



Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Computational Mathematics as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

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

Abbreviations used:	Course types: E = field trip, K = colloquium, O = conversatorium, P = placement/lab course, R = project, S = seminar, T = tutorial, Ü = exercise, 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 for the modules in this SFB:	Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre- ditable for bonus.									
Information on assessment procedures:	Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the me- thod of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.									
	Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.									
	Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.									

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

ASPO2015

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

03-Aug-2015 (2015-75)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration	(in semesters)	Method of grading		Module level				
	Courses		To be spe	To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessme	ent								
	Only after su completion of		Il if applica	ble							
	Other prereq	uisites	if applica	if applicable							
	Participants and allocati- on of places		ocati- if applica	ble							
	Additional information		on if applica	if applicable							
	Referred to in LPO I		if applica	if applicable (examination regulations for teaching-degree programmes)							

Compulsory Cours	es (55 EC	TS cred	lits)									
10-M-ANC-Ü-152-	Overvie	ew Analy	ysis for C	omput	ational Mathemati	3						
m01	ECTS 13 Duration		า	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			V (4) ·	+ Ü (2)							
	Method of assessment			Asses	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-ANA1 and 10-M-ANA2. Language of assessment: German and/or English							
10-M-LNC-Ü-152-	Overvie	Overview Linear Algebra for Computational Mathematics										
n01	ECTS	13	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	s		V (4) ·	/ (4) + Ü (2)							
	Methoo	d of asso	essment	Asses	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-LNA1 and 10-M-LNA2. Language of assessment: German and/or English							
10-M-SEM-152-	Semina	ar Mathe	ematics									
n01	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			S (2)								
	Method of assessment					: German and/or English						
	Referred to in LPO I			§ 22	I Nr. 3 f)							
10-M-VAN-152-mo1	Advanced Analysis											
	ECTS	7	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (4) + Ü (2)								
	Method of assessment		essment	 a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus 								
10-M-NUM1-152-	Numeri	ical Mat	hematics	1								
n01	ECTS	9	Duratio	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	S		V (4) + Ü (2)								
	Method	d of asso	essment	a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus								

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10-M-MWR-152-	Modeling a	and Computa	tional S	Science						
m01	ECTS 8	Duratio	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			V (4) + Ü (2) Module taught in: German and/or English						
	Method of	assessment	b) ora c) ora	oprox. 90 to 180 minutes, usually chosen) or e candidate each (15 to 30 minutes) or ups (groups of 2, 10 to 15 minutes per candidate) German and/or English						
Compulsory Electives Computational Mathematics (49 ECTS credits)										
Subfield Basics of Analysis (8 ECTS credits)										
10-M-ANA1-152-	Analysis 1									
m01	ECTS 8	Duratio	n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Courses		V (4) -	+ Ü (2)						
	Method of	assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises						
			each)	age of assessment.	German and/or English					
10-M-ANA2-152-	Analysis 2		Lange							
m01	ECTS 8 Duratio		n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Courses	Į	V (4) -	+ Ü (2)						
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English							
Subfield Basics of I	inear Algeb.	ora (8 ECTS cr	edits)							
10-M-LNA1-152-	Linear Alge	ebra 1								
m01	ECTS 8	Duratio		1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Courses		V (4) -							
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English							
10-M-LNA2-152-	Linear Alge	ebra 2								
m01	ECTS 8	Duratio		1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Courses		V (4) -							
	Method of	assessment	each)		rox. 90 to 180 minutes) and written exercises (appro German and/or English	ox. 12 exercise s	heets with approx. 4 exercises			

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Subfield Overview	Numeric	al Math:	ematics a	and Mo	odelling (12 ECTS cre	edits)						
10-M-NUC-Ü-152-	Overvi	ew Num	erical Ma	thema	tics 1 and 2 for Com	putational Mathematics						
m01	ECTS 12 Duration		n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Course	:S		V (4)	+ Ü (2)							
	Metho	d of ass	essment	Asses	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-NUC-Ü and 10-M-NUM1. Language of assessment: German and/or English							
10-M-NMC-Ü-152-	Overvi	Overview Numerical Mathematics 2 and Modelling for Computational Mathematics										
m01	ECTS	12	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es.		V (4)	$(4) + \ddot{U}(2)$							
	Method of assessment			Asses	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-NMC-Ü and 10-M-MWR. Language of assessment: German and/or English							
Subfield Basics Sp	ecializa	tion of C	Computati	ional N	Aathematics (9 ECTS	credits)						
10-M-ST01-152-	Stochastics 1											
m01	ECTS	9	Duratio	n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	!S		V (4)	+ Ü (2)							
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus									
10-M-ST02-152-	Stocha	stics 2										
m01	ECTS	9	Duratio	n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	S		V (4)	+ Ü (2)	· · ·						
				a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus								

10-M-ORS-152-m01	Operat	Operations Research										
	ECTS	9	Duration	ı	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		V (4) +	- Ü (2)							
	Metho	d of ass	essment		written examination (approx. 90 to 180 minutes, usually chosen) or							
) oral examination of one candidate each (15 to 30 minutes) or) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)							
				c) ora	examination in gro	German and/or Engl	to 15 minutes per candidate)					
					anguage of assessment: German and/or English ssessment offered: In the semester in which the course is offered and in the subsequent semester							
					able for bonus							
	Referre	ed to in l	LPO I	§ 22	Nr. 3 f)							
10-M-ALG-152-m01	Introdu	uction to	o Algebra									
	ECTS 9 Duration				1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		V (4) +	- Ü (2)							
	Method of assessment a) written examination (approx. 90 to 180 minutes, usually chosen) or											
		b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)										
						German and/or Engl						
				credit	able for bonus		1311					
10-M-DGE-152-m01	Introdu	uction to	Differen	tial Ge	ometry							
	ECTS	9	Duratio	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		V (4) +	- Ü (2)							
	Metho	d of ass	essment				utes, usually chosen) or					
						e candidate each (15						
						German and/or Engl	to 15 minutes per candidate)					
							the course is offered and in the	e subsequent se	emester			
					able for bonus							
10-M-DGL-152-m01	Ordina	ry Diffe	rential Eq	uation	5							
	ECTS	9	Duration	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		V (4) +	- Ü (2)							
	Metho	d of ass	essment				utes, usually chosen) or					
						e candidate each (15						
							to 15 minutes per candidate)					
					able for bonus	German and/or Engl	1011					

10-M-FTH-152-m01	Introdu	uction to	Complex	k Analy	vsis						
	ECTS	9	Duratio	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate		
	Course	S	_	V (4) ·	+ Ü (2)						
	Method	d of ass	essment		a) written examination (approx. 90 to 180 minutes, usually chosen) or						
						ne candidate each (15					
				c) ora	l examination in gr	oups (groups of 2, 10 t: German and/or Eng	to 15 minutes per candidate)				
					able for bonus						
10-M-GAN-152-	Geome	ometric Analysis									
m01	ECTS	9	Duration	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate		
	Course	s	•	V (4) ·	+ Ü (2)	•	•				
	Method	d of ass	essment				utes, usually chosen) or				
						ne candidate each (15					
						oups (groups of 2, 10 t: German and/or Eng	to 15 minutes per candidate)	1			
					able for bonus		(15))				
	Referre	d to in L	POI	§ 22	I Nr. 3 f)						
10-M-DIM-152-m01	Introdu	uction to	Discrete	rete Mathematics							
	ECTS	9	Duratio	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate		
	Course	S		V (4) ·	+ Ü (2)						
	Method	d of ass	essment				utes, usually chosen) or				
						ne candidate each (15					
							to 15 minutes per candidate)	1			
					Language of assessment: German and/or English creditable for bonus						
10-M-FAN-152-m01	Introdu	uction to	Function	al Ana	lysis						
	ECTS	9	Duration	n	1 semester	Method of grading	(not) successfully complete	d Modul level	undergraduate		
	Course	S		V (4) ·	+ Ü (2)						
	Method	d of ass	essment				utes, usually chosen) or				
					b) oral examination of one candidate each (15 to 30 minutes) or						
					c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English						
					able for bonus	. German anu/or Elig	11511				
	Referre	d to in L	PO I		I Nr. 3 f)						

10-M-PAR-152-m01	Introdu	Introduction to Partial Differential Equations										
	ECTS	9	Duration	ı	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		V (4) +	+ Ü (2)			- 2				
	Method	d of asse					utes, usually chosen) or					
						ne candidate each (15						
		c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English										
							the course is offered and in the	e subsequent se	emester			
				credit	able for bonus							
10-M-PGE-152-m01	Introdu	ntroduction to Projective Geometry										
	ECTS	9	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		V (4) +	+ Ü (2)							
	Method	d of asse) written examination (approx. 90 to 180 minutes, usually chosen) or							
						ne candidate each (15						
					oral examination in groups (groups of 2, 10 to 15 minutes per candidate) nguage of assessment: German and/or English							
							the course is offered and in the	e subsequent se	emester			
				credit	able for bonus			-				
10-M-ZTH-152-m01		ntroduction to Number Theory										
	ECTS	9	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course			V (4) +								
	Method	d of asse					utes, usually chosen) or					
						ne candidate each (15	to 30 minutes) or to 15 minutes per candidate)					
						t: German and/or Engl						
					able for bonus	, 0						
Subfield Overview	Speciali	zation C	omputati	onal N	Aathematics (12 EC	TS credits)						
10-M-ALGD-Ü-152-	Overvia	ew Alget	ora and O	rdinar	y Differential Equat	tions						
m01	ECTS	12	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) -	+ Ü (2)			-				
	Method	d of asse	essment	oral examination of one candidate each (20 to 40 minutes)								
									examiner. Each topic may only be			
						of one examination in t t: German and/or Engl	the sub-fields Gesamtüberblic	k (Overview).				
,				Langu	lage of assessment	a German anu/or Engi	1511					

