTS Method of grading		Only after succ. com	pl. of module(s)		
8 numerical grade					
Duration Module leve		Other prerequisites			
1 semester undergradua	ate				
Contents					
	er transform	, modulation techniq	ue, structure of digit	d fault correction, information tal transmission systems, intro-	
Intended learning outcome	es				
The students possess a tec transmission, a knowledge		•	-	ucture of systems for information	
Courses (type, number of w	veekly conta	ct hours, language —	if other than Germa	n)	
V + Ü (no information on S\	NS (weekly o	contact hours) and co	ourse language avail	able)	
Method of assessment (typ ster, information on wheth				tion offered — if not every seme-	
written examination (80 mi groups of 3: 40 minutes)	nutes) or or	al examination (one o	candidate each: 20 n	ninutes, groups of 2: 30 minutes,	
Allocation of places					
Additional information					
Workload					
Referred to in LPO I (exam	ination regu	lations for teaching-c	legree programmes)		
Module appears in					
Bachelor' degree (1 major) Computer Science (2007)					
Bachelor' degree (1 major) Mathematics (2008)					
Bachelor' degree (1 major)					
Bachelor' degree (1 major)	Computation	nal Mathematics (200	09)		

Module title			Abbreviation		
Theory	of com	plexity			10-I-KT-072-m01
Module	coord	inator		Module offered by	
holder	of the C	Chair of Computer Scienc	e IV	Institute of Comput	er Science
ECTS		od of grading	Only after succ. com	pl. of module(s)	
8	r	rical grade			
Duratio		Module level	Other prerequisites		
1 semes		undergraduate			
Conten					
sumption	on vers		terminism versus ind	eterminism, hierarch	nd time classes, memory con- nical theorems, translation me- of systems.
		ning outcomes			,
[Version 1: The students possess a fundamental and applicable knowledge in the areas of complexity measure- ments and classes, general relationships between space and time classes, memory consumption versus com- putation time, determinism versus indeterminism, hierarchical theorems, translation methods, P-NP problem, completeness problems, Turing reduction, interactive proof systems.] [Version 2: The students possess a fun- damental and applicable knowledge in the areas of complexity measurements and classes, memory consumpti- on versus computation time, determinism versus indeterminism, P-NP problem, completeness problems, lower bounds, Boolean hierarchy, polynomial time hierarchy, complexity of parallel algorithms and complexity of pro- babilistic algorithms.] Courses (type, number of weekly contact hours, language — if other than German) V + Ü (no information on SWS (weekly contact hours) and course language available) 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 (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3: 40 minutes)					
Allocati	ion of p	olaces			
Additio	nal info	ormation			
Workload					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in Bachelor' degree (1 major) Computer Science (2007)					
	-	ree (1 major) Computer Se ree (1 major) Mathematic			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Computation		09)	
васпею	or degi	ree (1 major) Computation	nat mathematics (200	19)	

Module title				Abbreviation		
Logic for informatics					10-l-LOG-072-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
		mantics of propositional ets, syntax and semantic		nd normal forms, Ho	rn formulas, SAT, resolution, infi-	
Intend	ed lear	ning outcomes				
					ositional logic, equivalence and semantics of predicate logic.	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
V + Ü (I	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		nation (50 minutes) or ora 5 minutes)	al examination (one c	andidate each: 15 m	inutes, groups of 2: 20 minutes,	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module appears in						
Bachelor' degree (1 major) Computer Science (2007)						
	Bachelor' degree (1 major) Mathematics (2008)					
	-	ree (1 major) Mathematic		`		
Bachelor' degree (1 major) Computational Mathematics (2009)						

Module title				Abbreviation		
Object oriented programming					10-I-OOP-072-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studie	es Informatik (Computer S	Science)	Institute of Comput	er Science	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Polymo ment.	orphism	, generic programming, r	neta programming, w	veb programming, te	mplates, document manage-	
Intende	ed learr	ning outcomes				
The stu their pr			ent paradigms of obj	ect-oriented progran	nming and have experience in	
Course	s (type,	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		nation (50 minutes) or ora 5 minutes)	al examination (one c	andidate each: 15 m	inutes, groups of 2: 20 minutes,	
Allocat	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module appears in						
Bachel	Bachelor' degree (1 major) Computer Science (2007)					
Bachelor' degree (1 major) Mathematics (2008)						
Bachelor' degree (1 major) Mathematics (2007)						
Bachelor' degree (1 major) Business Information Systems (2007)						
	-	ree (1 major) Business Inf	, ,			
	-	ree (1 major) Business Inf				
Bachel	Bachelor' degree (1 major) Computational Mathematics (2009)					

Module					Abbreviation	
Practical course in programming 10-I-PP-072-m01					10-I-PP-072-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Informatik (Computer S	Science)	Institute of Comput	er Science	
ECTS	2	od of grading	Only after succ. com	pl. of module(s)		
9	(not) s	successfully completed				
Duratio		Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
The pro	gramm	iing language Java. Indep	endent creation of sr	nall to middle-sized	, high-quality Java programs.	
Intende	ed lear	ning outcomes				
The stu	dents	are able to independently	develop small to mi	ddle-sized, high-qua	ality Java programs.	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
P (no in	nformat	ion on SWS (weekly cont	act hours) and course	e language available	e)	
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
nation	(60 to <u>9</u>				al examination: written exami- utes, groups of 2: 20 minutes,	
Allocat	ion of p	olaces				
	,					
Additio	nal inf	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)		
Module	appea	ars in				
Bachelo Bachelo Bachelo Bachelo	Module appears inBachelor' degree (1 major) Computer Science (2007)Bachelor' degree (1 major) Mathematics (2008)Bachelor' degree (1 major) Mathematics (2007)Bachelor' degree (1 major) Economathematics (2009)Bachelor' degree (1 major) Economathematics (2008)Bachelor' degree (1 major) Computational Mathematics (2009)					

Modul	e title				Abbreviation		
Compu	iter arc	hitecture			10-I-RAK-072-m01		
Modul	e coord	inator		Module offered by			
holder	of the (Chair of Computer Scienc	e V	Institute of Comput	er Science		
ECTS		od of grading	Only after succ. con				
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conter	nts						
		t architectures, command vector processors, multi-c		pipelining, statical a	and dynamic instruction schedu-		
Intend	ed lear	ning outcomes					
		master the most importar l operating systems.	nt techniques to desi	gn fast computers as	s well as their interaction with		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
V + Ü (no infoi	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
		nation (80 minutes) or or o minutes)	al examination (one	candidate each: 20 r	ninutes, groups of 2: 30 minutes,		
	tion of p						
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)			
Modul	e appea	ars in					
		ree (1 major) Computer S	cience (2007)				
	Bachelor' degree (1 major) Mathematics (2008)						
	-	ree (1 major) Mathematic					
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (20	09)			

Module title					Abbreviation	
Digital computer systems 10-I-RAL-072-m01					10-I-RAL-072-m01	
Modul	e coord	linator		Module offered by	<u> </u>	
holder	of the	Chair of Computer Scienc	e V	Institute of Comput	er Science	
ECTS	Meth	od of grading	Only after succ. com	npl. of module(s)		
8	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
					nchronous and asynchronous cir- e programming, memory hierar-	
Intend	ed lear	ning outcomes				
ming o	feasy				up to the design and program- vare description languages for the	
Course	es (type	, number of weekly conta	act hours, language —	- if other than Germa	ın)	
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
		nation (80 minutes) or or o minutes)	al examination (one o	candidate each: 20 r	ninutes, groups of 2: 30 minutes,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching of	legree programmes)		
Modul	e appea	ars in				
		ree (1 major) Computer S	cience (2007)			
	-	ree (1 major) Mathematic				
	-	ree (1 major) Mathematic				
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (20	09)		

Modul					Abbreviation		
Compu	iter net	works and communi	cation systems		10-I-RK-072-m01		
Modul	e coord	inator		Module offered by	1		
holder	ofthe	Chair of Computer Sc	ience III	Institute of Compu	ter Science		
ECTS	Meth	od of grading	Only after succ. cor	mpl. of module(s)			
8	nume	rical grade					
Duratio	on	Module level	Other prerequisites	5			
1 seme	ester	undergraduate					
Conter	nts						
and str chies, and IS	ructure dataflo O archi	of computer network w control and traffic tecture models. Inter	s: network structure, net control, transfer network net: structure and basic	work access, access . Communication pro mechanism, TCP/IP,	roduction to method architecture methods, digital transfer hierar- ptocols: fundamental principles routing, network management. ommunication systems and net-		
	ed lear	ning outcomes					
The stu	udents	possess an intricate	knowledge of the structu to rate these systems.	ire of computer netw	orks and communication system		
			ontact hours, language -	– if other than Germa	an)		
V + Ü (no info	rmation on SWS (wee	ekly contact hours) and c	ourse language avai	lable)		
			e, language — if other th Ile can be chosen to earr		ation offered — if not every seme		
		nation (80 minutes) o minutes)	or oral examination (one	candidate each: 20	minutes, groups of 2: 30 minutes		
Allocat	tion of	places					
		· · · · ·					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination	regulations for teaching-	degree programmes			
Modul	e appea	ars in					
		ree (1 major) Comput	ter Science (2007)				
	-	ree (1 major) Mathen					
	Bachelor' degree (1 major) Mathematics (2007)						
Datitu			1atics (2007)				

Module	title				Abbreviation
Software technology 10-I-ST-072-m01					10-l-ST-072-m01
Module	coord	inator		Module offered by	
Dean of	fStudie	es Informatik (Computer S	Science)	Institute of Comput	er Science
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
8	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
bases a	and obj		oundations of web p	rogramming (HTML,)	r interfaces, foundations of data- XML), software development pro- lity assurance.
Intende	ed learı	ning outcomes			
		possess a fundamental the second s		al knowledge on the	e design and development of
Courses	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
ster, inf written	formati examiı	on on whether module ca nation (80 minutes) or or	an be chosen to earn	a bonus)	tion offered — if not every seme- ninutes, groups of 2: 30 minutes,
		o minutes)			
Allocat		Jlaces			
		4 °			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	ars in			
Bachelo Bachelo Bachelo Bachelo Bachelo Bachelo	Module appears in Bachelor' degree (1 major) Computer Science (2007) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008) Bachelor' degree (1 major) Business Information Systems (2007) Bachelor' degree (1 major) Business Information Systems (2008) Bachelor' degree (1 major) Business Information Systems (2008) Bachelor' degree (1 major) Computational Mathematics (2009)				

Module	e title				Abbreviation	
Practical course in software 10-I-SWP-072-m01					10-I-SWP-072-m01	
Module coordinator				Module offered by		
Dean o	f Studi	es Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS		od of grading	Only after succ. com	npl. of module(s)		
10	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	Its					
cation	of solu		ML) and milestones, u	user manual, progra	uirements specifications, specifi- mming documentation, presenta-	
Intend	ed lear	ning outcomes				
The stu small t		possess the practical skil	ls for the design, dev	velopment and exect	ution of a software project in	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
P (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
ster, in periodi lution o tributio	formati ic prese compor ons mae	on on whether module ca entations on project prog nents (software) and the o	an be chosen to earn ress with regard to de documentation of the ent required; softwar	a bonus) etailing problem spe ese; if project is com	tion offered — if not every seme- cifications, the corresponding so- pleted in groups, proof of con- tentation as specified in assign-	
Allocat						
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)		
				<u> </u>		
Module	e appea	ars in				
Bachel Bachel	Bachelor' degree (1 major) Computer Science (2007) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007)					
	-	ree (1 major) Business In	•			
	-	ree (1 major) Business In ree (1 major) Computatio	, ,	-		
Dacilel	or deg			<u></u>		

Module					Abbreviation	
Theoret	tical in	formatics			10-l-Tl-072-m01	
Module coordinator Module offered by						
Dean of	f Studi	es Informatik (Computer	Science)	Institute of Comput	er Science	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
8	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
		, decidability, countabilit Ilar sets, generative gram			nctions and circuits, finite auto- nsitive languages.	
Intende	ed lear	ning outcomes				
tability,	, comp		plean functions and c	ircuits, finite automa	nputability, decidability, coun- ata and regular sets, generative	
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
V + Ü (r	no infoi	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		nation (80 minutes) or or o minutes)	al examination (one o	candidate each: 20 n	ninutes, groups of 2: 30 minutes,	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	e appea	urs in				
		ree (1 major) Computer S	cience (2007)			
	-	ree (1 major) Mathematic				
	-	ree (1 major) Mathematic				
Bachelo	or' deg	ree (1 major) Computatio	nal Mathematics (200	09)		

Module	e title				Abbreviation	
Knowle	edge m	anagement systems and	data mining		10-I-WMS-072-m01	
Module	e coord	inator		Module offered by		
holder	of the (Chair of Computer Scienc	e VI	Institute of Comput	er Science	
ECTS	1	od of grading	Only after succ. com			
10	1	rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate				
Conten	its	0	<u> </u>			
basic k poral c quisitio learnin [Versio basic k poral c	cnowled losures on and g algor n 2: Fo cnowled losure)	lge representation and in), problem classes and s process models, data mi ithms with data mining (l undations in the followin lge representation and in	ference (rules, object olution methods (dia ning (data warehouse earning of decidabili g areas: process and ference (rules, object	ts, constraints, prob gnostic, constructio e and OLAP, data pre ty trees, rules, subgr product-oriented kn ts, constraints, prob	owledge management systems, abilistic, non-monotonous, tem- n, simulation), knowledge ac- eprocessing, data visualisation), roups, clusters), semantic web.] nowledge management systems, abilistic, non-monotonous, tem- tion and process models, seman	
tic web		ning outcomes				
	-		nd practical knowled	ao nococconsta sur d	arctand and dayslan knowledge	
manag	ement				erstand and develop knowledge ion. The students also have ac-	
Course	e s (type	, number of weekly conta	ct hours, language —	· if other than Germa	ın)	
V + Ü +	Ü (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		nation (80 minutes) or or o minutes)	al examination (one o	candidate each: 20 r	ninutes, groups of 2: 30 minutes	
Allocat	ion of j	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)		
		_ • (examination regu				
Module	e appea	ars in				
		ree (1 major) Computer S	cience (2007)			
	-	ree (1 major) Mathematic				
	Bachelor' degree (1 major) Mathematics (2007)					
Bachelor' degree (1 major) Business Information Systems (2007)						
	-	ree (1 major) Business In	-	-		
	-	ree (1 major) Business In	-	-		
	-	ree (1 major) Computatio	-			
				- //		