10-M-DGGD-Ü-152-	Overvie	ew Diffe	rential Ge	eometr	y and Ordinary Diffe	erential Equations					
m01	ECTS	12	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4) ·	V (4) + Ü (2)						
	Method	d of asso	essment		oral examination of one candidate each (20 to 40 minutes)						
					Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
					Language of assessment: German and/or English						
10-M-ALFT-Ü-152-	Overvie	w Alge	hra and C		plex Analysis						
m01	ECTS	12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course		Duration				numencal grade	Modulievel	undergraduate		
			essment		/ (4) + Ü (2) oral examination of one candidate each (20 to 40 minutes)						
	Method	1 01 035	235mem					d upon with the	examiner. Each topic may only be		
				selec	ted as the subject of	fone examination in	the sub-fields Gesamtüberblic				
					anguage of assessment: German and/or English						
10-M-FTDG-Ü-152-				-	nd Differential Geom		1				
m01	ECTS 12 Duratio			1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			-	+ Ü (2)						
	Method of assessment					andidate each (20 to					
					Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
					Language of assessment: German and/or English						
10-M-FTGD-Ü-152-	Overview Complex Analysis and Ordinary Differential Equations										
m01	ECTS	12	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4) + Ü (2)							
	Method	d of ass	essment	oral e	oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be							
					selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
10-M-GADG-Ü-152-	Overvie	Coor	notric An		Language of assessment: German and/or English Iysis and Differential Geometry						
mo1		12	Duratio	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
			Duration					Modul level	undergraduate		
	Course				V (4) + Ü (2) oral examination of one candidate each (20 to 40 minutes)						
	Method	i or asso	essment					d upon with the	examiner. Each topic may only be		
							the sub-fields Gesamtüberblig		examinen Laen topie may only be		
						German and/or Eng					

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10-M-GAGD-Ü-152-	Ü-152- Overview Geometric Analysis and Ordinary Differential Equations									
m01	ECTS 12 Duration		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4) ·	+ Ü (2)	•	•			
	Method of assessment			oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
					led as the subject of lage of assessment:			ck (Overview).		
10-M-GAFT-Ü-152-	Overvia	w Geor	netric An	-	and Complex Analys	-				
m01		12	Duratio	-	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course	1	Duratio		+ Ü (2)	Method of glading	numencai giade	Modulievei	undergraduate	
			essment			andidate each (ac te	(o minutos)		_	
	Method	1 01 855	essment	Asses	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be					
				select	elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).					
		Language of assessment: German and/or English								
10-M-ALPG-Ü-152-		<u> </u>	1		ojective Geometry					
m01	ECTS 12 Duratio				1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses			V (4) ·	+ Ü (2)					
	Method of assessment				xamination of one ca					
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
					lage of assessment:			ck (Overview).		
10-M-ALDI-Ü-152-	Overview Algebra and Discrete Mathematics									
m01		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course	S	<u>,</u>	V (4) + Ü (2)						
	Method	d of ass	essment	oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be						
							the sub-fields Gesamtüberbli	ck (Overview).		
	Overrie		oto Math		age of assessment:		lisn			
10-M-DIPG-Ü-152- m01			Duratio		cs and Projective Ge		numerical aredo	Modul level	undergreduete	
		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses Method of assessment				+ Ü (2)					
	Method	a or asso	essment		xamination of one ca			d upon with the	examiner. Fach tonic may only be	
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
				Language of assessment: German and/or English						

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10-M-FADG-Ü-152-	ADG-Ü-152- Overview Functional Analysis and Differential Geometry										
m01	ECTS 12 Duration		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) ·	+ Ü (2)		•				
	Method	d of ass	essment	oral examination of one candidate each (20 to 40 minutes)							
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be							
					selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-FAGD-Ü-152-	Overvie	w Func	tional An		and Ordinary Differe						
mo1	ECTS	12	Duratio	<u> </u>	1 semester	Method of grading	numorical grado	Modul level	undergraduate		
	Course		Duratio		+ Ü (2)		numencal glade	Modul level	undergraduate		
						andidata angle (an ta	(o minutos)		_		
	Method of assessment					andidate each (20 to prence to two topics i		reed upon with the e	examiner. Fach tonic may only be		
					Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
	Language of assessment: German and/or English										
10-M-FAFT-Ü-152-	Overview Functional Analysis and Complex Analysis										
m01	ECTS 12 Duratio		Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (4) ·	+ Ü (2)						
	Method of assessment			oral e	xamination of one c	andidate each (20 to	40 minutes)				
			Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).								
						German and/or Eng		DIICK (Overview).			
10-M-FAGA-Ü-152-	Overview Functional Analysis and Geometric Analysis										
mo1	ECTS	12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course		1	V (4) + Ü (2)							
			essment	oral examination of one candidate each (20 to 40 minutes)							
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be							
							the sub-fields Gesamtüber	blick (Overview).			
					Language of assessment: German and/or English						
10-M-ALZT-Ü-152- m01		-	bra and N		, <u>,</u>						
11101		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses				+ Ü (2)						
	Method	d of ass	essment			andidate each (20 to		rand upon with the	avaminar Each tanic may ank ha		
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).							
				Language of assessment: German and/or English							

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10-M-DGZT-Ü-152-	152- Overview Differential Geometry and Number Theory									
m01	ECTS 12 Duration		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4) ·	+ Ü (2)					
	Method	d of ass	essment	oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
								olick (Overview).		
10-M-GDZT-Ü-152-	Overvie		nany Diffe		anguage of assessment: German and/or English ntial Equations and Number Theory					
mo1		12	Duratio		1 semester	Method of grading	numorical grado	Modul level	undergraduate	
	Course		Duratio		+ Ü (2)		numencai giaue	Modul level	undergraduate	
						andidata angle (an ta	(a minutas)		_	
	Method of assessment					andidate each (20 to erence to two topics i		ed upon with the	examiner. Fach tonic may only be	
					Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).					
				Langu	lage of assessment:	German and/or Eng	ish			
10-M-FTZT-Ü-152-	Overview Complex Analysis and Number Theory									
m01	ECTS 12 Duratio		Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses			V (4) ·	+ Ü (2)					
	Method of assessment			oral e	xamination of one c	andidate each (20 to	40 minutes)			
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
						German and/or Eng		DIICK (Overview).		
10-M-GAZT-Ü-152-	Overview Geometric Analysis and Number Theory									
m01		12	Duratio	-	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course			V (4) + Ü (2)						
	Method	d of ass	essment	oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be						
							the sub-fields Gesamtüberk	olick (Overview).		
	0			-	Language of assessment: German and/or English					
10-M-PGZT-Ü-152- mo1				-	and Number Theory				Lundenning durche	
1101		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses				+ Ü (2)				_	
	Method	d of ass	essment			andidate each (20 to		ad upon with the	avaminar Each tanic may anly ba	
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
				Language of assessment: German and/or English						

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10-M-DIZT-Ü-152-	Overview Discrete Mathematics and Number Theory										
m01	ECTS	12	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4) ·	+ Ü (2)		-				
	Methoo	l of ass	essment	oral e	oral examination of one candidate each (20 to 40 minutes)						
				Asses	sment will have refe	rence to two topics i	n pure mathematics as agreed	upon with the	examiner. Each topic may only be		
					ted as the subject of lage of assessment:		the sub-fields Gesamtüberblich	k (Overview).			
10-M-FAZT-Ü-152-	Overvie	w Func	tional An		and Number Theory		1311				
mo1	ECTS	12	Duratio		1 semester	Method of grading	numorical grado	Modul level	undergraduate		
	Course		Duratio		+ Ü (2)	Method of glading	numencai glade	Modulievei	undergraduate		
		-	occmont		xamination of one ca	ndidata aach (aa ta	(a minutas)		_		
	Method of assessment							upon with the	examiner. Fach topic may only be		
					ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
		Language of assessment: German and/or English									
10-M-DGPA-Ü-152-	Overview Differential Geometry and Partial Differential Equations										
m01	ECTS 12 Duratio				1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	5		V (4) ·	+ Ü (2)						
	Method of assessment				xamination of one ca						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).							
					lage of assessment:			k (Overview).			
10-M-GDPA-Ü-152-	Overview Ordinary Differential Equations and Partial Differential Equations										
mo1	ECTS	12	Duratio		1 semester	Method of grading		Modul level	undergraduate		
	Course	S	1	V (4) + Ü (2)							
	Method	lofass	essment	oral examination of one candidate each (20 to 40 minutes)							
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be							
							the sub-fields Gesamtüberblich	k (Overview).			
	Overvie	Com	nlav Anal		age of assessment:		lish				
10-M-FTPA-Ü-152- m01					nd Partial Differentia						
	ECTS	12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course				+ Ü (2)						
	Method of assessment				xamination of one ca			upon with the	examiner. Fach tonic may only be		
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).							
				Language of assessment: German and/or English							

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10-M-GAPA-Ü-152-	Overview Geometric Analysis and Partial Differential Equations									
m01	ECTS	12	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course	s		V (4) ·	+ Ü (2)			•		
	Method of assessment			oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
								ck (Overview).		
10-M-FAPA-Ü-152-	Language of assessment: German and/or English Overview Functional Analysis and Partial Differential Equations									
mo1	ECTS	12	Duratio	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course		Duratio		+ Ü (2)		numencal glade	Modulievei	undergraduate	
						andidata angh (an ta	(a minutac)			
	Method of assessment					andidate each (20 to erence to two topics		d upon with the e	examiner Each tonic may only be	
					ssessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be elected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).					
	Language of assessment: German and/or English									
10-M-PAZT-Ü-152-	Overview Partial Differential Equations and Number Theory									
m01	ECTS 12 Duratio		Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses		V (4) ·	+ Ü (2)						
	Method of assessment					andidate each (20 to				
				Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
						German and/or Eng		ck (Overview).		
10-M-STO-Ü-152-	Overview Stochastics 1 and Stochastics 2									
m01		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Course			V (4) + Ü (2)						
	Method	d of ass	essment	oral examination of one candidate each (20 to 40 minutes)						
				Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only						
					be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).					
	Language of assessment: German and/or English Overview Operations Research and Functional Analysis									
10-M-ORFA-Ü-152- m01		<u> </u>			1					
		12	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses				+ Ü (2)				_	
	Method	d of ass	essment			andidate each (20 to		tics as agreed up	on with the examiner Each tenis	
				Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview).						
				Language of assessment: German and/or English						

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10-M-ORPA-Ü-152-	Overview Ope	rations Re	esearch	and Partial Differe	ntial Equations					
m01	ECTS 12	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (4) -	- + Ü (2)		•	•			
	Method of ass	essment	Asses may o	sment will have refe only be selected as t		in pure and applied mat amination in the sub-fiel		on with the examiner. Each topic Overview).		
Students must such area of mandatory	Compulsory Electives Application-oriented Subject (45 ECTS credits) Students must successfully complete modules worth 45 ECTS credits in a single one of the focuses listed below. In addition, students must successfully complete, in the area of mandatory electives application-oriented subject, modules with numerical grading worth no less than 23 ECTS credits, cf. Section 3 Subsection 2 Sentences 2 through 4 FSB (subject-specific provisions).									
Focus Biology (45 B	CTS credits)									
Modules General B	iology I									
07-1A1Z-	The Plant King	gdom								
PF-152-m01	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses) + Ü (2.5)						
	Method of ass	essment		written examination (approx. 60 minutes) creditable for bonus Admission prerequisite to assessment: exercises. Regular attendance of exercises (minimum 80%) and successful completi-						
	other prerequi	sites				ses. Regular attendance o hours) are prerequisit				
07-1A1TI-152-m01	Evolution and	the Anima	al King	dom						
	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (2) -							
	Method of ass	essment	written examination (approx. 60 minutes) creditable for bonus							
	other prerequi	sites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exerci- ses (approx. 25 to 30 hours) are prerequisites for admission to assessment.							
	Referred to in	LPO I	<pre>§ 41 Nr. 1 (4 ECTS credits) and § 41 Nr. 4 (1 ECTS credits) § 61 Nr. 1 (4 ECTS credits) and § 61 Nr. 4 (1 ECTS credits)</pre>							
Modules General B	iology II									
07-2A2PHYPF-152-	Plant Physiolo	gy								
m01	ECTS 4	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (1) +	- Ü (2)						
	Method of ass	essment		n examination (appı able for bonus	rox. 60 minutes)					
	other prerequi	sites				ses. Regular attendance for admission to assess		successful completion of exerci-		
	Referred to in	LPO I	§ 61 l	Nr. 2						
Bachelor's with 1 major (Computational Mathem	natice (2015)				IMI Würzburg • generated	02-Aug-2025 ● exam reg data	record 82/52/		

07-2A2PHY-	Animal Physiology									
TI-152-m01	ECTS 4	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (1) +							
	Method of ass	essment	written examination (approx. 60 minutes) creditable for bonus							
	other prerequi	sites	Admis ses (a	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exerci- ses (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in I	LPO I	§ 41 Nr. 2 § 61 Nr. 2							
07-2A2GEN-	Genetics, Neurobiology, Behaviour									
V-152-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	_	V (3)	_						
	Method of ass	essment		written examination (approx. 60 to 90 minutes) creditable for bonus						
	other prerequi	sites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exerci- ses (approx. 25 to 30 hours) are prerequisites for admission to assessment.							
	Referred to in LPO I		§ 61 Nr. 2 (2 ECTS credits) § 61 Nr. 3 (1 ECTS credits) § 61 Nr. 4 (1 ECTS credits)							
Modules General B	iology III									
07-3A3EBIO-	Developmental Biology of Animals									
TI-152-m01	ECTS 4	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (1) + Ü (3)							
	Method of ass	essment	written examination (approx. 60 minutes) creditable for bonus							
	other prerequi	sites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exerci- ses (approx. 25 to 30 hours) are prerequisites for admission to assessment.							
	Referred to in I	LPO I	§ 61 l	Nr. 5						
07-3A3E-	Developmenta	l Biology	of Plar	nts						
BIOPF-152-m01	ECTS 4	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (1) +	V (1) + Ü (3)						
	Method of ass	essment		written examination (approx. 60 minutes) creditable for bonus						
	other prerequi	sites				ses. Regular attendance (minir for admission to assessment.	num 80%) and s	successful completion of exerci-		
	Referred to in I	LPO I	§ 61 l	Nr. 5						

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07-3A30E-	Plant a	nd Anin	nal Ecolog	sy							
KO-152-m01	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2) + Ü (2)							
	Method	d of ass	essment		written examination (approx. 90 minutes)						
			_		able for bonus						
		d to in L		§ 61							
07-3A3GEM-	Genes,	Molecu	les, Tech	nologi	es						
T-152-m01	ECTS	ECTS 6 Duration			1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (4)							
	Method	Method of assessment			written examination (approx. 90 minutes) creditable for bonus						
07-3A3BC-152-m01	Basic B	Biochem	istry								
	ECTS	4	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (1) +	· Ü (2)						
	Method	d of ass	essment	written examination (approx. 60 minutes) creditable for bonus							
	other p	rerequi	sites				ses. Regular attendance of exer o hours) are prerequisites for a		80%) and successful completi- essment.		
Modules Mathema	tics/Qua	antitativ	e Biology	/							
07-M-BST-152-m01	Mathe	matical	Biology a	nd Bio	statistics						
	ECTS	4	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2) +	+ Ü (2)						
	Method	d of asso	essment		n examination (appr able for bonus	rox. 60 minutes)					

Modules General B	Biology IV											
07-4A4FLO-152-	The Flora of Germany											
m01	ECTS 7	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses	V	/ (1) + Ü (2) + E (2.5)									
	Method of asse	A		ritten examination (approx. 45 minutes) and practical identification assignment (approx. 45 minutes), weighted 1:1 ssessment offered: Once a year, summer semester reditable for bonus								
	other prerequis	n s	ess Management and Ed	conomics) Bachelor's	(BSc with 180 ECTS credits), W	/irtschaftsinform	Wirtschaftswissenschaft (Busi- natik (Business Information Sy- Economics) Bachelor's (BSc with					
	Participants an cation of places	s p te	preferential consideration	n. The remaining plac	es will be allocated by lot. A wa	aiting list will be	est two semesters will be given e maintained and places re-alloca- mber of places will be allocated in					

07-4A4FAU-152-	The Fau	The Fauna of Germany ECTS 7 Duration 1 semester Method of grading numerical grade Modul level undergraduate														
m01	ECTS	7	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate							
	Courses	s		V (1)	+ Ü (2) + E (2.5)											
	Method	l of asse	essment	Asses	written examination (approx. 45 minutes) and practical identification assignment (approx. 45 minutes), weighted 1:1 Assessment offered: Once a year, summer semester creditable for bonus											
	other p	rerequis	sites	atten	idance of exercise				nd completion of exercises. Regular cises (approx. 25 to 30 hours) is a							
		pants an of place	S	Shou Stude Shou chelo locate degre cation availa quota form conce least A wai Selec ment rage cludii lows: dits (appli ding t king o Selec numb the si sters lot. Q Shou	ents of the Bachel ald the module be or's degree subject ed to students of ee subjects Compo- n-oriented subject able in one quota a. Should there be regulation for the erned will be alloc one other module iting list will be module iting list will be module iting list will be module s. For this purpos grade of all asses ng Chemie (Chem First, applicants qualitative rankin cants' position in to this third rankin or otherwise by lo ction process grou ber of ECTS credits ame number of EC of the respective Quota 3 (25 % of p ald the module be	used in other subjects, t Biologie (Biology) with the Bachelor's degree s utational Mathematics a t Biology (as well as pot exceed the number of a e, within one module co courses of one module cated in the same proce e component of the resp aintained and places re up 1 (95%): Places will p re, applicants will be ran sments taken during the histry), Physik (Physics), will be ranked, firstly, accord a third ranking will be cond ng. Among applicants w t. up 2 (5%): Places will be s already achieved in mod CTS credits achieved, pla applicant; among appli- laces): lottery.	logie (Biology) with 18 there will be two quo a 180 ECTS credits and ubject Biologie (Biolo and Mathematik (Mat tentially to students of applications, the rema mponent, several cou- component. In this ca dure. In this procedur bective module will be -allocated as they be rimarily be allocated according to the eir studies or of all mo- calculated as the sum vith the same ranking, allocated according to the same ranking, allocated according to compaces will be allocated cants with the same ranking, allocated according to compaces will be allocated cants with the same ranking, allocated according to cants with the same ranking to cants with the same ranking to the same ranking to cants with	so ECTS credits will be stas: 95% of places will d 5% of places (a minin ogy) with 60 ECTS credit thematics), each with 18 of other 'importing' subj aining places will be all urses with a restricted n ase, places on all cours re, applicants who alreat e given preferential con come available. according to the applic number of ECTS credits odule components in th natics)) at the time of a age grade weighted acco nber of ECTS credits act of these two rankings, places will be allocate to the following quotas ponents of the Faculty o d by lot. Quota 2 (25 % of number of subject seme	given preferential consideration. be allocated to students of the Ba- num of one place in total) will be al- ts and to students of the Bachelor's Bo ECTS credits, as part of the appli- ects). Should the number of places ocated to applicants from the other umber of places, there will be a uni- tes of a module component that are ady have successfully completed at							