Module				-	Abbreviation
Algebra	a, Geon	netry and Number The	eory		10-M-AGZ-072-m01
Module coordinator				Module offered by	
Dean of Studies Mathematik (Mathematics)		amatics)	Institute of Mathem		
ECTS		od of grading	Only after succ. cor		natics
22		rical grade			
 Duratio	L	Module level	Other prerequisites	•	
3 seme	·	undergraduate			isites are listed in the section on
Conten	tc		assessments.		
tic prop tures (r jective	perties residue spaces	of integers and ration class rings and finite	al numbers (as well as a fields) and their geome nental theorems, relatio	llgebraic extensions) try (quadratic forms)	s (groups, rings, fields); arithme-) relating to their algebraic struc-); axiomatic introduction of pro- and algebra, curves and hypersu
		ning outcomes			
ry.He/S	She is a		ncepts with one anothe		bra, geometry and number theo- dvantages of thinking across the
Course	s (type,	, number of weekly co	ntact hours, language –	– if other than Germa	an)
ster, in This mo	formati odule h	on on whether modul as the following 4 ass	e can be chosen to earn	a bonus) Unless stated otherv	ation offered — if not every seme vise, students must pass all of
Assess • 7 • a (; • L • A	ment ir ECTS c) writte approx. anguag	n module component redits, pass / fail n examination (appro 20 minutes) or c) ora ge of assessment: Ger nal prerequisites: Moc	10-M-AGZ-1-072: Einfüh x. 90 minutes, usually ch Il examination in groups man; English if agreed u lule 10-M-LNA recomme	rung in die Algebra (nosen) or b) oral exar s of 2 candidates (ap upon with examiner(nded.	
 8 a (a L A 	B ECTS o) writte approx. .anguag Additior	redits, pass / fail n examination (appro 20 minutes) or c) ora c of assessment: Ger al prerequisites: Moc	x. 90 minutes, usually ch I examination in groups man; English if agreed u Iule 10-M-LNA recomme	nosen) or b) oral exam of 2 candidates (ap upon with examiner(nded.	mination of one candidate each prox. 30 minutes)
• a (; • L • A Assess	a) writte approx. anguag Additior ment i r	20 minutes) or c) ora ge of assessment: Ger nal prerequisites: Moc n module component	Il examination in groups man; English if agreed u lule 10-M-LNA recomme 10-M-AGZ-P-072: Prüfur	of 2 candidates (ap upon with examiner(nded.	
• 2	ECTS o	netry and Number The redits, numerical grad mination of one cand	-	ninutes)	

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- Language of assessment: German; English if agreed upon with examiner(s)
- Only after successful completion of module components: Two out of the following three module components: 10-M-AGZ-1, 10-M-AGZ-2, 10-M-AGZ-3.
- Additional prerequisites: Module 10-M-LNA recommended.

Allocation of places

Additional information

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Workload

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

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Module appears in

Bachelor' degree (1 major) Mathematics (2007)

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	data record Bachelor (180 ECTS) Mathematik - 2007	

Module title					Abbreviation			
Analys	Analysis 10-M-ANA-072-m01							
Module coordinator Module offered by								
Dean	of Studi	es Mathematik (Mather	- i	atics) Institute of Mathematics				
ECTS		od of grading	Only after succ. con	npl. of module(s)				
18	nume	rical grade						
Durati	-	Module level	Other prerequisites					
2 sem	ester	undergraduate		, additional prerequi	isites are listed in th	e section on		
			assessments.					
Conte	nts							
ries, p	ower se	and completeness, bas ries, Taylor series, fund eorem); fundamental ir	amental calculus in or	ne and several variab	oles (including inver	se and impli-		
Intend	led lear	ning outcomes						
mathe	matical	nows and masters the e arguments and presen methods and concepts	t them adequately in w	ritten and oral form.	He/She is acquaint	ed with the		
Course	es (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)			
compo • • • •	onent. 10-M-AN 10-M-AN 10-M-AN 10- M -AN	omprises 3 module cor IA-1-072: V + Ü (no info IA-2-072: V + Ü (no info IA-P-072: M (no informa sessment (type, scope, ion on whether module	rmation on SWS (week rmation on SWS (week ation on SWS (weekly o language — if other th	ly contact hours) and ly contact hours) and contact hours) and co an German, examina	d course language a d course language a ourse language avai	vailable) vailable) lable)		
Asses: Asses: Asses:	 (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Other prerequisites: Modules 10-M-VKM and 10-M-PPM are recommended. Assessment in module component 10-M-ANA-2-072: Analysis 2 Analysis 2 8 ECTS, Method of grading: (not) successfully completed a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Other prerequisites: Modules 10-M-VKM and 10-M-PPM are recommended; in addition, module component 10-M-ANA-1 is recommended for module component 10-M-ANA-2. Assessment in module component 10-M-ANA-P-072: Examination in Analysis 2 ECTS, Method of grading: numerical grade oral examination of one candidate each (approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner 							
	 M-ANL-2 Other prerequisites: Modules 10-M-VKM and 10-M-PPM are recommended. 							
Alloca	tion of	places						
Bachelor's	achelor's with 1 major Mathematics (2007) JMU Würzburg • generated 11-Jan-2023 • exam. reg. page 143 / 216 data record Bachelor (180 ECTS) Mathematik - 2007							

Additional information

Workload

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

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Module appears in

Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg ● generated 11-Jan-2023 ● exam. reg. data record Bachelor (180 ECTS) Mathematik - 2007	page 144 / 216
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Module title					Abbreviation	
Defense of Bachelor Thesis in Mathematics					10-M-BAK-072-m01	
ord	coordi	linator		Module offered by		
ıdie	Studie	es Mathematik (Mathema	atics)	Institute of Mathem	atics	
tho	Metho	od of grading	Only after succ. com	pl. of module(s)		
ne	numer	rical grade				
	n	Module level	Other prerequisites			
	ter	undergraduate				
	S					
•	dent pr nis/hei	•	n the topic and result	ts of his/her Bacheld	or's thesis and answers questi-	
arı	d learn	ning outcomes				
k 0	talk or s.	on his/her own scientific w	vork, participate in a	scientific debate and	/She is able to give a short and d question the scientific activities	
		, number of weekly conta				
		tion on SWS (weekly cont				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
X. 1	prox. 1	15 minutes) with subsequ	ent discussion (appr	ox. 15 minutes)		
of p	on of p	places				
inf	nal info	ormation				
	ad					
in	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module appears in						
Bachelor' degree (1 major) Mathematics (2007)						
			s (2007)			

Module title Abbreviation						
Thesis Mathematics (Bachelor Thesis) 10-M-BAM-072-m01					10-M-BAM-072-m01	
Modul	e coord	inator		Module offered by	<u> </u>	
Dean o	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	atics	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	Registration for asse	essment: as specifie	d	
Conter	nts					
Indepe	ndently	y researching and writing	on a topic in mathen	natics selected in co	nsultation with the supervisor.	
Intend	ed lear	ning outcomes				
tained		his/her studies in the ba			oply the skills and methods ob- vn the result of his/her work in a	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
no cou	rses as	signed				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
written Langua		ssessment: German, Eng	lish if agreed upon w	ith the examiner		
Allocat	tion of p	places				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Modul	e appea	ars in				
Bachelor' degree (1 major) Mathematics (2008)						
Bachel	Bachelor' degree (1 major) Mathematics (2007)					

Module title					Abbreviation
Seminar in Analysis					10-M-BSA-072-m01
Module	coord	inator		Module offered by	
Dean of	fStudie	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in analysis.			
Intende	ed learı	ning outcomes			
of a giv	en topi				sters elaboration and structuring /She is able to participate active-
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	60 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat					
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
§ 73 (1)	1. Mat	hematik Analysis			
Module	appea	ars in			
	-	ree (1 major) Mathematic			
	Bachelor' degree (1 major) Mathematics (2007)				
	-	ree (1 major) Economathe	-		
	-	ree (1 major) Economathe			
	-	ree (1 major) Mathematic		,	
		ree (1 major) Computatio			
		gree (1 major, 1 minor) Ma			
First sta	First state examination for the teaching degree Gymnasium Mathematics (2009)				

Module	e title				Abbreviation
Seminar in Complex Analysis 10-M-BSC-072-m01					10-M-BSC-072-m01
Module	e coord	inator		Module offered by	
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS	1	od of grading	Only after succ. com		
5	nume	rical grade		•	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in complex analysis.			
Intende	ed lear	ning outcomes			
of a giv	en top				sters elaboration and structuring /She is able to participate active-
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)
S (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	60 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat			· · · ·		
Additio	nal inf	ormation	· · · · · · · · · · · · · · · · · · ·		
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
		hematik Analysis			
Module					
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008) Bachelor' degree (1 major) Mathematical Physics (2009) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008) First state examination for the teaching degree Gymnasium Mathematics (2009)					

Module title					Abbreviation				
Seminar in Discrete Mathematics 10-M-BSD-072-m01					10-M-BSD-072-m01				
Module coordinator Module offered by									
Dean c	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	atics				
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	ester	undergraduate							
Conter	nts								
A seled	cted top	pic in discrete mathemati	cs.						
Intend	ed lear	ning outcomes							
of a giv	ven top				sters elaboration and structuring /She is able to participate active-				
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	n)				
S (no i	nforma	tion on SWS (weekly cont	tact hours) and cours	e language available	2)				
ster, in	nformat	s essment (type, scope, la ion on whether module c 60 minutes)			tion offered — if not every seme-				
	tion of	0	-						
Additio	onal inf	ormation							
		Additional information							
Workle	nad								
Worklo	oad								
		IDOI (ovamination rog	lations for teaching	dogroo programmac)					
		LPOI (examination regu	llations for teaching-o	degree programmes)					
 Referre	ed to in		lations for teaching-o	degree programmes)					
 Referro Modul	ed to in e appea	ars in		degree programmes)					
 Referro Modul Bachel	ed to in e appe a lor' deg	ars in ree (1 major) Mathematic	:s (2008)	degree programmes)					
 Referro Modul Bachel Bachel	ed to in e appe a lor' deg lor' deg	ars in ree (1 major) Mathematic ree (1 major) Mathematic	:s (2008) :s (2007)	degree programmes)					
 Referre Modul Bachel Bachel Bachel	ed to in e appe a lor' deg lor' deg lor' deg	ars in ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Economath	:s (2008) :s (2007) ematics (2009)	degree programmes)					
 Referro Bachel Bachel Bachel Bachel Bachel	ed to in e appe a lor' deg lor' deg lor' deg lor' deg	ars in ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Economath ree (1 major) Economath	ematics (2008) ematics (2009)	degree programmes)					
 Referra Bachel Bachel Bachel Bachel Bachel Bachel	ed to in e appea lor' deg lor' deg lor' deg lor' deg lor' deg	ars in ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Economath	zs (2008) zs (2007) ematics (2009) ematics (2008) zal Physics (2009)						

Module title				Abbreviation	
Seminar in Algebra				10-M-BSE-072-m01	
Module	coord	inator		Module offered by	
Dean of	fStudie	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in algebra.			
Intende	ed learr	ning outcomes			
of a giv	en topi				sters elaboration and structuring /She is able to participate active-
Course	s (type,	, number of weekly conta	ct hours, language —	· if other than Germa	n)
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	e)
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	50 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
		hematik Lineare Algebra,			
Module	appea	irs in			
		ree (1 major) Mathematic	s (2008)		
Bachelo	or' degi	ree (1 major) Mathematic	s (2007)		
	-	ree (1 major) Economathe	-		
	-	ree (1 major) Economathe			
	-	ree (1 major) Mathematic		、 、	
	-	ree (1 major) Computation		-	
		gree (1 major, 1 minor) Ma			
FIRST Sta	First state examination for the teaching degree Gymnasium Mathematics (2009)				

Module title				Abbreviation			
Seminar in Functional Analysis					10-M-BSF-072-m01		
Module coordinator Module offered by					<u> </u>		
Dean o	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics		
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)			
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	Its						
A selec	ted top	pic in functional analysis.					
Intend	ed lear	ning outcomes					
of a giv	/en top				sters elaboration and structuring /She is able to participate active-		
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)		
S (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	2)		
ster, in	format	sessment (type, scope, la ion on whether module ca 60 minutes)			tion offered — if not every seme-		
Allocat	ion of	places					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)			
Module	e appea	ars in					
Bachelor' degree (1 major) Mathematics (2008)							
Bachelor' degree (1 major) Mathematics (2007)							
Bachelor' degree (1 major) Economathematics (2009)							
		ree (1 major) Economathe					
Bachel	or' deg	ree (1 major) Mathematic	Bachelor' degree (1 major) Mathematical Physics (2009)				
Bachelor' degree (1 major) Computational Mathematics (2009)							
Bachel	or deg	ree (1 major) Computatio	nal Mathematics (200	09)			