07-4S1N-	Neurobiology	y 1								
V01-152-m01	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses		Ü (4)	+ S (1)						
	Method of as	sessment	b) log c) ora d) ora e) pre f) pra maxin Stude	 a) written examination (approx. 45 to 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 of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. 						
	Participants a cation of plac		Stude Shou chelo locate degre cation availa quota form conce least A wai Selec ment rage cludii lows: dits (appli ding t king o Selec numb the sa sters lot. Q Shou	Id the number of a ents of the Bachele Id the module be ir's degree subject ed to students of t es subjects Compu- n-oriented subject able in one quota a. Should there be regulation for the erned will be alloc one other module ting list will be ma tion process grou s. For this purpose grade of all assess ng Chemie (Chemi First, applicants v qualitative ranking cants' position in to this third rankir for otherwise by lot tion process grou ber of ECTS credits ame number of EC of the respective a uota 3 (25 % of pl ld the module be	p 2 (5%): Places will be allocated according to the already achieved in modules/module componer TS credits achieved, places will be allocated by lo applicant; among applicants with the same numb	CTS credits will be giv 95% of places will be of places (a minimu with 60 ECTS credits atics), each with 180 per 'importing' subject g places will be alloct with a restricted nur places on all courses oplicants who alread en preferential consider available. rding to the applicant ber of ECTS credits the components in the s)) at the time of app grade weighted acco of ECTS credits achi- nese two rankings, and ces will be allocated e following quotas: Conts of the Faculty of E ot. Quota 2 (25% of per of subject semes	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places tated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration. Ats' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- plication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by			

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07-4S1N-	Integrative Behavioral Biology 1													
VO2-152-m01	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Course	es		V (2)	+ S (2)									
	Metho	d of ass	sessment	b) log c) ora	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or									
				e) pre f) pra maxir Stude	 d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. 									
					table for bonus									
		pants a of place	ind allo- es	Stude Shou chelo locate degre cation availa quota form conce least A wai Selec ments rage g cludin lows: dits (applie ding t king o Selec numb the sa sters lot. Q Shou	Id the number of a ents of the Bachelo ild the module be to or's degree subject ed to students of t ee subjects Compu n-oriented subject able in one quota of a. Should there be regulation for the erned will be alloca- one other module iting list will be ma ction process group s. For this purpose grade of all assess ng Chemie (Chemi to this third ranking cants' position in a to this third ranking or otherwise by lot ction process group ber of ECTS credits ame number of EC of the respective a Quota 3 (25 % of pla- tild the module be to and the module be to an to the module be to an to the module be to an the module be to an to the module be to an the module be to an to the module be to an the module be to an the module be to an the module be to an the module be to an the mo	p 2 (5%): Places will be allocated according to t a already achieved in modules/module compone CTS credits achieved, places will be allocated by applicant; among applicants with the same nun	ECTS credits will be gives: 95% of places (a minimu % of places (a minimu) with 60 ECTS credits matics), each with 180 other 'importing' subject ing places will be alloct es with a restricted nur e, places on all courses applicants who alread iven preferential considered iven preferential considered in the time of apple e grade weighted accord er of ECTS credits achies these two rankings, are laces will be allocated the following quotas: Constant of the Faculty of E y lot. Quota 2 (25% of motion of subject semesting)	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration. Ats' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- olication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by						

07-4S1N-	Functio	nal Mor	phology	of Arth	ropods						
V03-152-m01	ECTS	5	Duration	1	1 semester	Method of grading nu	umerical grade	Modul level	undergraduate		
	Courses	S		V (1) +	+ Ü (5)						
	Method	d of asse	essment	term paper (approx. 5 to 10 pages) creditable for bonus							
	Darticin	ante an	dallo								
	Particip cation o			20 pla Shoul Stude Shoul chelo locate degre catior availa quota form n conce least A wai Selecc ments rage g cludir lows: dits (c applic ding t king c Selecc numb	aces. Id the number of a ents of the Bachelo Id the module be u r's degree subject ed to students of the esubjects Compu- n-oriented subject able in one quota of the subject Compu- n-oriented subject able in one quota of the subject Scompu- n-oriented subject able in one quota of the subjects Compu- n-oriented subject able in one quota of the subject Scompu- n-oriented subject able in one quota of the subject Scompu- regulation for the of the subject Scompu- section process group to this third ranking to the subject Scompu- tion process group per of ECTS credits	or's degree subject Biolog used in other subjects, the Biologie (Biology) with 18 he Bachelor's degree sub tational Mathematics and Biology (as well as poten exceed the number of app within one module comp courses of one module co ated in the same procedu component of the respec intained and places re-all o 1 (95%): Places will prim , applicants will be ranke ments taken during their stry), Physik (Physics), Ma vill be ranked, firstly, accordin a third ranking will be cald g. Among applicants with o 2 (5%): Places will be all already achieved in module a third achieved in the third achieves a	ere will be two quotas: 95% 80 ECTS credits and 5% of pl oject Biologie (Biology) with d Mathematik (Mathematics ntially to students of other 'ir plications, the remaining pla ponent, several courses with omponent. In this case, place are. In this procedure, applica- ctive module will be given pr llocated as they become ava narily be allocated according ed according to the number of studies or of all module con athematik (Mathematics)) at ording to their average grade ing to their total number of EC culated as the sum of these in the same ranking, places w llocated according to the foll ules/module components of	redits will be giv of places will be laces (a minimu 60 ECTS credits), each with 180 mporting' subject aces will be alloct a restricted nur es on all courses ants who alread referential consid- ilable. g to the applican of ECTS credits th nponents in the t the time of app e weighted accou CTS credits achie two rankings, an vill be allocated lowing quotas: C	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- ets). Should the number of places that do applicants from the other nber of places, there will be a uni- s of a module component that are y have successfully completed at deration. ts' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- lication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with		
				numb the sa sters lot. Q Shoul	per of ECTS credits ame number of EC of the respective a uota 3 (25 % of pla ld the module be u	already achieved in modu TS credits achieved, place applicant; among applican aces): lottery.	ules/module components of es will be allocated by lot. Q nts with the same number o 's degree subject Biologie (E	f the Faculty of E uota 2 (25 % of f subject semes			

07-4S1N-	Biolog	y and E	cology of A	Arthro	pods						
V05-152-m01	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	es		Ü (4)	 Ü (4) + S (1) a) written examination (approx. 45 to 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 of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. 						
	Metho	d of ass	essment	b) log c) ora d) ora e) pre f) pra maxir Stude							
		pants a of place	nd allo- es	Stude Shou chelo locate degre cation availa quota form conce least A wai Selec ments rage g cludin lows: dits (applie ding t king o Selec numb the sa sters lot. Q Shou	Id the number of a ents of the Bachelo Id the module be u or's degree subject ed to students of the es subjects Compu n-oriented subject able in one quota e a. Should there be, regulation for the o erned will be allocat one other module iting list will be ma ction process group s. For this purpose grade of all assess ng Chemie (Chemis s. For this purpose grade of all assess ng Chemie (Chemis cants' position in a to this third rankin or otherwise by lot ction process group per of ECTS credits ame number of EC of the respective a Quota 3 (25 % of pla Id the module be u	p 2 (5%): Places will be allocated according to t already achieved in modules/module compon TS credits achieved, places will be allocated by applicant; among applicants with the same nur	ECTS credits will be giv s: 95% of places will be 5% of places (a minimu y) with 60 ECTS credits a ematics), each with 180 other 'importing' subject ing places will be alloc ses with a restricted nur e, places on all courses , applicants who alread given preferential consider me available. (cording to the applican umber of ECTS credits the lule components in the tics)) at the time of app ge grade weighted accord ber of ECTS credits achies f these two rankings, ar places will be allocated the following quotas: Contents of the Faculty of B by lot. Quota 2 (25 % of post mber of subject semest	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration. tts' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- plication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by			

07-4S1M-	Basics	in Light	t- and Eleo	ctron-M	Nicroscopy							
Z1-152-m01	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (1) +	V (1) + Ü (5)							
	Metho	d of ass	essment		n examination (app able for bonus	rox. 30 to 60 minutes	5)					
		pants ar		Stude Shoul chelo locate degre catior availa quota form i conce least A wai Selec ments rage g cludir lows: dits (d applid ding t king c Selec numb the sa sters lot. Q Shoul	Id the number of ap ents of the Bachelor Id the module be us r's degree subject B ed to students of the es subjects Computa h-oriented subject B able in one quota ex h. Should there be, v regulation for the co erned will be allocat one other module co ting list will be main tion process group a s. For this purpose, a grade of all assessm ng Chemie (Chemist First, applicants will qualitative ranking) cants' position in a t to this third ranking. or otherwise by lot. tion process group a to the respective ap uota 3 (25 % of place Id the module be us	s degree subject Biol ed in other subjects, biologie (Biology) with e Bachelor's degree s ational Mathematics a biology (as well as pot ceed the number of a within one module co burses of one module ed in the same proce omponent of the resp nationed and places re 1 (95%): Places will p applicants will be ran hents taken during the ry), Physik (Physics), Il be ranked, firstly, a and, secondly, accord third ranking will be co third ranking will be co cordits achieved in mo o credits achieved in mo o credits achieved, pla plicant; among applicants iso): lottery.	there will be two quotas: 95% 180 ECTS credits and 5% of p ubject Biologie (Biology) with and Mathematik (Mathematics centially to students of other 'i upplications, the remaining pla mponent, several courses with component. In this case, plac dure. In this procedure, applic pective module will be given pu- allocated as they become ava- rimarily be allocated according ked according to the number eir studies or of all module cor Mathematik (Mathematics)) a ccording to their average grade ding to their total number of E alculated as the sum of these ith the same ranking, places v allocated according to the fol podules/module components o aces will be allocated by lot. Q cants with the same number of	credits will be given of places will be dealers (a minimu 60 ECTS credits so), each with 180 mporting' subject aces will be alloct a restricted numes on all courses ants who alread referential considered for the applicant of ECTS credits to the applicant of ECTS credits achied two rankings, and will be allocated lowing quotas: C of the Faculty of E Quota 2 (25 % of f subject semes	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at			