Module title			Abbreviation			
Seminar in Geometry					10-M-BSG-072-m01	
Module	coord	inator		Module offered by		
Dean of	fStudie	es Mathematik (Mathema	atics)	Institute of Mathem	atics	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
A selec	ted top	ic in geometry or differen	ntial geometry.			
Intende	ed learr	ning outcomes				
of a giv	en topi				sters elaboration and structuring /She is able to participate active-	
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)	
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available)	
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
Assess	ment o	50 minutes) ffered: in the semester in ssessment: German, Eng				
Allocat			· · ·			
Additio	nal inf	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)		
§ 73 (1)	4. Mat	hematik Geometrie				
Module	appea	irs in				
	-	ree (1 major) Mathematic				
		ree (1 major) Mathematic				
		ree (1 major) Economathe				
	-	ree (1 major) Economathe				
	-	ree (1 major) Mathematic				
	-	ree (1 major) Computation gree (1 major, 1 minor) Ma		•		
11131 310	ונכ כאמ	First state examination for the teaching degree Gymnasium Mathematics (2009)				

Module title					Abbreviation	
Seminar in Linear Algebra					10-M-BSL-072-m01	
Module coordinator				Module offered by		
Dean o	f Studio	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
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	undergraduate				
Conten	ts					
A selec	ted top	ic in linear algebra.				
Intende	ed lear	ning outcomes				
of a giv	en topi				sters elaboration and structuring /She is able to participate active-	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)	
S (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
Assess	ment o	50 minutes) ffered: in the semester in ssessment: German, Eng				
Allocat	ion of p	olaces				
	_					
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPO I (examination regu	lations for teaching-o	legree programmes)		
		hematik Lineare Algebra				
Module			5			
Bachel	Bachelor' degree (1 major) Mathematics (2008)					
	Bachelor' degree (1 major) Mathematics (2007)					
	Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008)					
	-	ree (1 major) Mathematic				
	-	ree (1 major) Computatio		09)		
Bachel	or's de	gree (1 major, 1 minor) Ma	athematics (Minor, 20	008)		
First sta	ate exa	mination for the teaching	degree Gymnasium	Mathematics (2009)		

Module	e title				Abbreviation
Semina	ar in Nu	merical Mathematics			10-M-BSN-072-m01
Module coordinator Module offered by					
		es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS	-	od of grading	Only after succ. com		
5		rical grade			
Duratio	'n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in numerical mathema	tics.		
Intende	ed lear	ning outcomes			
of a giv	en top				sters elaboration and structuring /She is able to participate active-
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)
S (no ir	format	ion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	60 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat	-				
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
		hematik Angewandte Ma			
Module					
		ree (1 major) Mathematic	s (2008)		
	Bachelor' degree (1 major) Mathematics (2007)				
	Bachelor' degree (1 major) Economathematics (2009)				
	-	ree (1 major) Economathe			
	-	ree (1 major) Mathematic			
		ree (1 major) Computatio gree (1 major, 1 minor) Ma			
		mination for the teaching		-)
1131 310			active oyninasium	mainemailes (2009)	/

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Module title					Abbreviation
Seminar in Operation Research 10-M-BSO-072-mo1					10-M-BSO-072-m01
Module coordinator Module offered by					<u>, </u>
Dean o	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS	Meth	od of grading	Only after succ. com	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts	-			
A selec	cted top	oic in operations research	1.		
Intend	ed lear	ning outcomes			
of a giv	ven top				sters elaboration and structuring /She is able to participate active-
Course	es (type	, number of weekly conta	ct hours, language —	- if other than Germa	in)
S (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)
ster, in	format	s essment (type, scope, la ion on whether module ca 60 minutes)			ition offered — if not every seme-
	tion of	·			
Additio	onal inf	ormation			
Worklo	oad				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Modul	e appea	ars in			
Bachel	lor' deg	ree (1 major) Mathematic	s (2008)		
Bachelor' degree (1 major) Mathematics (2007)					
Bachelor' degree (1 major) Economathematics (2009)					
	-	ree (1 major) Economathe			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Computatio	-		
Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008)					

Module title			Abbreviation		
Seminar in Stochastics				10-M-BSS-072-m01	
Module	coord	inator		Module offered by	
Dean of	fStudie	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in stochastics.			
Intende	ed learr	ning outcomes			
of a giv	en topi				sters elaboration and structuring /She is able to participate active-
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	50 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
§ 73 (1)	3. Mat	hematik Stochastik			
Module	e appea	ars in			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic			
		ree (1 major) Economathe			
	-	ree (1 major) Economathe			
	-	ree (1 major) Mathematic		、 、	
	-	ree (1 major) Computation	-		
		gree (1 major, 1 minor) Ma			
First sta	First state examination for the teaching degree Gymnasium Mathematics (2009)				

Module	e title				Abbreviation
Semina	ar in Or	dinary Differential Equa	ations		10-M-BSW-072-m01
Module coordinator				Module offered by	<u> </u>
Dean o	f Studi	es Mathematik (Mather	natics)	Institute of Mathen	natics
ECTS	Methe	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				
A selec	ted top	oic in the theory of ordir	nary differential equati	ons.	
Intende	ed lear	ning outcomes			
of a giv ly in a s	en top scientif	ic using selected literat ic discussion.	ure, and prepares a ta	lk on the subject. He	sters elaboration and structuring /She is able to participate active-
Course	s (type	, number of weekly con	tact hours, language –	– if other than Germa	an)
S (no ir	nformation	tion on SWS (weekly co	ntact hours) and cours	e language availabl	e)
					ation offered — if not every seme-
-		ion on whether module	can be chosen to earn	a bonus)	
		50 minutes) ffered: in the semester	in which the course is	offorod	
		ssessment: German, Er			
Allocat	-		<u> </u>		
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination reg	gulations for teaching-	degree programmes	
	-	hematik Analysis			
Module		•			
	Bachelor' degree (1 major) Mathematics (2008)				
Bachel	Bachelor' degree (1 major) Mathematics (2007)				
	Bachelor' degree (1 major) Economathematics (2009)				
	Bachelor' degree (1 major) Economathematics (2008)				
	-	ree (1 major) Mathemat		o o)	
	-	ree (1 major) Computati		•	
		gree (1 major, 1 minor) / mination for the teachi)
11151 510			ing acgree ayninasiuni	mathematics (2009)

Module	e title				Abbreviation
Semina	Seminar in Number Theory				10-M-BSZ-072-m01
Module	e coord	inator		Module offered by	
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
A selec	ted top	ic in number theory.			
Intende	ed lear	ning outcomes			
of a giv	en topi				sters elaboration and structuring /She is able to participate active-
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)
S (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-
Assess	ment o	60 minutes) ffered: in the semester in ssessment: German, Eng			
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
		hematik Lineare Algebra		- , -	
		¥			
	Module appears in Bachelor' degree (1 major) Mathematics (2008)				
	Bachelor' degree (1 major) Mathematics (2007)				
	Bachelor' degree (1 major) Economathematics (2009)				
	Bachelor' degree (1 major) Economathematics (2008)				
	Bachelor' degree (1 major) Mathematical Physics (2009)				
		ree (1 major) Computatio			
		gree (1 major, 1 minor) Ma mination for the teaching			
riist Sta			ucgiee Gymmasium	mathematics (2009)	1

Module title Abbreviation			Abbreviation		
Compu	uterorie	nted Mathematics			10-M-COM-072-m01
Modul	e coord	inator		Module offered by	
Dean c	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
3	(not)	successfully completed			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
rical co 10-M-L	omputa .NA). Co	tion (e. g. Matlab) to sup	plement the basic mo of problems in linear a	odules in analysis ar	Mathematica or Maple) and nume- nd linear algebra (10-M-ANA and nalysis, in particular differential
Intend	ed lear	ning outcomes			
		earns the use of advance cation to solve mathema		cal software package	es, and is able to assess their
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		s essment (type, scope, la ion on whether module c			tion offered — if not every seme-
project	t in the	form of programming exe	ercises (expenditure o	of time as specified a	at the beginning of the course)
Alloca	tion of	places			
Additio	onal inf	ormation			
Worklo	oad				
			-		
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
		ree (1 major) Computer S	cience (2007)		
Bachelor' degree (1 major) Mathematics (2007)					
Bache	Bachelor' degree (1 major) Physics (2007)				
Bache	lor' deg	ree (1 major) Technology	of Functional Materia	als (2006)	

Module title			Abbreviation	
Ordinary Differential Equations and C	omplex Analysis		10-M-DFT-072-m01	
Module coordinator		Module offered by	·	
Dean of Studies Mathematik (Mathem	atics)	Institute of Mathem	natics	
ECTS Method of grading	Only after succ. com	pl. of module(s)		
14 numerical grade				
Duration Module level	Other prerequisites			
2 semester undergraduate				
Contents				
Existence and uniqueness theorems of stems of linear diffferential equations ons, basic notions in the qualitative th functions, meromorphic functions and plex analysis, applications in compute	, introduction to the p neory of ordinary differ I conformal maps, bas	roblem of systems o rential equations, ba ic proof methods in	f nonlinear differential equati- asic properties of holomorphic differential equations and com-	
Intended learning outcomes				
The student is acquainted with the fur equations and holomorphic functions ges of thinking across the borders of o	. He/she is able to inte	erconnect these con		
Courses (type, number of weekly cont	act hours, language —	if other than Germa	ın)	
 This module comprises 3 module components. Information on courses will be listed separately for each module component. 10-M-DFT-1-072: V + Ü (no information on SWS (weekly contact hours) and course language available) 10-M-DFT-2-072: V + Ü (no information on SWS (weekly contact hours) and course language available) 10-M-DFT-P-072: M (no information on SWS (weekly contact hours) and course language available) 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) Assessment in this module comprises the assessments in the individual module components as specified be- 				
low. Unless stated otherwise, success vidual assessments.	ful completion of the	module will require s	successful completion of all indi-	
 Assessment in module component 10-M-DFT-1-072: Ordinary Differential Equations Ordinary Differential Equations 5 ECTS, Method of grading: (not) successfully completed a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Assessment in module component 10-M-DFT-2-072: Introduction to Complex Analysis Introduction to Complex Analysis 7 ECTS, Method of grading: (not) successfully completed a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Assessment in module component 10-M-DFT-P-072: Examination in Ordinary Differential Equations and Complex Analysis 2 ECTS, Method of grading: numerical grade oral examination of one candidate each (approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Analysis 2 ECTS, Method of grading: numerical grade oral examination of one candidate each (approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Only after successful completion of module components: 10-M-DFT-1 or 10-M-DFT-2 				

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Additional information

Workload

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

Module appears in

Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg. data record Bachelor (180 ECTS) Mathematik - 2007	page 161 / 216
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1				
Certain prerequisites must be met to qualify for admission to as- sessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be con- sidered a declaration of will to seek admission to assessment. If stu- dents have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for as- sessment into effect. Students who meet all prerequisites will be admit- ted to assessment in the current or in the subsequent semester. For as- sessment at a later date, students will have to obtain the qualification for admission to assessment anew.				
c methods,				
sters the re- ematics and				
t every seme-				
n be replaced s (groups of				
Referred to in LPO I (examination regulations for teaching-degree programmes)				
\S 73 (1) 2. Mathematik Lineare Algebra, Algebra und Elemente der Zahlentheorie				
Bachelor' degree (1 major) Computer Science (2007) Bachelor' degree (1 major) Computer Science (2010) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008)				

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Mathematical Physics (2009) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008) First state examination for the teaching degree Gymnasium Mathematics (2009)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	Γ
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module	e title				Abbreviation	
Introduction to Functional Analysis			_	10-M-FAN-072-m01		
Module coordinator			Module offered by			
		es Mathematik (Mathe		Institute of Mathem	atics	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	·	rical grade				
Duratio		Module level	Other prerequisites			
1 semesterundergraduateCertain prerequisites must be met to qualify for admission sessment. The lecturer will inform students about the respect at the beginning of the course. Registration for the course will be a declaration of will to seek admission to assess mudents have obtained the qualification for admission to assess the course of the semester, the lecturer will put their regist sessment into effect. Students who meet all prerequisites will be assessment at a later date, students will have to obtain the qualification to assess the course of the semester will put the semester will be assessment at a later date.		nts about the respection for the course with ission to assessment r admission to assest will put their registra t all prerequisites with e subsequent semest	ctive details ill be con- nt. If stu- ssment over ation for as- ill be admit- ster. For as-			
			admission to asses	sment anew.		
Conten	ts					
Banach	n space	s and Hilbert spaces, b	oounded operators, prin	nciples of functional	analysis.	
Intende	ed learı	ning outcomes				
method broad a	ds, is al applica	ole to apply methods f bility of the theory to o	concepts and methods rom linear algebra and ther branches of mathe	analysis to functiona ematics.	al analysis, and reali	
			itact hours, language –			
			y contact hours) and co			
			language — if other the can be chosen to earn		tion offered — if not	every seme-
by an o 2, appr	oral exa ox. 30	mination of one candio minutes)	utes); if announced by late each (approx. 20 n nglish if agreed upon w	ninutes) or an oral ex		'
Allocat			,			
Additio	onal info	ormation				
Worklo	ad					
Referre	d to in	IPOI (examination re	gulations for teaching-	legree programmes)		
			Saturions for reaching (
§ 73 (1) 1. Mathematik Analysis						
Module appears in Pachalari dagrae (a major) Mathematics (2008)						
Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Technology of Functional Materials (2009) Bachelor' degree (1 major) Technology of Functional Materials (2010) Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008) Bachelor' degree (1 major) Mathematical Physics (2009)						
Bachelor's	with 1 maj	or Mathematics (2007)		g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	-	page 164 / 216
			uata record B	achelor (160 ECTS) Mathema	lik - 200/	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Computational Mathematics (2009) Master's degree (1 major) Technology of Functional Materials (2010) Master's degree (1 major) Technology of Functional Materials (2009) Master's degree (1 major) Functional Materials (2012) Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008) First state examination for the teaching degree Gymnasium Mathematics (2009) Bachelor' degree (1 major) Technology of Functional Materials (2006)

Module title			Abbreviation		
Linear	Linear Algebra 10-M-LNA-072-m01				
Module coordinator		Module offered by			
Dean	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
18		rical grade		, , , , , , , , , , , , , , , , , , , ,	
Durati	-	Module level	Other prerequisites		
2 sem		undergraduate			sites are listed in the section on
2 5011	cotter		assessments.	, additionat prerequi	sites are listed in the section of
<u> </u>	-		assessments.		
Conte					
					nomial rings); vector spaces
					aps (isomorphism theorem,
					, eigenvalues, eigenvectors and
					lynomial), normal forms, bilinear
		· · ·	aces (orthonormal ba	ases, isometries, prir	ncipal axis transformation).
Intend	led lear	ning outcomes	_		
The st	udent k	nows and masters the ba	sic notions and esse	ntial methods of line	ear algebra. He/She is able to
					equately in written and oral form.
			of methods and cond	epts of linear algebr	a and knows about their alge-
braic a	and geo	metric background.			
Cours	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
This m	nodule c	omprises 3 module com	onents. Information	on courses will be li	sted separately for each module
compo					
•	10-M-LN	IA-1-072: V + Ü (no inform	nation on SWS (week	ly contact hours) and	l course language available)
•	10-M-LN	IA-2-072: V + Ü (no inforn	nation on SWS (week	ly contact hours) and	l course language available)
•	10-M-LN	A-P-072: M (no informati	on on SWS (weekly c	ontact hours) and co	urse language available)
Metho	d of as	sessment (type, scope, la	inguage — if other th	an German, examina	tion offered — if not every seme-
ster, iı	nformat	ion on whether module c	an be chosen to earn	a bonus)	
Asses	sment i	n this module comprises	the assessments in t	he individual modul	e components as specified be-
					successful completion of all indi-
	assess			·	
		n module component 10-			ebra 1
		Method of grading: (not)	, ,		
					nination of one candidate each
		. 20 minutes) or c) oral ex			
		ge of assessment: Germa rerequisites: Module 10-N			ler
		n module component 10-			obra a
		Method of grading: (not)			
					nination of one candidate each
 a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate ead (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) 					
 Language of assessment: German, English if agreed upon with the examiner 					
 Other prerequisites: Module 10-M-VKM is recommended; in addition, module component 10-M-LNA-1 					
	recomm	ended for module compo	onent 10-M-LNA-2.		
		n module component 10-		nation in Linear Alge	bra
		Method of grading: num			
		mination of one candida			
		ge of assessment: Germa			
		er successful completion rerequisites: Module 10-N			J-IM-LINA-2
•	ошего	ereduisties: Module 10-P	vi-visivi is recommend	ieu.	

Allocation of places

Additional information

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Workload

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

Module appears in

Bachelor' degree (1 major) Mathematics (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 167 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module	e title				Abbreviation	
Non-Linear Dynamics					10-M-NLD-072-m01	
				Madula offered by		
Module coordinator			Module offered by			
	—	es Mathematik (Mathem	-	Institute of Mathem	natics	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	· · · · ·	rical grade				
Duratio		Module level undergraduate	Other prerequisites	s must be met to qu	alify for admission t	
1 seme	ster	unuergrauuate		rer will inform stude		
				the course. Registrat		
				n of will to seek adm		
				d the qualification fo		
				mester, the lecturer		
				t. Students who mee		
			ted to assessment i	n the current or in th	e subsequent seme	ster. For as-
			sessment at a later	date, students will h	ave to obtain the qu	alification for
			admission to asses	sment anew.		
Conten	its					
		in stability theory, Lyap c dynamics; applicatior				
		ning outcomes				
		acquainted with the fu		nd results in non-lin	ear dynamics and th	neir proof me-
		e is able to apply these				· · · · · · · · · · · · · · · · · · ·
Course	s (type,	, number of weekly cont	act hours, language –	- if other than Germa	ın)	
ı) Ü + V	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		essment (type, scope, on on whether module			tion offered — if not	every seme-
		nation (approx. 90 minu			ten examination car	he replaced
		mination of one candid				
		minutes)				
		ssessment: German, En	glish if agreed upon w	vith the examiner		
Allocat	ion of p	olaces				
Additio	onal info	ormation				
			_			
Worklo	Dad					
	al #= !=		ulations for to a lite			
		LPOI (examination reg	ulations for teaching-	uegree programmes)		
§ 73 (1) 1. Mathematik Analysis						
Module						
	-	ree (1 major) Mathemati ree (1 major) Mathemati				
	-	ree (1 major) Kathemati ree (1 major) Economati				
	-	ree (1 major) Economati	-			
	-	ree (1 major) Mathemati				
	-	ree (1 major) Computati		09)		
Bachel	or' deg	ree (1 major) Aerospace	Computer Science (20	009)		
Bachelor's	with 1 maj	or Mathematics (2007)		g • generated 11-Jan-2023 • e	-	page 168 / 216
			data record B	achelor (180 ECTS) Mathema	uk - 200/	



Bachelor' degree (1 major) Aerospace Computer Science (2011) Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008) First state examination for the teaching degree Gymnasium Mathematics (2009)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.
	data record Bachelor (180 ECTS) Mathematik - 2007

Module title Abbreviation					Abbreviation	
Numer	ical Ma	thematics 1			10-M-NM1-072-m01	
Modul	e coord	inator		Module offered by	<u> </u>	
Dean c	of Studi	es Mathematik (Mathem	atics)	Institute of Mathem	natics	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
8	nume	rical grade		•		
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
		stems of linear equation tion with polynomials, s			juations and systems of equati-	
	· · ·	ning outcomes				
		acquainted with the fur oblems and knows abou			erical mathematics, applies them	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	in)	
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		s essment (type, scope, la ion on whether module c			tion offered — if not every seme-	
		mination (90 minutes; u nination in groups (group		ral examination of o	ne candidate each (20 minutes)	
	tion of					
Additio	onal inf	ormation				
Worklo	bad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appea	ars in				
Bachelor' degree (1 major) Computer Science (2007)						
	Bachelor' degree (1 major) Mathematics (2007)					
Bachel	lor' deg	ree (1 major) Physics (20	07)			

Module title Abbreviation					Abbreviation		
Numer	ical Ma	thematics 2			10-M-NM2-072-m01		
Modul	e coord	inator		Module offered by			
Dean c	of Studi	es Mathematik (Mathem	atics)	Institute of Mathem	natics		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
5	nume	rical grade		•			
Durati	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conter	nts						
		nods and applications for ial equations, boundary		s, linear programmin	g, initial value problems for ordi-		
Intend	ed lear	ning outcomes					
about and en	their ac Igineeri	lvantages and limitation ng sciences and econom	s concerning the poss nics.	sibilities of application	erical mathematics and knows on in different fields of natural		
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	in)		
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-		
		mination (90 minutes) of ps of 2 candidates (30 m		of one candidate eac	ch (20 minutes) or c) oral exami-		
Allocat	tion of	places					
Additio	onal inf	ormation					
Worklo	oad						
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Bachelor' degree (1 major) Mathematics (2007)							
Bache		Bachelor' degree (1 major) Physics (2007)					

Module title Abbreviation					
Operations Research		10-M-ORS-072-m01			
		,			
Module coordinator	Module offered by				
Dean of Studies Mathematik (Mathematics)	Institute of Mathem	natics			
	ompl. of module(s)				
5 numerical grade					
Duration Module level Other prerequisite					
sessment. The lec at the beginning o sidered a declarat dents have obtain the course of the s sessment into effe	Certain prerequisites must be met to qualify for admission to as- sessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be con- sidered a declaration of will to seek admission to assessment. If stu- dents have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for as- sessment into effect. Students who meet all prerequisites will be admit- ted to assessment in the current or in the subsequent semester. For as-				
admission to asse		ave to obtain the qu	anneation ior		
Contents					
Linear programming, duality theory, transport problems, in	ntegral linear program	ming, graph theoret	ic problems.		
Intended learning outcomes					
The student is acquainted with the fundamental methods for solving many practical problems especially in econom problems, both theoretically and numerically.					
Courses (type, number of weekly contact hours, language	— if other than Germa	ın)			
V + Ü (no information on SWS (weekly contact hours) and	course language avail	able)			
Method of assessment (type, scope, language — if other t ster, information on whether module can be chosen to ear		ition offered — if not	every seme-		
written examination (approx. 90 minutes); if announced b by an oral examination of one candidate each (approx. 20 2, approx. 30 minutes) Language of assessment: German, English if agreed upon	minutes) or an oral ex				
Allocation of places					
Additional information					
Workload					
Workload					
Referred to in LPO I (examination regulations for teaching	g-degree programmes)				
§ 73 (1) 5. Mathematik Angewandte Mathematik					
Module appears in					
Bachelor' degree (1 major) Computer Science (2007) Bachelor' degree (1 major) Computer Science (2010) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Economathematics (2009) Bachelor' degree (1 major) Economathematics (2008) Bachelor' degree (1 major) Mathematical Physics (2009)					
chelor's with 1 major Mathematics (2007) JMU Würzburg • generated 11-Jan-2023 • exam. reg. page 172 / 216					

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Bachelor' degree (1 major) Computational Mathematics (2009) Master's degree (1 major) Nanostructure Technology (2011) Master's degree (1 major) Nanostructure Technology (2010) Bachelor's degree (1 major, 1 minor) Mathematics (Minor, 2008) First state examination for the teaching degree Gymnasium Mathematics (2009)

Modu	Module title Abbreviation									
Progra	amming	g Course for Mathematics	and other students		10-M-PRG-072-m01					
Modu	le coord	linator		Module offered by						
Dean	of Studi	ies Mathematik (Mathema	atics)	Institute of Mathem	natics					
ECTS	Meth	od of grading	Only after succ. com	npl. of module(s)						
3	(not)	successfully completed								
Durati	on	Module level	Other prerequisites							
1 seme	ester	undergraduate								
Conte	nts									
Basics matics		odern programming lang	uage (e. g. C or Fortra	n) taking into accou	nt the particular needs in mathe-					
Intend	led lear	ning outcomes								
	udent i hemati		ntly on small program	nming exercises and	standard programming problems					
Course	es (type	e, number of weekly conta	act hours, language —	- if other than Germa	an)					
P (no i	informa	tion on SWS (weekly cont	tact hours) and cours	e language available	e)					
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-					
projec	t in the	form of programming exe	ercises (expenditure c	of time as specified a	at the beginning of the course)					
Alloca	tion of	places								
Additi	onal in	formation								
Workl	oad									
Referr	ed to in	LPOI (examination regu	llations for teaching-o	legree programmes)						
			· · · · · · · · · · · · · · · · · · ·	· - ·						
Modu	le appe	ars in								
	Bachelor' degree (1 major) Mathematics (2007)									
Bache	lor' deg	gree (1 major) Physics (20	07)		Bachelor' degree (1 major) Physics (2007)					

Modul	Module title Abbreviation					
Readin	Reading Course Discrete Mathematics 10-M-RCD-072-mo1					
Modul	e coord	inator		Module offered by		
Dean o	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
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	ester	undergraduate				
Conter	nts					
Basics	in disc	rete mathematics.				
Intend	ed lear	ning outcomes				
		able to work independe use standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
Course	e s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
A (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
a) talk	(approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)		
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appea	ars in				
		ree (1 major) Mathematic	s (2007)			
	0		× 1/			

Module title Abbreviation					Abbreviation	
Readin	Reading Course Functional Analysis 10-M-RCF-072-mo1					
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
ECTS		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					
Basics	in func	tional analysis.				
Intende	ed lear	ning outcomes				
		able to work independe se standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
A (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
a) talk	(approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)		
Allocat	ion of j	olaces				
Additio	nal inf	ormation				
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Bachel	or' deg	ree (1 major) Mathematic	s (2007)			

numerical Mathematics 10-M-RCN-072-m01 Module coordinator Module offered by Dean of Studies Mathematik (Mathematics) Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatex tand can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places	Module	Module title Abbreviation					
Dean of Studies Mathematik (Mathematics) Institute of Mathematics ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatext and can use standard literature. Courses (type, number of weekly contact hours) language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Readin	Reading Course Numerical Mathematics 10-M-RCN-072-m01					
ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematica text and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Alditional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Module	Module coordinator N					
5 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatext and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Alditional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
Duration Module level Other prerequisites 1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicat text and can use standard literature. Courses (type, number of weekly contact hours, language – if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Additional information Additional information Morkload Referred to in LPO I (examination regulations for teaching-degree programmes)	ECTS	Methe	od of grading	Only after succ. con	npl. of module(s)		
1 semester undergraduate Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatext and can use standard literature. Courses (type, number of weekly contact hours, language – if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Atlocation of places Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	5	nume	rical grade				
Contents Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatext and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Workload Module appears in	Duratio	on	Module level	Other prerequisites			
Advanced topics in numerical mathematics. Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematicatext and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	1 seme	ster	undergraduate				
Intended learning outcomes The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematica text and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Morkload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Conten	ts					
The student is able to work independently on a given scientific topic. He or she can tackle a simple mathematica text and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Morkload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Advanc	ed top	ics in numerical mathem	atics.			
text and can use standard literature. Courses (type, number of weekly contact hours, language — if other than German) A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Intende	ed lear	ning outcomes				
A (no information on SWS (weekly contact hours) and course language available) 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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in				ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
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) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
ster, information on whether module can be chosen to earn a bonus) a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages) Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	A (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
Allocation of places Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in						tion offered — if not every seme-	
Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	a) talk	(approx	x. 30 minutes) or b) writte	n elaboration (appro	ox. 5 to 10 pages)		
Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Allocat	ion of	places				
Workload Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in							
 Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Additio	onal inf	ormation				
 Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in							
 Module appears in	Workload						
 Module appears in							
 Module appears in	Referred to in LPO I (examination regulations for teaching-degree programmes)						
	Module	Module appears in					
Bachelor' degree (1 major) Mathematics (2007)	Bachel	or' deg	ree (1 major) Mathematic	s (2007)			