07-4S1M-	Analysis of Chromosomes												
Z2-152-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course				$V(1) + \ddot{U}(5)$								
	Methoo	d of asse	essment		en examination (ap table for bonus	pprox. 30 to 60 minutes	5)						
		pants an of place		Stude Shou chelo locate degre cation availa quota form conce least A wai Selec ment: rage g cludin lows: dits (applie ding t king o Selec numb the sa sters lot. Q Shou	Id the number of a ents of the Bachelo Id the module be u or's degree subject ed to students of the es subjects Compu n-oriented subject able in one quota e a. Should there be, regulation for the o erned will be allocat one other module ting list will be ma stion process group s. For this purpose grade of all assess ng Chemie (Chemis First, applicants w qualitative ranking cants' position in a to this third rankin or otherwise by lot. tion process group ber of ECTS credits ame number of ECT of the respective a quota 3 (25 % of pla Id the module be u	br's degree subject Biol used in other subjects, Biologie (Biology) with he Bachelor's degree su itational Mathematics a Biology (as well as pot exceed the number of a , within one module cor courses of one module ated in the same proced component of the resp intained and places re- p 1 (95%): Places will pr e, applicants will be ran sments taken during the stry), Physik (Physics), vill be ranked, firstly, ac g) and, secondly, accord a third ranking will be c ag. Among applicants will be already achieved in mo TS credits achieved, pla applicant; among applicaces): lottery.	there will be two quotas: 95 a 180 ECTS credits and 5% of ubject Biologie (Biology) with and Mathematik (Mathematic tentially to students of other applications, the remaining mponent, several courses with component. In this case, pl dure. In this procedure, appri- bective module will be given -allocated as they become a rimarily be allocated accord ked according to the number eir studies or of all module of Mathematik (Mathematics) ccording to their average gra- ding to their total number of calculated as the sum of the odules/module components aces will be allocated by lot cants with the same number lor's degree subject Biologie	S credits will be given of places will be given of places (a minimu th 60 ECTS credits cics), each with 1800 r 'importing' subject places will be alloce with a restricted num laces on all courses oblicants who alread preferential considered available. ling to the applicar er of ECTS credits t components in the add weighted accoon f ECTS credits achieves the time of app add weighted accoon f ECTS credits achieves so will be allocated following quotas: C s of the Faculty of E c. Quota 2 (25 % of er of subject semes	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at				

07-4S1AM-	Methods in Biotechnology												
B-152-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2) + S (2)									
	Method	d of ass	essment		n examination (app able for bonus	prox. 30 to 60 minutes	5)						
		pants ar		Stude Shoul chelo locate degre catior availa quota form r conce least A wait Select ments rage g cludir lows: dits (d applid ding t king c Select numb the sa sters lot. Qi	Id the number of ap ents of the Bachelor Id the module be us r's degree subject B ed to students of the es subjects Computa h-oriented subject B able in one quota ex a. Should there be, v regulation for the co erned will be allocat one other module ca ting list will be main tion process group a s. For this purpose, a grade of all assessm ng Chemie (Chemist First, applicants wil qualitative ranking) cants' position in a t to this third ranking. or otherwise by lot. tion process group a to the respective ap uota 3 (25 % of plac Id the module be us	T's degree subject Biol sed in other subjects, Biologie (Biology) with e Bachelor's degree si ational Mathematics a Biology (as well as pot cceed the number of a within one module cor- burses of one module ted in the same proce- component of the resp ntained and places re- 1 (95%): Places will per applicants will be ran nents taken during the try), Physik (Physics), Il be ranked, firstly, ac and, secondly, accord third ranking will be c s. Among applicants w 2 (5%): Places will be already achieved in mo S credits achieved, pla oplicant; among applic ces): lottery.	a 180 ECTS credits and 5% of pl. ubject Biologie (Biology) with 6 and Mathematik (Mathematics) pentially to students of other 'in upplications, the remaining place monent, several courses with component. In this case, place dure. In this procedure, applicate edure. In this procedure, applicate edure as they become avait rimarily be allocated according ked according to the number of eir studies or of all module com Mathematik (Mathematics)) at coording to their average grade ding to their total number of EC alculated as the sum of these to ith the same ranking, places w allocated according to the follo odules/module components of aces will be allocated by lot. Que cants with the same number of or's degree subject Biologie (B	redits will be giv of places will be aces (a minimu to ECTS credits aces will be alloc a restricted nur es on all courses ants who alread eferential consider to the applican of ECTS credits the the time of app weighted accoust two rankings, and ill be allocated owing quotas: C the Faculty of E uota 2 (25 % of subject semest	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- its). Should the number of places ated to applicants from the other nber of places, there will be a uni- of a module component that are y have successfully completed at deration. ts' previous academic achieve- ney have achieved and their ave- subject of Biologie (Biology) (ex- lication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-				

07-4S1MOLB-152-	spects	s of Mol	ecular Bio	otechn	ology							
mo1 E	CTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
C	Courses Method of assessment			V (2) + S (2) written examination (approx. 30 to 60 minutes) creditable for bonus								
N												
		ants an of place:	S	Stude Shoul chelor locate degree cation availa quota form r conce least of A wait Select ments rage g cludin lows: dits (c applic ding te king o Select numb the sa sters o lot. Qu Shoul	d the number of app ents of the Bachelor' d the module be us- r's degree subject B ed to students of the e subjects Computa h-oriented subject B able in one quota ex- suble in one quota ex- subjects Computa- to the subject of the module of the module be us- ind the module be us-	s degree subject Biol ed in other subjects, iologie (Biology) with e Bachelor's degree s itional Mathematics a iology (as well as pot ceed the number of a vithin one module co- urses of one module ed in the same proce- omponent of the resp tained and places re- ta (95%): Places will be rangeplicants will be ran ents taken during the ry), Physik (Physics), l be ranked, firstly, ac and, secondly, accord- hird ranking will be co- Among applicants will credits achieved in mo- credits achieved, pla plicant; among appli-	there will be two quotas: 180 ECTS credits and 5% ubject Biologie (Biology) and Mathematik (Mathem tentially to students of oth upplications, the remainin mponent, several courses component. In this case, dure. In this procedure, a bective module will be giv -allocated as they becom rimarily be allocated accord ked according to the num eir studies or of all modul Mathematik (Mathematic coording to their average ding to their total number alculated as the sum of t ith the same ranking, pla allocated according to the odules/module compone aces will be allocated by b cants with the same num or's degree subject Biolo	CTS credits will be giv 95% of places will be 6 of places (a minimum with 60 ECTS credits a natics), each with 180 her 'importing' subject of places will be alloct swith a restricted nur places on all courses opplicants who alread ren preferential consideren preferential consideren preferential consideren preferential consideren preferential consideren preferential consideren preferential consideren preference prefer	en preferential consideration. allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- ts). Should the number of places ated to applicants from the other nber of places, there will be a uni- of a module component that are y have successfully completed at			

07-4S1M- Z6-152-m01	Special Bioinformatics 1													
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	Courses			V (1) + Ü (5)									
	Metho	d of asso	essment	Langu	Log (approx. 10 to 20 pages) Language of assessment: German or English creditable for bonus									
		pants ar of place	25	Stude Shoul chelo locate degre catior availa quota form r conce least of A wait Select ments rage g cludir lows: dits (c applic ding t king o Select numb the sa sters o lot. Qu Shoul	ents of the Bachelor' ld the module be use or's degree subject Bi- ed to students of the ee subjects Computa n-oriented subject Bi- able in one quota exe a. Should there be, w regulation for the co- erned will be allocate one other module co- ting list will be main tion process group 1 s. For this purpose, a grade of all assessm ng Chemie (Chemistr First, applicants will qualitative ranking) a cants' position in a t to this third ranking. or otherwise by lot. tion process group 2 ber of ECTS credits al ame number of ECTS of the respective app uota 3 (25 % of place ld the module be use	s degree subject Biol ed in other subjects, iologie (Biology) with e Bachelor's degree su ational Mathematics a iology (as well as pot ceed the number of a vithin one module cor purses of one module ed in the same proces omponent of the resp nationed and places re- 1 (95%): Places will pr applicants will be ran tents taken during the ry), Physik (Physics), f l be ranked, firstly, ac and, secondly, accord third ranking will be co third ranking will be co coredits achieved in mo coredits achieved in mo coredits achieved, pla plicant; among applicants es): lottery.	there will be two quotas: 95% 180 ECTS credits and 5% of pl ubject Biologie (Biology) with 6 and Mathematik (Mathematics) entially to students of other 'in pplications, the remaining pla mponent, several courses with component. In this case, place dure. In this procedure, applicate ective module will be given pro- allocated as they become avai- rimarily be allocated according ked according to the number of eir studies or of all module com Mathematik (Mathematics)) at coording to their average grade ding to their total number of EC alculated as the sum of these ith the same ranking, places w allocated according to the foll odules/module components of aces will be allocated by lot. Qu cants with the same number of or's degree subject Biologie (B	redits will be giv of places will be laces (a minimum 60 ECTS credits a), each with 180 mporting' subject ces will be alloct a restricted nur es on all courses ants who alread eferential consid- ilable. g to the applican of ECTS credits the mponents in the t the time of app e weighted accord CTS credits achies two rankings, ar vill be allocated cowing quotas: C f the Faculty of B uota 2 (25 % of p f subject semest	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration. Ats' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- plication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-					