Module	Module title Abbreviation					
Readin	Reading Course Operations Research 10-M-RCO-072-mo1					
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Basics	in oper	rations research.				
Intende	ed lear	ning outcomes				
		able to work independense standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
A (no in	format	tion on SWS (weekly cont	act hours) and cours	e language available	2)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
a) talk ((approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)		
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
-						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Bachel	or' deg	ree (1 major) Mathematic	s (2007)			

Module	Module title Abbreviation					
Readin	Reading Course Optimisation 10-M-RCP-072-m01					
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Basics	in opti	mization.				
Intende	ed lear	ning outcomes				
		able to work independense standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)	
A (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	2)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
a) talk	(approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)		
Allocat	ion of _l	places				
Additio	nal inf	ormation				
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Bachel	or' deg	ree (1 major) Mathematic	s (2007)			

Module	Module title Abbreviation					
Readin	Reading Course Stochastics 10-M-RCS-072-m01					
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics	
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					
Advanc	ed top	ics in stochastics.				
Intende	ed lear	ning outcomes				
		able to work independen se standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
A (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	2)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
a) talk	(approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)		
Allocat	ion of j	olaces				
Additio	nal inf	ormation				
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	appea	ars in				
Bachel	or' deg	ree (1 major) Mathematic	s (2007)			

Module	title				Abbreviation
Readin	g Cour	se Dynamical Systems			10-M-RCY-072-m01
Module	e coord	inator	<u>, </u>		
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics
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				
Basics	in dyna	amical systems and nonli	near dynamics.		
Intende	ed lear	ning outcomes			
		able to work independense standard literature.	ntly on a given scient	ific topic. He or she	can tackle a simple mathematical
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
A (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
a) talk	(approx	x. 30 minutes) or b) writte	en elaboration (appro	ox. 5 to 10 pages)	
Allocat	ion of _l	places			
Additio	nal inf	ormation			
Worklo	ad				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Mathematic	s (2007)		

Modu	le title				Abbreviation
Stoch	astics 1				10-M-ST1-072-m01
Modu	le coord	inator		Module offered by	
Dean	of Studi	es Mathematik (Mathema	atics)	Institute of Mathem	atics
ECTS					
8	nume	rical grade			
Duration Module level Other prerequisites					
1 sem	ester	undergraduate			
Conte	nts				
contin chasti	uous di c indep	stributions: normal distri	bution, random varia ditional probability, o	ble, distribution fun characteristics of dis	asure and integration theory, ction, product measures and sto- tributions: expected value and
Intend	led lear	ning outcomes			
		acquainted with fundam lems and knows about th			ics, applies these methods to
Cours	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V + Ü ((no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		s essment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		mination (90 minutes; us nination in groups (group		ral examination of o	ne candidate each (20 minutes)
Alloca	tion of	places			
Additi	onal inf	ormation			
Workl	oad				
Referr	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Modu	le appea	ars in			
	-	ree (1 major) Computer S ree (1 major) Mathematic			
			- (-))		

Module title Abbreviation						
Stochas	stics 2				10-M-ST2-072-m01	
Module	e coord	inator		Module offered by		
Dean of	f Studie	es Mathematik (Mathema	atics)	Institute of Mathem	atics	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Conten	ts					
Elemen	ts of da	ata analysis, statistics of	data in normal and o	ther distributions, e	lements of multivariate statistics.	
Intende	ed learr	ning outcomes				
		acquainted with fundam and knows about the ty			, applies these methods to prac-	
Course	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)	
V + Ü (n	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		nination (approx. 90 min tes) or c) oral examinatio			ion of one candidate each (ap- ites)	
Allocati	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	e appea	in				
Bachelo	Bachelor' degree (1 major) Mathematics (2007)					

Module	title				Abbreviation	
Advance	ed Ana	lysis			10-M-VAN-072-m01	
Module	coordi	inator		Module offered by		
Dean of	Studie	es Mathematik (Mathema	atics)	Institute of Mathem	atics	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
7	numer	rical grade				
Duration	1 I	Module level	Other prerequisites			
1 semes	ter	undergraduate				
Contents	s					
•		gral in several variables, ry Fourier theory in L^2, (-	on convergence and	Fubini's theorem, L^p-spaces	
Intendeo	d learr	ning outcomes				
		acquainted with advanc understand the construc			of the Lesbegue integral, he or	
Courses	(type,	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
V + Ü (no	o infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		nination (approx. 90 min tes) or c) oral examinatio			ion of one candidate each (ap- ites)	
Allocatio	on of p	olaces				
Addition	nal info	ormation				
Workloa	d					
Referred	l to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	appea	rs in				
		ree (1 major) Mathematic	()			

Module	e title				Abbreviation
Prepara	atory C	ourse Mathematics			10-M-VKM-072-m01
Module					
Dean o	f Studi	es Mathematik (Mathema	atics)	Institute of Mathem	natics
ECTS		od of grading	Only after succ. con	pl. of module(s)	
2	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Introdu	ction t	o the basic techniques in	mathematics; appro	ach to sets, proposi	tions, propositional logic.
Intende	ed lear	ning outcomes			
		ets acquainted with the b s degree study programm		ues which are prere	quisites for the further courses in
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
V + T (n	o infor	mation on SWS (weekly o	contact hours) and co	urse language availa	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
comple	tion of	project assignments (to	be specified at the b	eginning of the cours	se)
Allocat	ion of _l	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Mathematic	s (2007)		

Modul	e title				Abbreviation
Experi	mental	Physics 3 (Optics, Quant	tum Phenomena, Intr	oduction Atomic	11-E3-072-m01
Physic	s)				
Modul	e coord	inator		Module offered by	
Manag	ging Dire	ector of the Institute of A	oplied Physics	Faculty of Physics a	and Astronomy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	·
8		rical grade		•	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts		•		
Physic	al laws	of optics, quantum phen	omena, introduction	to Atomic Physics.	
		ning outcomes		,	
			asic contexts and prin	nciples of optics au	antum phenomena and Atomic
Physic			usie contexts and pin	respices of optices, qu	antani prenomena ana Atoinit
		, number of weekly conta	act hours, language –	- if other than Germa	an)
		rmation on SWS (weekly			
		· · · · · ·	· · · · · · · · · · · · · · · · · · ·		ation offered — if not every seme-
		ion on whether module c			ation offered — If not every serile-
	-	nation (approx. 120 minu			
	tion of				
Alloca		Jaces			
		ormation			
Additio		ormation			
Worklo	pad				
Referre	ed to in	LPOI (examination regu	llations for teaching-o	degree programmes)	
Modul	e appea	ars in			
Bache	lor' deg	ree (1 major) Mathematic	cs (2008)		
Bache	lor' deg	ree (1 major) Mathematic	:s (2007)		
	-	ree (1 major) Physics (20			
	-	ree (1 major) Physics (20			
Bache	lor' deg	ree (1 major) Physics (20	08)		
Bache	lor' deg	ree (1 major) Nanostructu	ure Technology (2008)	
Bache	lor' deg	ree (1 major) Nanostructu	ure Technology (2007)	
Bache	lor' deg	ree (1 major) Computatio	nal Mathematics (20	09)	
		gree (1 major, 1 minor) Pł			

Moaul	e title				Abbreviation
Experi	mental	Physics 4 (Introduction	to Solid State Physics	s)	11-E4-072-m01
Modul	e coord	inator		Module offered by	·
Manag	ing Dire	ector of the Institute of A	pplied Physics	Faculty of Physics a	and Astronomy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
8	8 numerical grade				
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
		of solids: Bonding and s lectron gas).	structure, lattice dynai	mics, thermal prope	rties, principles of electronic pro-
Intend	ed lear	ning outcomes			
		have knowledge of the b properties, principles of			nding and structure, lattice dyna-
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-
writter	ı exami	nation (approx. 120 mini	utes)		
Allocat	tion of	olaces			
Additio	onal inf	ormation	_		
Workle	oad				
Worklo	oad				
		IDOL (examination rog	ulations for teaching	degree programmer	
		LPOI (examination reg	ulations for teaching-o	degree programmes)	
 Referro	ed to in		ulations for teaching-o	degree programmes)	
 Referro Modul	ed to in e appea	ars in		degree programmes)	
 Referro Modul Bache	ed to in e appea lor' deg	ars in ree (1 major) Mathemati	cs (2008)	degree programmes)	
 Referro Modul Bachel Bachel	ed to in e appea lor' deg lor' deg	ars in ree (1 major) Mathemati ree (1 major) Mathemati	cs (2008) cs (2007)	degree programmes)	
 Referro Modul Bache Bache Bache	ed to in e appea lor' deg lor' deg lor' deg	ars in ree (1 major) Mathemati	cs (2008) cs (2007) 007)	degree programmes)	

Introdu	e title				Abbreviation	
muout	uction to	o Physics for Students	of Non-physics-relate	ed Minor Subjects	11-EFNF-072-m01	
Modul	e coord	nator		Module offered by	<u> </u>	
		ector of the Institute of	Applied Physics	Faculty of Physics a	and Astronomy	
ECTS	<u> </u>	d of grading	Only after succ. co	- · · · · ·		
7		rical grade				
/ Duratio	<u> </u>	Module level	Other prerequisite	c		
2 seme		undergraduate		3		
Conten		undergraduate				
		aration theony therma	dunamics ontics scia	nco of alactricity. Ata	mic and Nuclear Dhu	reiec
		oration theory, thermo	aynamics, optics, scie	fice of electricity, Ald	mic and Nuclear Priy	SICS.
		ning outcomes				
		nave knowledge of the	· · · ·			
Course	es (type,	number of weekly con	tact hours, language	 if other than Germa 	an)	
V + V (r	no infor	mation on SWS (weekl	y contact hours) and c	ourse language avai	able)	
Metho	d of ass	essment (type, scope,	language — if other th	nan German, examina	ation offered — if not	every seme-
ster, in	formati	on on whether module	can be chosen to ear	n a bonus)		
written	examir	nation (approx. 120 min	nutes)			
Allocat	tion of p	laces				
Only as	s part of	f pool of general key sk	xills (ASQ): 10 places.	Places will be allocat	ed by lot.	
		ormation			,	
Worklo						
WORKIO						
Referre	ed to in	LPOI (examination reg	gulations for teaching	-degree programmes		
Module	e appea	rs in				
		rs in ree (1 major) Biochemis	stry (2011)			
Bachel Bachel	or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis	stry (2013)			
Bachel Bachel Bachel	or' degi or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis	stry (2013) stry (2009)			
Bachel Bachel Bachel Bachel	or' degi or' degi or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biology (2	stry (2013) stry (2009) 1011)			
Bachel Bachel Bachel Bachel Bachel	or' degi or' degi or' degi or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biology (2 ree (1 major) Biology (2	stry (2013) stry (2009) 0011) 0007)			
Bachel Bachel Bachel Bachel Bachel Bachel	or' degi or' degi or' degi or' degi or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Biology (2	stry (2013) stry (2009) 1011) 1007) 1010)			
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Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Geograph ree (1 major) Geograph ree (1 major) Geograph ree (1 major) Computer ree (1 major) Computer ree (1 major) Computer ree (1 major) Computer ree (1 major) Food Cher ree (1 major) Mathemat ree (1 major) Mathemat	stry (2013) stry (2009) (011) (007) (2007) (2007) (2008) (2010) (2009) y (2007) y (2007) y (2008) y (2010) Science (2007) Science (2014) Science (2010) mistry (2009) tics (2012)			
Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	or' degi or' degi	ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biochemis ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Biology (2 ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Chemistry ree (1 major) Geograph ree (1 major) Geograph ree (1 major) Geograph ree (1 major) Computer ree (1 major) Computer ree (1 major) Computer ree (1 major) Computer ree (1 major) Food Cher ree (1 major) Mathemat	stry (2013) stry (2009) (011) (007) (2007) (2007) (2008) (2010) (2009) y (2007) y (2007) y (2008) y (2010) Science (2007) Science (2014) Science (2010) mistry (2009) tics (2012)			

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Biomedicine (2009) Bachelor' degree (1 major) Biomedicine (2013) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor' degree (1 major) Computational Mathematics (2014) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

Module	e title				Abbreviation		
		o Physics Part 1 for stude	ents of Physics Relate	ed Minor Subjects	11-ENNF1-062-m01		
Module	- coord	instar		Module offered by			
			philod Dhusics		and Astronomy		
ECTS		ector of the Institute of Ap od of grading	Only after succ. com	Faculty of Physics a	and Astronomy		
7	<u> </u>	rical grade					
Duration Module level Other prerequisites							
1 semester undergraduate							
Conten	ts						
Mecha	nics. vi	bration theory, thermody	namics.				
		ning outcomes					
		nave basic knowledge of	physics for engineeri	ng students.			
		, number of weekly conta			in)		
		mation on SWS (weekly o					
					ition offered — if not every seme-		
		on on whether module ca			and oncica in not every selle-		
written	exami	nation (approx. 120 minu	tes)				
Allocat							
		f pool of general key skill	s (ASQ): 20 places. P	laces will be allocat	ed by lot.		
-		ormation			,		
Worklo	ad						
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)			
Module	appea	urs in					
		ree (1 major) Mathematic	s (2008)				
	0	ree (1 major) Mathematic	· /				
	-	ree (1 major) Mathematic					
	-	ree (1 major) Mathematic	-				
	-	ree (1 major) Mathematic					
	-	ree (1 major) Technology		-			
	-	ree (1 major) Technology					
	-	ree (1 major) Computatio		-			
	-	ree (1 major) Computatio		•			
	-	ree (1 major) Computatio					
		ree (1 major) Computatio					
		ree (1 major) Aerospace (
	-	ree (1 major) Aerospace (ree (1 major) Aerospace (•	•			
	-	ree (1 major) Aerospace (ree (1 major) Functional N	•	'11)			
	-			ls (2006)			
Jachet	Bachelor' degree (1 major) Technology of Functional Materials (2006)						

Module	e title				Abbreviation	
Introdu	iction t	o Physics Part 2 for stud	ents of Physics Relat	ed Minor Subjects	11-ENNF2-062-m01	
Module	coord	inator		Module offered by		
		ector of the Institute of Ap	nlied Physics	Faculty of Physics a	and Astronomy	
ECTS		od of grading		, ,		
7		rical grade	Only after succ. compl. of module(s)			
Duration Module level Other prerequisites						
1 semester undergraduate						
Conten	ts					
Science	e of ele	ctricity, magnetism, optic	cs, Atomic Physics.			
		ning outcomes				
		nave basic knowledge of	physics for engineeri	ng students.		
		, number of weekly conta		-	in)	
		mation on SWS (weekly o			•	
					ition offered — if not every seme-	
		on on whether module ca				
		nation (approx. 120 minu				
Allocat)			
		f pool of general key skill	s (ASO): 20 places. P	laces will be allocat	ed by lot.	
		ormation	<u> </u>			
Worklo	ad					
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)		
Module	annea	urs in				
		ree (1 major) Mathematic	s (2008)			
	-	ree (1 major) Mathematic				
	-	ree (1 major) Mathematic				
	-	ree (1 major) Mathematic	-			
		ree (1 major) Mathematic				
		ree (1 major) Technology				
	-	ree (1 major) Technology				
	-	ree (1 major) Computation		-		
		ree (1 major) Computation				
	-	ree (1 major) Computatio ree (1 major) Computatio				
	-	ree (1 major) Computation ree (1 major) Aerospace (-		
		ree (1 major) Aerospace (
	-	ree (1 major) Aerospace (•	•		
		ree (1 major) Functional N				
		ree (1 major) Technology		ls (2006)		

Module	e title				Abbreviation
Measu	rement	s and Data Analysis			11-PFR-072-m01
Module	e coord	inator		Module offered by	
Manag	ing Dire	ector of the Institute of A	pplied Physics	Faculty of Physics a	and Astronomy
ECTS	1	od of grading	Only after succ. con	npl. of module(s)	
2	nume	rical grade			
Duratio	Ouration Module level Other prerequis		Other prerequisites	i	
1 seme	ster	undergraduate			
Conten	Its				
		, error approximation and oution functions, signific			average values and standard de- lications.
Intend	ed lear	ning outcomes			
		e, the students acquire s error propagation and th			ave knowledge of practical experi-
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)
V + Ü (I	no infoi	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-
written	exami	nation (approx. 120 minu	ites)		
Allocat	ion of j	olaces			
Additio	onal inf	ormation			
			_		
Worklo	ad				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	urs in			
Bachel	or' deg	ree (1 major) Mathematic	cs (2008)		
Bachel	or' deg	ree (1 major) Mathematio	cs (2007)		
		ree (1 major) Physics (20			
Bachel	or' deg	ree (1 major) Physics (20	09)		
	-	ree (1 major) Physics (20			
		ree (1 major) Nanostructi			
		ree (1 major) Nanostructi			
	-	ree (1 major) Computatio		09)	
Bachel	or's de	gree (1 major, 1 minor) Pl	nysics (Minor, 2008)		

					Abbreviation		
Practica	al Cour	se			11-PG-IAF-072-m01		
Module	coord	nator		Module offered by			
Managi	ng Dire	ctor of the Institute of	Applied Physics	Faculty of Physics a	ind Astronomy		
ECTS		od of grading	Only after succ. con	npl. of module(s)			
4		uccessfully completed					
Duratio		Module level	Other prerequisites				
	1 semester undergraduate Module 11-PFR recommended.						
	Contents Physical laws of mechanics, thermodynamics, optics, science of electricity, vibration and waves, Atomic and						
Nuclear	r Physic	s and wave optics. Ba	sic measuring method	s using computers ar	nd storage oscillosco	opes.	
Intende	ed learn	ing outcomes					
are able	e to ind		kills of physical measu conduct experiments in				
Course	s (type,	number of weekly cor	ntact hours, language –	- if other than Germa	ın)		
BAM): F Klassise Elektriz Wellend Atom- u Comput Method ster, inf This mo 1. Lab c ly con	Courses (type, number of weekly contact hours, language — if other than German) Beispiele aus Mechanik, Wärmelehre und Elektrik (Examples from Mechanics, Thermodynamics and Electricity, BAM): P (2 weekly contact hours) Klassische Physik (Classical Physics, KLP): P (2 weekly contact hours) Elektrizitätslehre und Schaltungen (Electricity and Circuits, ELS): P (2 weekly contact hours) Wellenoptik (Physical Optics, WOP): P (2 weekly contact hours) Atom- und Kernphysik (Atomic and Nuclear Physics, AKP): P (2 weekly contact hours) Computer und Messtechnik (Computers and Measurement Technology, CMT): P (2 weekly contact hours) 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) This module has the following assessment components 1. Lab course in part 1: a) Preparing, performing and evaluating the experiments will be considered successful- ly completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes).						
physi Student Student nent, th To pass Student	ics-rela ts mus ts will l ney mus this m ts mus	ted contents of the co tregister for assessme be offered one opportu st pass both elements odule, students must t attend BAM, KLP or E	bassed. b) Talk (with di urse (approx. 30 minut ent components 1 and 2 unity to retake element a) and b). successfully complete LS courses prior to atte pass both assessment	es). online (registration a) and/or element b) two out of the six cound nding WOP, AKP or C	deadline to be anno . To pass an assess urses. MT courses.	unced). ment compo-	
Allocati	ion of p	olaces					
Additio	nal info	ormation					
Worklo	ad						
Referre	d to in	LPOI (examination re	gulations for teaching-	degree programmes)			
			<u> </u>	<u> </u>			
Module	appea	rs in					
		ree (1 major) Mathema	tics (2008)				
		or Mathematics (2007)	JMU Würzbur	g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema		page 193 / 216	



Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 194 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module	e title				Abbreviation
Physic	s Labor	atory Course for student	s of Physics Related	Minor Subjects	11-PNNF-062-m01
Module	e coord	inator		Module offered by	
Manag	ing Dire	ector of the Institute of Ap	plied Physics	Faculty of Physics a	and Astronomy
ECTS	Metho	od of grading	Only after succ. com	npl. of module(s)	
3	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Mecha Physics		bration theory, thermody	namics, optics, X-ray	s, nuclear magnetic	resonance, Atomic and Nuclear
Intend	ed lear	ning outcomes			
The stu	dents	know the principles of Ph	ysics.		
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	an)
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la on on whether module ca			ation offered — if not every seme-
					mination (approx. 90 minutes)
Allocat		• • •	() (p = () () () () () () () () () () () () ()		
		f pool of general key skill	s (ASO): 15 places. P	laces will be allocate	ed by lot.
		ormation			····, ····
Worklo	ad				
Referre	d to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Module	e appea	urs in			
Bachel	or' deg	ree (1 major) Mathematic	s (2008)		
Bachel	or' deg	ree (1 major) Mathematic	s (2014)		
Bachel	or' deg	ree (1 major) Mathematic	s (2012)		
Bachel	or' deg	ree (1 major) Mathematic	s (2013)		
	-	ree (1 major) Mathematic			
	-	ree (1 major) Technology			
	-	ree (1 major) Technology			
	-	ree (1 major) Computatio	-		
		ree (1 major) Computatio			
	-	ree (1 major) Computatio			
	-	ree (1 major) Computatio		13)	
	-	ree (1 major) Functional N			
Bachel	or' deg	ree (1 major) Technology	of Functional Materia	als (2006)	

Modul	e title				Abbreviation	
Theore	tical P	hysics 1 (Theoretical Mec	hanics)		11-T1-072-m01	
Module coordinator Module offered by						
Manag and As	•	ector of the Institute of Th sics	neoretical Physics	Faculty of Physics a	and Astronomy	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
8	nume	rical grade				
Duratio	on	Module level	Other prerequisites	i		
1 seme	ster	undergraduate				
Conter	nts	-	·			
Newto	nian m	echanics, Lagrangian me	chanics. Hamiltonian	equation of motion.	. conservation laws.	
		ning outcomes			,	
	udents		rinciples of classical	theoretical mechanic	cs and the required calculation	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
written	exami	nation (approx. 120 minu	ites)			
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	ad					
	_					
Referre	ed to in	LPOI (examination regu	llations for teaching-	degree programmes)		
Modul	e appea	ars in				
		ree (1 major) Mathematic	cs (2008)			
		ree (1 major) Mathematic				
Bachel	or' deg	ree (1 major) Physics (20	07)			
Bachel	or' deg	ree (1 major) Physics (20	09)			
Bachel	or' deg	ree (1 major) Physics (20	08)			
Bachel	or' deg	ree (1 major) Nanostructi	ure Technology (2008	3)		
Bachel	or' deg	ree (1 major) Nanostructi	ure Technology (2007	<i>י</i>)		
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (20	09)		
Bachel	or's de	gree (1 major, 1 minor) Pł	nysics (Minor, 2008)			

Modul	e title				Abbreviation
Theore	etical Pl	hysics 2 (Theoretical E	lectrostatics and Electr	odynamics)	11-T2-072-m01
Modul	e coord	inator		Module offered	by
Managing Director of the Institute of Theoretical Physics and Astrophysics				Faculty of Physi	cs and Astronomy
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
8	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
Electro	statics	, magnetostatics, Max	well equations, covaria	nt formulation, el	ectrodynamics and matter.
		ning outcomes			,
	udents		e principles of classical	electrodynamics	and the required calculation me-
Course	es (type	, number of weekly co	ntact hours, language –	- if other than Ge	rman)
V + Ü (no info	rmation on SWS (week	ly contact hours) and co	ourse language a	vailable)
ster, ir	nformat	ion on whether modul	e can be chosen to earn		ination offered — if not every seme
		nation (approx. 120 m	inutes)		
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPOI (examination re	egulations for teaching-	degree programm	ies)
Modul	e appea	ars in			
		ree (1 major) Mathema	atics (2008)		
	-	ree (1 major) Mathema			
	-	ree (1 major) Physics (
Bache	lor' deg	ree (1 major) Physics (2009)		
Bache	lor' deg	ree (1 major) Physics (2008)		
Bache	lor' deg	ree (1 major) Nanostru	cture Technology (2008	3)	
	-		cture Technology (2007		
Bache	lor' deg	ree (1 major) Computa	tional Mathematics (20	09)	
Bache	lor's de	gree (1 major, 1 minor)	Physics (Minor, 2008)		

Modu					Abbreviation
Theoretical Physics 3 (Theoretical Quantum Mechanics)					11-T3-072-m01
Modu	le coord	linator		Module offered by	1
	ging Dir strophy	ector of the Institute c sics	f Theoretical Physics	Faculty of Physics	and Astronomy
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
8	nume	erical grade			
Durati	on	Module level	Other prerequisite	S	
1 sem	ester	undergraduate			
Conte	nts	•			
			nger equation, mathem spin, hydrogen atom, m		f quantum mechanics, harmonic s.
Intend	led lear	ning outcomes			
The st	udents	have knowledge of th	e principles of quantum	n mechanics and the	required calculation methods.
Cours	es (type	, number of weekly co	ontact hours, language	— if other than Germ	an)
		· · · · · · · · · · · · · · · · · · ·	kly contact hours) and c		
ster, i	nformat	ion on whether modu	le can be chosen to ear		ation offered — if not every sem
		nation (approx. 120 m	inutes)		
Alloca	tion of	places			
Additi	onal inf	formation			
Workl	oad				
Referr	ed to in	LPOI (examination r	egulations for teaching	-degree programmes	5)
Modu	le appe	ars in			
		gree (1 major) Mathem	atics (2008)		
		gree (1 major) Mathem			
	-	ree (1 major) Physics			
	-	gree (1 major) Physics			
	-	ree (1 major) Physics	-		
	-		ucture Technology (200	8)	
			ucture Technology (200		
Bache	lor' deg	gree (1 major) Comput	ational Mathematics (20	009)	
Racho	lor's de	gree (1 major, 1 minor) Dhusics (Minor 2008)		

Modul					Abbreviation	
Theore	etical P	hysics 4 (Theoretical	Thermodynamics and S	tatistics)	11-T4-072-m01	
Modul	e coord	linator		Module offered by	/	
	ging Dir strophy	ector of the Institute c sics	of Theoretical Physics	Faculty of Physics	and Astronomy	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)		
8						
Durati	on	Module level	Other prerequisite	S		
1 seme	ester	undergraduate				
Conte	nts	•	F			
Princip chanic		hermodynamics, func	lamental theorems, the	rmodynamic potenti	als, principles of statistical me-	
Intend	led lear	ning outcomes				
		have knowledge of th ethods.	e principles of thermod	ynamics and statisti	cal mechanics and the required	
Course	es (type	e, number of weekly co	ontact hours, language	— if other than Germ	ian)	
V + Ü ((no info	rmation on SWS (wee	kly contact hours) and c	course language ava	ilable)	
ster, ir	nformat		le can be chosen to ear		ation offered — if not every seme-	
		· · · ·	iniu(es)			
Alloca	tion of	places				
 Additi	onal inf	formation				
Auuiti						
Workle	oad					
Referr	ed to in	LPOI (examination r	egulations for teaching	-degree programme	5)	
			<u></u>		,	
Modul	e appe	ars in				
Bache	lor' deg	gree (1 major) Mathem	atics (2008)			
	-	gree (1 major) Mathem				
	Bachelor' degree (1 major) Physics (2007)					
	-	gree (1 major) Physics	-			
	-	ree (1 major) Physics				
			ucture Technology (200			
	-		ucture Technology (200	-		
	-		ational Mathematics (20	•		
Bache	lor's de	gree (1 major, 1 minor) Physics (Minor, 2008)			