07-4S1PS1-152- m01	Molecu	ılar moo	lelling - Fro	om DN	IA to Protein			_			
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (1) +	· Ü (5)						
				computerised practical examination (approx. 6 hours) creditable for bonus							
		pants ar	.5	Stude Should chelor locate degree cation availa quota form r conce least of A wait Select ments rage g cludin lows: dits (of applic ding to king o Select numb the sa sters o lot. Qu	ents of the Bachelo d the module be u r's degree subject ed to students of the e subjects Compu h-oriented subject uble in one quota e . Should there be, regulation for the computed one other module ting list will be allocation one other module ting list will be ma tion process group s. For this purpose grade of all assess ing Chemie (Chemis First, applicants with qualitative ranking cants' position in a o this third rankin or otherwise by lot tion process group er of ECTS credits ame number of EC of the respective a uota 3 (25 % of pla d the module be u	or's degree subject Biolo used in other subjects, t Biologie (Biology) with he Bachelor's degree su itational Mathematics an Biology (as well as pote exceed the number of ap , within one module con courses of one module con courses of one module con component of the respe- intained and places re- o 1 (95%): Places will pri e, applicants will be rank stry), Physik (Physics), N vill be ranked, firstly, ac g) and, secondly, accord a third ranking will be ca already achieved in mo TS credits achieved, pla applicant; among applic aces): lottery.	there will be two quotas: 95% of 180 ECTS credits and 5% of pla biject Biologie (Biology) with 6 nd Mathematik (Mathematics) entially to students of other 'im oplications, the remaining place nonent, several courses with component. In this case, place lure. In this procedure, applicate ective module will be given pre- allocated as they become avai imarily be allocated according ked according to the number o ir studies or of all module com Mathematik (Mathematics)) at cording to their total number of EC alculated as the sum of these to the same ranking, places with allocated according to the follo dules/module components of ices will be allocated by lot. Qu- tants with the same number of pr's degree subject Biologie (Bi	redits will be giv of places will be aces (a minimur o ECTS credits a , each with 180 porting' subject ces will be alloct a restricted nun s on all courses ants who already efferential consid- lable. to the applican f ECTS credits the ponents in the the time of app weighted accor TS credits achies two rankings, ar ill be alloctated a pwing quotas: Q the Faculty of B tota 2 (25 % of p subject semest	en preferential consideration. allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- ts). Should the number of places ated to applicants from the other nber of places, there will be a uni- of a module component that are y have successfully completed at deration. ts' previous academic achieve- ney have achieved and their ave- subject of Biologie (Biology) (ex- lication. This will be done as fol- ding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-		

07-4S1PS2-152- m01	Metho	ds in Pla	ant Ecoph	ysiolo	gy								
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		$\ddot{U}(4) + S(1)$									
	Methoo	d of ass	essment	Log (approx. 10 to 20 pages) creditable for bonus									
		pants ar		Stude Shoul chelo locate degre cation availa quota form conce least A wai Selec ments rage g cludir lows: dits (d applid ding t king o Selec numb the sa sters lot. Q Shoul	Id the number of ap ents of the Bachelor Id the module be us r's degree subject B ed to students of the es subjects Computa h-oriented subject B able in one quota ex a. Should there be, v regulation for the co erned will be allocat one other module c ting list will be main tion process group a s. For this purpose, grade of all assessm ng Chemie (Chemist First, applicants will qualitative ranking) cants' position in a t to this third ranking. or otherwise by lot. tion process group a to the respective ap uota 3 (25 % of place Id the module be us	s degree subject Biol sed in other subjects, biologie (Biology) with e Bachelor's degree s ational Mathematics a biology (as well as pot ceed the number of a within one module co- burses of one module ed in the same proce- omponent of the resp nationed and places re- 1 (95%): Places will per applicants will be ran hents taken during the ry), Physik (Physics), ll be ranked, firstly, ac- and, secondly, accord third ranking will be co- third ranking will be co- cordits achieved in mo- for credits achieved in mo- for credits achieved, pla- plicant; among appli-	there will be two quotas: 95% a 180 ECTS credits and 5% of p ubject Biologie (Biology) with and Mathematik (Mathematics centially to students of other 'in applications, the remaining pla mponent, several courses with component. In this case, place dure. In this procedure, applic bective module will be given pr -allocated as they become ava rimarily be allocated according ted according to the number of eir studies or of all module cor Mathematik (Mathematics)) an according to their average graded ding to their total number of Ed calculated as the sum of these ith the same ranking, places w allocated according to the foll odules/module components o aces will be allocated by lot. Q cants with the same number o	redits will be giv of places will be laces (a minimu 60 ECTS credits), each with 180 mporting' subject cas will be alloct a restricted nur es on all courses ants who alread eferential consid- ilable. g to the applican of ECTS credits to nponents in the t the time of app e weighted accou- CTS credits achie two rankings, an vill be allocated lowing quotas: C f the Faculty of E uota 2 (25 % of f subject semes	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places tated to applicants from the other mber of places, there will be a uni- s of a module component that are y have successfully completed at deration. Ats' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- plication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran-				

07-4S1PS3-152-	Pharm	aceutic	al Drugs i	n Plan	ts			
m01	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate
	Course	es		Ü (4)	+ S (1)			
			essment	b) log c) ora d) ora e) pre f) pra maxin Stude	g (approx. 10 to 20 al examination of o al examination in g esentation (approx actical examination mum of 4 hours).	(approx. 45 to 60 minutes) or o pages) or one candidate each (approx. 30 minutes) or groups of up to 3 candidates (approx. 20 minutes x. 20 to 30 minutes) or n (on average approx. 2 hours; time to complete v ned about the method and length of the assessme	will vary according to	
		pants a of place		Stude Shou chelc locat degre catio availa quota form conce least A wai Selec ment rage cludi lows: dits (appli ding king o Selec numb the s sters lot. Q Shou	Id the number of a ents of the Bachel ild the module be or's degree subject ed to students of the es subjects Compu- n-oriented subject able in one quota a. Should there be regulation for the erned will be alloc one other module iting list will be ma- ction process grou s. For this purpose grade of all assess ng Chemie (Chemi cants' position in to this third rankin or otherwise by lot ction process grou ber of ECTS credits ame number of EC of the respective a Quota 3 (25 % of pl ild the module be	p 2 (5%): Places will be allocated according to the already achieved in modules/module componer TS credits achieved, places will be allocated by le applicant; among applicants with the same numb	CTS credits will be given of places will be of places (a minimu with 60 ECTS credits atics), each with 180 mer 'importing' subject of places will be alloct with a restricted numplaces on all courses of places who alread en preferential consistent available. Therefore, the applicant of the applicants who alread en preferential consistent of ECTS credits the components in the states) at the time of app grade weighted accor of ECTS credits achinese two rankings, a ces will be allocated en following quotas: Conts of the Faculty of E ot. Quota 2 (25% of ber of subject semes	ven preferential consideration. e allocated to students of the Ba- m of one place in total) will be al- and to students of the Bachelor's ECTS credits, as part of the appli- cts). Should the number of places cated to applicants from the other mber of places, there will be a uni- s of a module component that are ly have successfully completed at deration. hts' previous academic achieve- hey have achieved and their ave- subject of Biologie (Biology) (ex- olication. This will be done as fol- rding to the number of ECTS cre- eved (quantitative ranking). The nd places will be allocated accor- according to the qualitative ran- Quota 1 (50 % of places): total Biology; among applicants with places): number of subject seme- ters, places will be allocated by

07-S1-LP1-152-m01	Laborat	tory Pra	ctical Cou	irse l						
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses	S		P (5) Module	e taught in: Gern	nan and/or English				
				b) log (c) oral d) oral e) pres f) pract maxim Studen	(approx. 10 to 20 examination of c examination in s entation (approx tical examination um of 4 hours).	one candidate each (ap groups of up to 3 candid c. 20 to 30 minutes) or n (on average approx. 2	prox. 30 minutes) or lates (approx. 20 minut	e will vary according to	subject area but will not exceed a e.	
	other pr		sites	Please	consult with cou	Irse advisory service in	advance.			
07-S1-Ex1-152-m01		on l								
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses	S		E (2) Module	e taught in: Gern	nan and/or English				
				 b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not examinum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. 						
	other pr				consult with cou	Irse advisory service in	advance.			
·		-	ry Project							
	ECTS Courses	5 s		R (5)	1 semester e taught in: Gern	Method of grading	numerical grade	Modul level	undergraduate	
	Method		essment	 b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus 						
	other pr	rerequis	sites	Please	consult with cou	Irse advisory service in	advance.			
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Modules Special			ical Cours								
07-5EP-152-m01	EXTERNA	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course			P (1) Module taught in: German and/or English							
	Metho				g (approx. 10 to 20 l examination of or el examination in gr esentation (approx. ctical examination num of 4 hours). ents will be informe	ne candidate each (ap oups of up to 3 candid 20 to 30 minutes) or (on average approx. 2	prox. 30 minutes) or lates (approx. 20 minute hours; time to complete nd length of the assessn	will vary according to	subject area but will not exceed a e.		
	other prerequisites		Pleas	e consult with cour	se advisory service in	advance.					
07-S2-EX2-152-	Excursion II										
m01	ECTS 10 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		E (8) Modu	lle taught in: Germa	an and/or English					
	Method of assessment			 a) written examination (approx. 45 to 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 of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German and/or English creditable for bonus 							
	other p	orerequi	sites	Pleas	e consult with cour	se advisory service in	advance.				

07-S2-IP2-152-m01	Interdis	sciplina	ry Project	II								
	ECTS	10	Duration	I	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	-	R (8) Modu	le taught in: Germa	in and/or English						
	Methoo	l of asse	essment	b) log c) ora d) ora e) pre f) prac maxin Stude Langu	(approx. 10 to 20 p l examination of on l examination in gr sentation (approx. ctical examination num of 4 hours). ents will be informe	e candidate each (app oups of up to 3 candic 20 to 30 minutes) or (on average approx. 2	prox. 30 minutes) or lates (approx. 20 minutes p hours; time to complete wi nd length of the assessmen	ll vary according to	subject area but will not exceed a e.			
	other p											
07-S2-LP2-152-			-	tical Course II Duration 1 semester Method of grading numerical grade Modul level undergraduate								
m01		10	Duration		1 semester	undergraduate						
	Course			P (8) Modu	(8) Iodule taught in: German and/or English							
				b) log c) ora d) ora e) pre f) prac maxin Stude Langu credit	(approx. 10 to 20 p l examination of on l examination in gr sentation (approx. ctical examination num of 4 hours). ents will be informe tage of assessment able for bonus	e candidate each (app oups of up to 3 candic 20 to 30 minutes) or (on average approx. 2 d about the method and German and/or Engl	prox. 30 minutes) or lates (approx. 20 minutes p hours; time to complete wi nd length of the assessmen ish	ll vary according to	subject area but will not exceed a e.			
	other p	<u> </u>	sites	Pleas	e consult with cour	se advisory service in	advance.					
Focus Chemistry (4	5 ECTS o	redits)										
Compulsory Course	es (21 EC	TS cred	its)									
o8-AC-Ex-	Experin	nental (Chemistry									
Chem-152-m01	ECTS	5	Duratior	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			V (4)								
				written examination (approx. 90 minutes) Language of assessment: German and/or English								
	Additio	nal Info	rmation	Quali	fication goal: scien	tific competences						

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08-0C1-152-m01	Organi	c Chem	istry 1									
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (3)	V (3) + Ü (1)							
	Metho	d of ass	essment	 a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English 								
			ormation	anne	x 2 to the APOLm	2 sentence 2 APOLmCh in conjunction with No. I Ch	2nd letter b) of annex	1 to the APOLmCh and No. 2 of				
		ed to in		-	l Nr. 2							
o8-PC-QMS-	· · ·	les of q	uantum n	nechar	nics and spectros	copy for engineering students						
FU-152-m01	ECTS	8	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	-		11	V (4) + Ü (2) a) written examination (approx. 90 to 180 minutes) or							
	metho			b) ora c) ora d) log e) pre Lang	 b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus 							
08-TC-152-m01	Quantu	um Chei	mistry									
	ECTS	3	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (2)	+ Ü (1)							
	Metho	d of ass	essment	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus								
	Referre	ed to in	LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								

Compulsory Electi	ves (24 E	CTS cre	dits)									
08-0C2-152-m01	Organi	c Chem	istry 2 an	d anal	l analytical methods in organic chemistry							
	ECTS	9	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	:S		V (3)	$V(3) + \ddot{U}(1) + V(2)$							
	Metho	d of ass	essment	b) ora c) ora d) log e) pre	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English							
08-PC-TKE-152-	Therm	odynam	ics, Kinet	ics, El	ectrochemistry							
m01	ECTS	9	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	!S		V (4)	/ (4) + Ü (2)							
	Metho	d of ass	essment	b) ora c) ora d) log e) pre Langi	 a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus 							
	Referre	ed to in l	LPO I	§ 62	l Nr. 1							
08-PC-SBL-152-	Symm	etry, ch	emical bo	nding	and light							
m01	ECTS	9	Duration		2 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	s		V (3)	$+ \ddot{U}(2) + V(2) + \ddot{U}(2)$	2)						
	Metho	d of ass	essment	 a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English 								

08-AS1-152-m01	Inorganic Che	emistry of	the Ele	ments							
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) -	+ V (2)							
	Method of as	sessment	a) written examination (approx. 90 to 180 minutes) or								
				 b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or 							
			e) presentation (approx. 30 minutes)								
				Language of assessment: German and/or English							
	Additional Inf	ormation		ding to § 2 para. 2 < 2 to the APOLmCl		n conjunction with No.	. I 2nd letter a) of annex	1 to the APOLmCh and No. 1 of			
	Referred to in	LPO I	§ 62 I	Nr. 1							
Focus Computer So	ience (45 ECTS:	credits)									
10-I-EinP-152-m01	Introduction t	o Program	ming								
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) -	+ Ü (2)			<u>`</u>				
	Method of ass	sessment	If ann of one date).	ounced by the lect e candidate each (a		f the course, the writte		replaced by an oral examination s (approx. 15 minutes per candi-			
	Referred to in	LPO I		§ 49 Nr. 1 b) § 69 Nr. 1 b)							
10-I-ADS-152-m01	Algorithms ar	nd data str	ucture	S							
	ECTS 10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (4) -	+ Ü (2)							
	Method of as	sessment	If ann of one date).	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus							
	Referred to in	LPO I		Nr. 1 a) Nr. 1 a)							

10-I-ST-152-m01	Software Te	chnology								
	ECTS 10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (4) -	⊦Ü (2)						
	Method of a	ssessment	If ann of one date).	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus						
	Referred to i	n LPO I	§ 49 § 69	§ 49 Nr. 1 b) § 69 Nr. 1 b)						
10-I-PP-152-m01	Practical Co	urse in Prog	grammi	ng						
	ECTS 10	Duratio	n		Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses		P (6)							
	Method of a		If ann of one date).	written examination (approx. 60 to 120 minutes). f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date).						
	Referred to i	n LPO I		Nr. 1 c) Nr. 1 d)						
10-I-SWP-152-m01	Practical co	urse in softv	ftware							
	ECTS 10	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses		P (6)							
	Method of a	ssessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group)						
	Modules succompleted	ccessfully	10-I-P	10-I-PP, 10-I-ST						
	other prerec	uisites		lition, the knowledg recommended.	e and skills acquired	l in module 10-I-ADS are requir	ed. Prior attenda	ance of this module is therefore		
	Referred to i	n LPO I	§ 69 I	Nr. 1 d)			,			
10-I-RAL-152-m01	Digital com	outer syster	ns							
	ECTS 10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (4) -	⊦Ü (2)						
	Method of a	ssessment	If ann of one date).	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). creditable for bonus						

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10-l-lÜ-152-m01	Inform	ation Tra	ansmissio	on				48				
	ECTS	10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	es		V (4) ·	+ Ü (2)			•				
	Metho	d of asse	essment		written examination (approx. 60 to 120 minutes).							
				If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination								
					of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date).							
					able for bonus							
	Referre	ed to in L	PO I	§ 22	§ 22 II Nr. 3 b)							
10-I-HWP-152-m01	Practic	al cours	e in hard	ware								
	ECTS	10	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		P (6)								
	Metho	d of asse	essment		rtfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 nutes per project)							
	Referre	ed to in L	PO I	§ 22	I Nr. 3 b)							
10-I-TIV-152-m01	Theore	etical Inf	ormatics									
	ECTS	CTS 5 Duration		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			V (4)								
	Method of assessment			lf ann	ounced by the lecture candidate each (a		f the course, the written exami		replaced by an oral examination s (approx. 15 minutes per candi-			
	Referre	ed to in L	PO I		Nr. 1 a) Nr. 1 a)							
10-I-TIT-152-m01	Tutoria	al Theore	etical Info	ormatio	:S							
	ECTS	5	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	es		Ü (2)								
	Method of assessment			a) completion of approx. 11 exercises with approx. 4 components each (50% to be completed correctly) or b) written examination (approx. 180 to 240 minutes) Method of assessment to be selected by the candidate.								
	Referred to in LPO I			§ 49 Nr. 1 a) § 69 Nr. 1 a)								

10-I-LOG-152-m01	Logic f	or infor	matics								
	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (2)	V (2) + Ü (2)						
	Metho	d of ass	essment	lf ann of on date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus						
	Referre	ed to in	LPO I	§ 22	I Nr. 3 b)						
10-I-AGT-152-m01	Algorit	hmic G	r <mark>aph Theo</mark>	ry							
	ECTS	5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ Ü (2)						
		ed to in		If ann of on date) Langu credit	e candidate each (a uage of assessmen cable for bonus	replaced by an oral examination 5 (approx. 15 minutes per candi-					
			-	-	§ 22 II Nr. 3 b)						
10-l=lCG-152-m01	ECTS	1	mputer Gr Duration		(Mothod of grading numerical grade	Madullaval	graduata			
	Course	5	Duration		1 semester Method of grading numerical grade Modul level graduate V (2) + Ü (2)						
		-	essment	writte If ann of on date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus						
	Additic	onal Info	ormation	Focus HCI	ses available for stu	udents of the Master's programme Informatik	(Computer Science, 120	ECTS credits):			

	Databa	ses									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S	_	V (2) ·	/ (2) + Ü (2)						
	Methoo	l of asse	essment	lf ann of on date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus						
	Referre	d to in L	.PO I		Nr. 1 b) Nr. 1 b)						
10-I-WBS-152-m01	Knowle	dge-ba	sed Syste	ems							
	ECTS	5	Duratio	า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			V (2) ·) + Ü (2)						
	Method of assessment			lf ann of on date) Langu	ounced by the lec e candidate each (oprox. 60 to 120 minutes). cturer at the beginning of the course, the written (approx. 20 minutes) or an oral examination in g nt: German and/or English					
	Referre	d to in L	PO I	§ 22	§ 22 Nr. 3 b)						
10-I-DM-152-m01	Data M	ining	1								
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course			• • •	V (2) + Ü (2)						
			essment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in L	PO I	§ 22	ll Nr. 3 b)						