Modul					Abbreviation
Supply, Production and Operations Management. An Intro				luction	12-BPL-G-072-m01
Modul	e coord	inator		Module offered	by
	of the gement	Chair of Business Mar	nagement and Industrial	Faculty of Busine	ess Management and Economics
ECTS		od of grading	Only after succ. con	pl. of module(s)	
5		rical grade		• • • •	
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
					in procurement, production and loc ction to related planning procedu-
Intend	ed lear	ning outcomes			
rate pr	ocurem	ent, production and l		nterdependencie	rocesses in the domains of corpo- s. Furthermore, they are capable o
Course	es (type	, number of weekly co	ontact hours, language –	- if other than Ger	man)
V + Ü (no info	rmation on SWS (weel	kly contact hours) and co	ourse language av	vailable)
			e, language — if other tha le can be chosen to earn		ination offered — if not every seme
writter	exami	nation (approx. 60 mi	nutes)		
Alloca	tion of	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPOI (examination r	egulations for teaching-o	legree programm	es)
					,
Modul	e appea	ars in			
		ree (1 major) Chemist	ry (2007)		
	-	ree (1 major) Compute			
	-	ree (1 major) Mathem			
Bachel		· · · · · · · · · · · · · · · · · · ·			
	lor' deg	-			
Bache	-	ree (1 major) Mathem		omics (2007)	

older of the Chair of Human Resource Management and Irganisation CTS Method of grading Only after succ. component of grading numerical grade uration Module level Other prerequisites semester undergraduate ontents his course will introduce students to relevant subject areas verview of the different perspectives and main points of vier nterprise may take place. The course will focus on what come and in what form they are organised. For this purpose, a sin-making behaviour. eading list to be provided during lecture. he aim of the lectures is to familiarise the students with the eld of business administration. ourses (type, number of weekly contact hours, language — + Ü (no information on SWS (weekly contact hours) and course ter, information on whether module can be chosen to earn at ter, information on whether module can be chosen to earn at ter, information on whether module can be chosen to earn at term of the earn of the module can be chosen to earn at term.	of business administration. Students will acquire an w from which a theoretical examination of business npanies or other organisations are, how they beha- tudy will be made of the economic subject's decisi- basic problem issues and perspectives within the if other than German)
older of the Chair of Human Resource Management and Irganisation CTS Method of grading Only after succ. component of grading numerical grade uration Module level Other prerequisites semester undergraduate ontents his course will introduce students to relevant subject areas verview of the different perspectives and main points of vier nterprise may take place. The course will focus on what come and in what form they are organised. For this purpose, a sin-making behaviour. eading list to be provided during lecture. he aim of the lectures is to familiarise the students with the eld of business administration. ourses (type, number of weekly contact hours, language — + Ü (no information on SWS (weekly contact hours) and course ter, information on whether module can be chosen to earn at ter, information on whether module can be chosen to earn at ter, information on whether module can be chosen to earn at terms of the earn of second terms of the earn of the lectures is to familiarise the students with the eld of business administration.	Faculty of Business Management and Economics pl. of module(s) of business administration. Students will acquire and w from which a theoretical examination of business npanies or other organisations are, how they beha- tudy will be made of the economic subject's decisi- basic problem issues and perspectives within the if other than German)
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semester undergraduate ontents his course will introduce students to relevant subject areas verview of the different perspectives and main points of vier nterprise may take place. The course will focus on what com e and in what form they are organised. For this purpose, a si n-making behaviour. eading list to be provided during lecture. ntended learning outcomes he aim of the lectures is to familiarise the students with the eld of business administration. ourses (type, number of weekly contact hours, language — + Ü (no information on SWS (weekly contact hours) and cou lethod of assessment (type, scope, language — if other that ter, information on whether module can be chosen to earn a	w from which a theoretical examination of business npanies or other organisations are, how they beha- tudy will be made of the economic subject's decisi- basic problem issues and perspectives within the if other than German)
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lethod of assessment (type, scope, language — if other that ter, information on whether module can be chosen to earn a	urse language available)
ter, information on whether module can be chosen to earn a	
ritton oxamination (approx. 60 minutos)	
ritten examination (approx. 60 minutes)	
llocation of places	
dditional information	
/orkload	
eferred to in LPO I (examination regulations for teaching-de	
	egree programmes/
Nodule appears in	
achelor' degree (1 major) Chemistry (2007) achelor' degree (1 major) Geography (2007)	
achelor' degree (1 major) Computer Science (2007)	
achelor' degree (1 major) Mathematics (2008)	
achelor' degree (1 major) Mathematics (2008) achelor' degree (1 major) Mathematics (2007)	
achelor' degree (1 major) Muthematics (2007) achelor' degree (1 major) Business Management and Econo	omics (2007)
achelor' degree (1 major) Business Information Systems (20	
achelor' degree (1 major) Political and Social Studies (2007	

Module	e title				Abbreviation
Introduction to Economics					12-EVWL-G-072-m01
Module	coord	inator		Module offered by	
			and International		Monogoment and Economics
Econon		Chair of Monetary Policy	and international	Faculty of Business	s Management and Economics
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				
The cou	urse de	als with the following to	pics:		
		shows how markets fun			
		n of labour is the basis o	f our wealth		
-		in action			
		and cartels endanger n			
		market and the role of u ment's role in a social m			
		tal redistribution guarar		ce in a market econo	omy
		ital policy and the gover			Siny
		and agents in the macro			
		regate supply and dema		rium?	
		fiscal policy			
12How	does a	central bank stabilise a	ggregate demand by	setting interest rates	5?
Intende	ed lear	ning outcomes			
		g this course, students re conomic as well as macro			onomics. Students are able to in theoretical models.
Course	s (type	, number of weekly cont	act hours, language –	– if other than Germa	an)
		rmation on SWS (weekly			
		sessment (type, scope, l ion on whether module of			ation offered — if not every seme-
written	exami	nation (approx. 60 minu	tes)		
Allocat	ion of	places			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPOI (examination reg	ulations for teaching-	degree programmes))
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Geography	(2007)		
	-	ree (1 major) Mathemati			
	-	ree (1 major) Mathemati			
	-	ree (1 major) Business N	-		
	-	ree (1 major) Business Ir	•		
Bachel	or' deg	ree (1 major) Political an	d Social Studies (200	(7)	

Modul	e title				Abbreviation
Financ	ial Acco	ounting			12-ExtUR-G-072-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Business Taxatio	n		Management and Economics
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duration Module level Other prerequisites					
1 seme	ester	undergraduate			
Conter	nts				
ble-en	try bool		fundamentals of reco		including the technique of dou- nd presentation of assets, liabili-
Intend	led lear	ning outcomes			
		uire a basic unterstandin apply this knowledge, i.e			ting. They are able to arrange, re- g problems.
Course	es (type	, number of weekly conta	act hours, language –	– if other than Germa	an)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			ition offered — if not every seme-
writter	n exami	nation (approx. 60 minut	es)		
Alloca	tion of	places			
Additi	onal inf	ormation			
Worklo	nad				
WOTKE					
Pofor	od to in	LPOI (examination regu	lations for toaching	dagraa programmaa	
Refeif				uegiee programmes)	
		•			
	e appea				
	-	ree (1 major) Computer S			
	0	ree (1 major) Mathematic	· /		
	-	ree (1 major) Mathematic		nomics (2007)	
	-	ree (1 major) Business M ree (1 major) Business In	-		
Dache	ior deg	ree (1 major) Business in	ionnation Systems (2	2007)	

Investr	e title				Abbreviation	
	nent ar	nd Finance. An Introduct	ion		12-I&F-G-072-m01	
Module	e coord	inator		Module offered by	ļ	
holder of the Chair of Business Management, Banking and Faculty of Business Management and Economic						
Finance		chan of Dusiness Maria	gement, banking and		Management and Lu	0110111105
ECTS	1	od of grading	Only after succ. con	npl. of module(s)		
5	1	rical grade				
Duratio	, n	Module level	Other prerequisites	6		
1 seme		undergraduate				
Conten	ts	<u> </u>				
	urse of nciples	fers an introduction to p of financial economics abus:		mathematics, severa	l methods of capital	budgeting
1. Princ 2. Fund 3. Prob 4. Prob 5. Prob	iples o lament lems o lems o lems o	f financial mathematics al concepts f investment and financ f investment and financ f investment and financ ket and corporate finan	e in one commodity w e in one commodity w e in many commoditie	orld under uncertain		
Intende	ed lear	ning outcomes				
		the central problems in	intertemporal allocat			
	eration	and calculate the optim of several other investr	al useful life given sta	atic and dynamic inv	estment approaches	under the
conside of taxes	eration s.	and calculate the optim	al useful life given sta nent opportunities and	atic and dynamic invo d the capital market	estment approaches scenario, especially t	under the
conside of taxes Course	eration s. s (type	and calculate the optim of several other investr	al useful life given sta nent opportunities and act hours, language –	atic and dynamic inv d the capital market - if other than Germa	estment approaches scenario, especially t n)	under the
conside of taxes Course V + Ü (r Methoo	eration s. s (type no infor d of ass	and calculate the optim of several other investr , number of weekly cont	al useful life given sta nent opportunities and act hours, language – contact hours) and co anguage – if other the	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, int	eration s. s (type no infor d of ass formati	and calculate the optim of several other investm , number of weekly cont mation on SWS (weekly sessment (type, scope, l	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, int written	eration s. s (type no infor d of ass formati examin	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly sessment (type, scope, l ion on whether module nation (approx. 60 minu	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
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conside of taxes Course V + Ü (r Methoo ster, ini written Allocat	eration s. s (type no infor d of ass formati examin ion of p	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly sessment (type, scope, l ion on whether module nation (approx. 60 minu	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, ini written Allocat	eration s. s (type no infor d of ass formati examin ion of p	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, int written Allocat Additio	eration s. s (type no infor d of ass formati examin ion of p onal inf	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, int written Allocat Additio	eration s. s (type no infor d of ass formati examin ion of p onal inf	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn	atic and dynamic inv d the capital market - if other than Germa ourse language avail an German, examina	estment approaches scenario, especially t nn) able)	under the he influence
conside of taxes Course V + Ü (r Methoo ster, inf written Allocat Additio Worklo 	eration s. s (type no infor d of ass formati examin ion of p onal inf	and calculate the optim of several other investr , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn tes)	atic and dynamic invo d the capital market - if other than Germa ourse language avail an German, examina a bonus)	estment approaches i scenario, especially t in) able) ition offered — if not o	under the he influence
conside of taxes Course V + Ü (r Methoo ster, inf written Allocat Additio Worklo 	eration s. s (type no infor d of ass formati examin ion of p onal inf	and calculate the optim of several other investm , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn tes)	atic and dynamic invo d the capital market - if other than Germa ourse language avail an German, examina a bonus)	estment approaches i scenario, especially t in) able) ition offered — if not o	under the he influence
conside of taxes Course V + Ü (r Methoo ster, in' written Allocat Additio Worklo Referre 	eration s. s (type no infor d of ass formati examin ion of p onal inf	and calculate the optim of several other investm , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places ormation	al useful life given stanent opportunities and act hours, language – contact hours) and co anguage – if other the can be chosen to earn tes)	atic and dynamic invo d the capital market - if other than Germa ourse language avail an German, examina a bonus)	estment approaches i scenario, especially t in) able) ition offered — if not o	under the he influence
conside of taxes Course V + Ü (r Methoo ster, int written Allocat Additio Worklo Referre Bachelo Bachelo Bachelo	eration s. s (type no infor d of ass formati examini ion of p onal inf ad ed to in e appea or' deg or' deg or' deg or' deg	and calculate the optim of several other investm , number of weekly cont mation on SWS (weekly con on whether module nation (approx. 60 minu places ormation	al useful life given stanent opportunities and fact hours, language – fact hours, language – fact hours) and co anguage – if other the can be chosen to earn ites) ulations for teaching- Science (2007) cs (2008) cs (2007) Management and Econ	atic and dynamic invo d the capital market - if other than Germa ourse language avail an German, examina a bonus) degree programmes)	estment approaches i scenario, especially t in) able) ition offered — if not o	under the he influence

Module	e title			Abbreviation				
Manag	Managerial Accounting 12-IntUR-G-072-m01							
Module	e coord	inator		Module offered by	<u> </u>			
holder	of the (Chair of Business Mana	gement and Accoun-		Management and E	conomics		
ting	·		-					
ECTS Method of grading Only after succ. compl. of module(s)								
	5 numerical grade							
	Duration Module level Other prerequisites 1 semester undergraduate							
Conten		undergraduate						
Conten								
		fers an introduction to	aims and methods of r	nanagerial accountir	ng (cost accounting)			
	e of syll							
	-	accounting and financi accounting: basic term	-					
		bes of costs						
		accounting based on t	otal costs					
	-	based on total costs accounting and job co	sting based on direct/v	variable costs				
		and cost-variance analy						
		e-profit analysis						
9. Cost	inform	ation and operating de	cisions					
Readin	g:							
		ischer/Günther: Koster						
		n/Pedell: Kostenrechn ditions)	ung. Eine entscheidun	gsorientierte Einführ	ung.			
		ning outcomes						
		ng the course "Manage	ment Accounting and	Control" the student	ts will be able to			
		responsibilities of the						
		central concepts of inte	ernal enterprise compu	iting restriction and o	control and assign c	ase studies		
the ter		basic methods of inter	aal corporato accounti	ag and control on a f	ull and cost base to	idoalizod ca-		
		nedium difficulty that o						
sion.	-	,						
Course	s (type	, number of weekly con	tact hours, language –	- if other than Germa	in)			
V + Ü (I	no infoi	mation on SWS (weekl	y contact hours) and co	ourse language avail	able)			
		essment (type, scope, on on whether module			tion offered — if not	t every seme-		
written	exami	nation (approx. 60 min	utes)					
Allocat	ion of p	olaces						
Additio	onal inf	ormation						
Worklo	ad							
Referre	ed to in	LPOI (examination reg	gulations for teaching-	degree programmes)				
Packal-	with a second	or Mothomatics (as)	INALL SATES	a concrete d law	V2m K07			
Dacrielor's	with 1 ma	or Mathematics (2007)		g • generated 11-Jan-2023 • e achelor (180 ECTS) Mathema	-	page 205 / 216		

Module appears in

Bachelor' degree (1 major) Chemistry (2007) Bachelor' degree (1 major) Computer Science (2007) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Business Management and Economics (2007) Bachelor' degree (1 major) Business Information Systems (2007)

Module title Abbre				Abbreviation	
	Macroeconomics 1 12-Mak1-G-072-mo1				
Module	e coord	inator		Module offered by	
holder	of the (Chair of International Mac			Management and Economics
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	L	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
current wages concep change balance sis). Outline 1. Macr - Issues - The m 2. Long - The cl - Mone - The cl - Mone - The cl - Unem 3. Shor - Fluctu - The IS - The IS - The IS - The IS - The IS - The IS	odule c and ca and pri ots whice e risk, p es in th e of syll roecond s roecond s ro	apital account, nominal acces) and in the short term thare of central importan urchasing power parity). e global economy; quest abus: pmic issues and characte croeconomics ment of economic activit elationships ong-term model of the clo nflation ong-term model of a smal	nd real exchange rate n (with fixed wages a ce in a globalised en The explanations wil ions related to the Eu ristics y sed economy Il open economy s introduction	e, prices and inflation nd prices). The cours vironment (e.g. inte l be applied to curre	loyment, production, interest, n - in the long run (with flexible se will familiarise students with rest rate arbitrage, foreign ex- nt issues (e. g. current account nion and the global financial cri-
N. Greg also rea Olivier by Oliv Michae	The latest editions of the following textbooks: N. Gregory Mankiw: Macroeconomics [students are recommended to read the original English edition; they may also read the German translation] Olivier Blanchard and David H. Johnson, Macroeconomics Prentice Hall; [a German-language edition of the book by Oliver Blanchard and Gerhard Illing is available from Pearson Studium]. Michael Burda and Charles Wyplosz: Macroeconomics. A European text. To illustrate the lecture, case studies in particular will be developed in which more current sources are used.				
Intende	ed lear	ning outcomes			
actions to inter	and pr pret on	roblems in the course of a	advancing globalizat	ion and to deal with	nalytically macroeconomic inter- these arguments. Students learn individual economic actors (busi-
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V + Ü (r	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)

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)

Allocation of places

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Additional information

Workload

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

Module appears in

Bachelor' degree (1 major) Mathematics (2008)

Bachelor' degree (1 major) Mathematics (2007)

Bachelor' degree (1 major) Business Management and Economics (2007)

Bachelor' degree (1 major) Business Information Systems (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 208 / 216
	data record Bachelor (180 ECTS) Mathematik - 2007	

Module	title				Abbreviation
Macroeconomics 2					12-Mak2-G-072-m01
Module coordinator				Module offered by	
holder o	f the C	hair of Public Finance		Faculty of Business	Management and Economics
		d of grading	Only after succ. com	pl. of module(s)	
5 1		ical grade			
Duration	1	Module level	Other prerequisites		
1 semest	ter	undergraduate			
Contents	S				
Contents 1. Phillip 2. Growt 3. Microo 4. Macro Lecture r Intendec After con th theory	ure pro s: us curv h theo econo becono notes t d learn npletin y, they	know the microeconomi	peconomics nomie 2" students an c foundations of mod	re familiar with the n dern macroeconomic	nomic theory and policy.
nal cons	equen	ices of policy reforms by	applying simple ecor	nomic models.	
		number of weekly conta			
		mation on SWS (weekly o			
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written e	examin	ation (approx. 60 minut	es)		
Allocatio	on of p	laces			
Addition	al info	ormation			
Workloa	Workload				
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	appea	rs in			
Bachelo Bachelo	r' degr r' degr	ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Business Ma ree (1 major) Business In	s (2007) anagement and Econ		

Bachelor's with 1 major Mathematics (2007)

Modul	e title				Abbreviation
Introdu	uction t	o Market-Oriented Ma	nagement		12-Mark-G-072-m01
Module coordinator Module offered by			/		
		Chair of Business Mana	agement and Marke-		s Management and Economics
ting					
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	5	
1 seme	ster	undergraduate			
Conten	Its				
Conten With th plained ling. Th al purc sed on Outline 1. Mark 2. Expl 3. Func 4. Strat 5. Corp Readin Foscht	module ne stake d and e ne cours hasing a conje e of syll keting, anatior dament tegic m borate s g: , T. / Sv	xemplified in the 5 classes will focus not only o behaviour. A case stud oint analysis will provid abus: entrepreneurship and b ns of consumer behavio als of market research arketing; marketing too social responsibility ver	starting point, the basi ssical steps: situation a n the behavioural appr dy introducing students de students with deepe pusiness management our ols rsus creating shared va	ic design of market- analysis, objectives roaches of consume s to the fundamenta er insights into the t	oriented management will be ex- , strategies, tools and control- er behaviour but also on industri- Il principles of market research ba
Hombu Untern Hombu Untern Kroebe Meffert zepte - Meffert 4th ed. Meyer, Wiesba Porter, New Yo Simon, baden	ehmen urg, Ch. ehmen er-Riel, ¹ t, H. / B - Instru t, H. / B - Stuttg M.: Ök aden 19 M. E.: ¹ ork 201. , H. / Fa 2009.	: Grundlagen des Mark sführung, 4th revised a : Grundlagen des Mark sführung, 3rd ed., Wies W. /Weinberg, P.: Kons Burman, Ch / Kirchgeorg mente Praxisbeispie Burman, Ch / Becker, Cl gart 2010. conomische Organisatio 95. Wettbewerbsvorteile 4. (Original: Porter, M.: assnacht, M.: Preisman	and exp. ed., Wiesbade etingmanagements: Ei sbaden, 2012a. umentenverhalten, 9th g, M.: Marketing Grun le, 11th revised and exp h.: Internationales Mar on der Industrie: Netzw Spitzenleistungen erre Competitive Advantag	en 2012. Inführung in Strateg n ed., Munich 2009. ndlagen marktorient p. ed., Wiesbaden 2 keting-Managemen verkarrangements zw eichen und behaupt ge, New York 1985.)	tierter Unternehmensführung: Kor
		ning outcomes			
matica	lly. In a				le to classify the knowledge syste the conventional problem fields o
busine					
		, number of weekly cor	ntact hours, language -	– if other than Germ	nan)

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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. 60 minutes)

Allocation of places

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Additional information

Workload

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

Module appears in

Bachelor' degree (1 major) Mathematics (2008)

Bachelor' degree (1 major) Mathematics (2007)

Bachelor' degree (1 major) Business Management and Economics (2007)

Bachelor' degree (1 major) Business Information Systems (2007)

Bachelor's with 1 major Mathematics (2007)	JMU Würzburg • generated 11-Jan-2023 • exam. reg.	page 211 / 216
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Module	e title				Abbreviation
Microe	Microeconomics 1				12-Mik1-G-072-m01
Module	e coord	inator		Module offered by	
holder of the Chair of Economics, Inform Economics		mation and Contract	Faculty of Business	Management and Economics	
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate					
Conten	Contents				

The lecture covers the following topics

Theory of the household:

- 1. Utility maximisation under constraints
- 2. Comparative statics
- 3. Income and substitution effects
- 4. Labour supply
- 5. Intertemporal consumption / savings decisions

Theory of the firm:

- 6. Production functions (technology)
- 7. Profit maximisation
- 8. Long run versus short run cost minimisation
- 9. Supply of goods

Intended learning outcomes

Students are systematically trained in microeconomic methods relevant in household and firm theory. Accordingly, they will know how to solve optimization problems under constraints. These scientific methods will serve as useful in many fields of specialization in economics and business administration. In particular, studends know analytically how to analyze the impact of changes in the economic environment, e.g., wages, interest rates, income on individual decision making.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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)

Allocation of places

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Additional information

Workload

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

Module appears in

Bachelor's with 1 major Mathematics (2007)

Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Business Management and Economics (2007) Bachelor' degree (1 major) Business Information Systems (2007)

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Module title			Abbreviation
			12-Mik2-G-072-m01
Module coordinator		Module offered by	
holder of the Chair of Industrial Econon			Management and Economics
ECTS Method of grading	Only after succ. com	pl. of module(s)	
5 numerical grade			
Duration Module level	Other prerequisites		
1 semester undergraduate	-		
Contents			
Outline of syllabus: 1. Cost minimisation 2. Profit maximisation and the supply for 3. Short-run market equilibrium 4. Long-run market equilibrium 5. Government interventions 6. Monopoly 7. Pricing strategies with market power 8. Introduction to game theory 9. Strategic interaction and oligopoly			
Intended learning outcomes			
The aim of the course is to understand ferent market structures; namely perfect the so-called oligopoly markets. Ultima of view is desirable. Using our models, terventions. The knowledge that studer to them. In almost all business and ecc nomic actors make their decisions. Stu This knowledge will also be useful in the	tly competitive mark tely, we are intereste we will also try to an ts gain in this course nomics lectures mar dents will thus learn	ets, monopoly mark ed in whether the ma alyze the consequer e will be in their futu kets play a role. It al the important buildi	ets and all forms in between, irket results from a social point nees of different government in- re course of studies of benefits so discussed in detail how eco- ing blocks of economic thought.
Courses (type, number of weekly conta	ct hours, language —	if other than Germa	n)
V + Ü (no information on SWS (weekly c	contact hours) and co	ourse language avail	able)
Method of assessment (type, scope, la ster, information on whether module ca			tion offered — if not every seme-
written examination (approx. 60 minute	es)		
Allocation of places			
Additional information			
Workload			
Referred to in LPO I (examination regu	lations for teaching-o	legree programmes)	
<u>_</u> <u>_</u>		0 1 0 /	
Module appears in			
Bachelor' degree (1 major) Mathematic Bachelor' degree (1 major) Mathematic Bachelor' degree (1 major) Business Ma Bachelor' degree (1 major) Business Inf	s (2007) anagement and Econ		

Bachelor's with 1 major Mathematics (2007)
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Module title				Abbreviation		
Introd	Introduction to Economic Policy				12-WiPo-G-072-m01	
Modul	e coord	inator		Module offered by		
holder of the Chair of Economic Order and Social Policy Faculty of Business Management and Ec			onomics			
ECTS		-	Only after succ. con	·	Management and EC	ononnes
		od of grading rical grade				
5						
Duration 1 seme		Module level	Other prerequisites	•		
		undergraduate				
Conter	nts					
Deceri						
Descri		nsists of six chapters. Tl	no first chanter illustra	ates what economist	s have in mind when	referring
		conomic policy" and dis				
		tives that are set out in				
		aw for Promoting Stabil				
croeco	nomic o	data to evaluate the deg	ree to which the parti	cular objective is ach	nieved, discusses the	reasons of
possib	le prob	lems and demonstrates	actions the governme	ent may take to cure	the problems.	
	с и					
	e of syll ductior					
		iomic Policy"?				
		f economic policy				
		of economic policy				
		of economic policy				
	employ					
		e status quo of the labor	ur market			
		unemployment				
		ur market problems				
		stability	ata h :11:4.2			
		lation, deflation or price inflation and deflation	stability:			
		e instability				
	•	cting relationship betwe	en full employment a	nd stable prices		
		cles and economic grov				
		rrent situation of the wo		-term ecnomoic grow	/th	
		cyclical fluctuations and		-		
		roeconomic instabilities	and means to facilita	ate economic growth		
		oreign trade	F 1.	1 147 11		
		lances of payments of G macroeconomic imbalar		ne World		
		abilities in foreign trade	ices			
		tribution				
		e distribution of incomes	and its historical dev	/elopment		
		an increase in income in		•		
- Cure	for ineq	uality and redistributior	1			
Intend	ed lear	ning outcomes				
The stu	udents s	gain a basic understand	ing of the role of the s	tate in national and	international econom	ies. Based
		of macroeconomic mode				
		etc.), students study th				
		s in which situations su				-
		terventions may be harn				
		conomic situations and t				
		uation of a country on the	ie basis of empirical n	nacroeconomic data	and to explain the pa	irticular pro-
		on different models.	IMIT Witzburg	g • generated 11-Jan-2023 • e	yam reg	page 215 / 216
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Courses (type, number of weekly contact hours, language — if other than German)

V + \ddot{U} (no information on SWS (weekly contact hours) and course language available)

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)

Allocation of places

Additional information

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Workload

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

Module appears in

Bachelor' degree (1 major) Mathematics (2008)

Bachelor' degree (1 major) Mathematics (2007)

Bachelor' degree (1 major) Business Management and Economics (2007)

Bachelor' degree (1 major) Business Information Systems (2007)

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