10-I-00P-152-m01	Object oriented	d Progran	nming							
	ECTS 5	Duratio	n 1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) + Ü (2)							
	Method of asse	essment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus							
	Referred to in L	PO I	§ 22 Nr. 3 b)							
10-I-KT-152-m01	Computational	Complex	kity							
	ECTS 5	Duratio	1 1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) + Ü (2)	[•]	•					
	Method of asse		If announced by the lect of one candidate each (date). Language of assessmen creditable for bonus	guage of assessment: German and/or English						
	Referred to in L	-	§ 22 II Nr. 3 b)							
10-I-KD-152-m01	Cryptography a	1								
	ECTS 5	Duration		Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) + Ü (2)							
	Method of asse	essment		turer at the beginning approx. 20 minutes) o	of the course, the written exa r an oral examination in grou		replaced by an oral examination s (approx. 15 minutes per candi-			
	Referred to in L		§ 22 Nr. 3 b)							
10-l-3D-152-m01	3D Point Cloud	r	-	1						
	ECTS 5	Duratio		Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) + Ü (2)							
	Method of asse	essment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus							
	Referred to in L	PO I	§ 22 II Nr. 3 b)							

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10-I-BS-152-m01	Operating Sys	tems								
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	e	Modul level	undergraduate		
	Courses		V (2) +	V (2) + Ü (2)						
	Method of ass	essment	lf ann of one date). Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus						
10-I-RAK-152-m01	Computer Arch	nitecture								
_	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	9	Modul level	undergraduate		
	Courses		V (2) -	+ Ü (2)	<u>.</u>		•			
	Method of ass	essment	If ann of one date). Langu	vritten examination (approx. 60 to 120 minutes). f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- late). .anguage of assessment: German and/or English creditable for bonus						
	Referred to in I		§ 69 I	l Nr. 3 b) Nr. 1 c): Rechnerard						
10-I-RK-152-m01		works and	l Comm	nunication Systems						
	ECTS 8	Duration		1 semester	Method of grading numerical grade	9	Modul level	undergraduate		
	Courses	_	V (4) -							
	Method of ass	essment	lf ann of one date). Langu	ounced by the lectu e candidate each (a	rox. 60 to 120 minutes). Irer at the beginning of the course, the pprox. 20 minutes) or an oral examina : German and/or English					
	Referred to in I	POI	§ 22	l Nr. 3 b)						
10-l-AR-152-m01	Automation ar	d Control	l Techn	ology						
	ECTS 8	Duratio		1 semester	Method of grading numerical grade	9	Modul level	undergraduate		
	Courses		V (4) -							
	Method of ass		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus § 22 II Nr. 3 b)							
	Referred to In I	-PU1	8 22 1	1 111. 3 D)						

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Compulsory Cours	es (14 EC	TS crea	dits)								
11-ENNF1-152-m01	Classic	al Phys	sics 1 for S	Students	s of Physics relat	ed Disciplines					
	ECTS	7	Duratio	n	1 semester	Method of grading	numerical grade		Modul level	undergraduate	
	Course	S			V (4) + Ü (2) Module taught in: Ü: German or English						
	Metho	d of ass	essment		written examination (approx. 120 minutes) Language of assessment: German and/or English						
	other p	other prerequisites			ssfully completed		es will qualify for a			per semester). Students who The lecturer will inform students	
	Additic	onal Info	ormation	consid neral a the qu studer for an sessm	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.						
1-ENNF2-152-m01	Classic	al Phys	sics 2 for S	Student	s of Physics relat	ed Disciplines					
	ECTS	7	Duratio	n	1 semester	Method of grading	numerical grade		Modul level	undergraduate	
	Course	S			V (4) + Ü (2) Module taught in: Ü: German or English						
	Metho	d of ass	essment	written examination (approx. 120 minutes) Language of assessment: German and/or English							
	other p	orerequi	isites	succes	ssfully completed		es will qualify for a			per semester). Students who The lecturer will inform students	
	Additional Information				lered a declaratio academic and exa alification for adr nts that meet the assessment or wl	n of will to seek admiss mination regulations). nission to assessment, respective prerequisite hose registration for an	sion to assessment If the module coorc they will put the st s can successfully r assessment was no	pursuant to s linators subs udent's regis register for ar ot put into eff	Section 20 Su equently find tration for ass assessment. fect will not be	ion to assessment, this will be obsection 3 Sentence 4 ASPO (ge- that the student has obtained sessment into effect. Only those . Students who did not register e admitted to the respective as- ade achieved in this assessment	

Compulsory Electiv Students must take			or the ty	wo modules 11-P-F	PA and 11-P-FR1. Other	combinations are not permi	tted.					
11-PNNF-152-m01	Laboratory Course Physics for Students of Physics Related Disciplines											
	ECTS 3	Duratio	n	1 semester	Method of grading	(not) successfully complet	ed Modul level	undergraduate				
	Courses		P (4)									
	Method of ass	sessment	Each	a) practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (90 minutes). Each experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each be repeated once.								
11-P-PA-152-m01	Laboratory Co	ourse Phys	ics A (l	Mechanics, Heat,	Electromagnetism)							
	ECTS 3	Duratio	n	1 semester	Method of grading	(not) successfully complet	ed Modul level	undergraduate				
	Courses		P (2)									
	Method of ass		Prepa pletec comp sics-re the as	actical assignment with talk (approx. 30 minutes) eparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully com eted if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After mpletion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the phy- s-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of e assessment have to be successfully completed.								
11-P-FR1-152-m01	Data and Erro											
	ECTS 2	Duratio		1 semester	Method of grading	(not) successfully complet	ed Modul level	undergraduate				
	Courses		V (1) + Modu	- Ü (1) le taught in: Ü: Ge	rman or English							
	Method of ass	sessment			prox. 120 minutes) it: German and/or Eng	ish						
	other prerequ	isites	succe	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additional Info		consid neral the qu stude for an sessm will no	dered a declaratio academic and exa ualification for adr nts that meet the assessment or wh nent. If a student t ot be considered.	n of will to seek admis mination regulations). nission to assessment respective prerequisite nose registration for ar	sion to assessment pursua If the module coordinators , they will put the student's s can successfully register assessment was not put ir	nt to Section 20 Su subsequently finc registration for as for an assessment to effect will not b	ion to assessment, this will be ubsection 3 Sentence 4 ASPO (ge- that the student has obtained sessment into effect. Only those . Students who did not register e admitted to the respective as- ade achieved in this assessment				
	Referred to in	LPO I		Nr. 1 c) Nr. 1 d)								

11-P-NFB-152-mo1 Laboratory Course Physics B for Students of other Disciplines											
	ECTS	4	Duratio	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	S		P (2)				<u>.</u>			
	Metho	d of asse	essment	practical assignment with talk (approx. 30 minutes) Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully com- pleted if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the phy- sics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.							
	other p	rerequis	sites	Stude	nts are highly recom	mended to complete	e modules 11-P-PA and 11-P-FR1	prior to comple	eting module 11-P-NFB.		
Compulsory Electiv	es 2 (22	ECTS c	redits)								
11-E-O-152-m01	Optics	and Wa	ves								
	ECTS	8	Duration	1 I	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course			Modu	V (4) + Ü (2) Module taught in: Ü: German or English						
	Metho	d of asse	essment	written examination (approx. 120 minutes) Language of assessment: German and/or English							
11-E-A-152-m01		and Qua	anta								
	ECTS 8 Duratio		Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (4) + Ü (2) Module taught in: Ü: German or English							
	Metho	d of asse	essment		written examination (approx. 120 minutes) _anguage of assessment: German and/or English						
11-E-F-152-m01	Introdu	uction to	Solid Sta	ate Phy	vsics						
	ECTS	8	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course			V (4) + Ü (2) Module taught in: Ü: German or English							
	Metho	d of asse	essment		n examination (appr age of assessment:	ox. 120 minutes) German and/or Engl	ish				
11-E-T-152-m01	Nuclea	r and El	ementary	Partic	le Physics						
	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S			V (3) + Ü (1) Module taught in: Ü: German or English						
	Metho	d of asse	essment		n examination (appr age of assessment:	ox. 120 minutes) German and/or Engl	ish				

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11-T-M-152-m01	Theoretical Mechanics											
	ECTS	8	Duration	I	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) ıle taught in: Ü: Ge	rman or English						
	Metho	d of ass	essment	written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other p	orerequi	sites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additional Information			Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.								
11-T-Q-152-m01	Quantu	um Mec	hanics					1				
	ECTS	8	Duratior	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) + Ü (2) Module taught in: Ü: German or English								
	Metho	d of ass	essment	written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other prerequisites			Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
			ormation	consi neral the q stude for ar sessr	dered a declaratio academic and exa ualification for adr ents that meet the assessment or wl	n of will to seek admis mination regulations). nission to assessment respective prerequisite nose registration for ar	sion to assessment p If the module coordir , they will put the stuc s can successfully reg assessment was not	ursuant to Section 20 Sunators subsequently find dent's registration for assignment gister for an assessment put into effect will not b	on to assessment, this will be bsection 3 Sentence 4 ASPO (ge- that the student has obtained sessment into effect. Only those . Students who did not register e admitted to the respective as- ide achieved in this assessment			
11-T-S-152-m01	Statist											
	ECTS	8	Duratior		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) + Ü (2) Module taught in: Ü: German or English								
	Method of assessment			written examination (approx. 120 minutes) Language of assessment: German and/or English								

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11-T-E-152-m01	Electrody	Electrodynamics												
	ECTS 8	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses				V (4) + Ü (2)									
					lle taught in: Ü: Ger									
	Method o	Method of assessment			n examination (app									
				Langu	lage of assessment	: German and/or Engl	sn							
Key Skills Area (20 ECTS credits)														
	General Key Skills (5 ECTS credits) In addition to the modules listed below, students may also take modules offered by JMU as part of the pool of general transferable skills (ASQ).													
General Key Skills	General Key Skills (subject-specific)													
10-M-Tu-	Exercise	tutor o	or proof-r	reading	g in Mathematics									
K0-152-m01	ECTS 5	5	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses			Τ (0)										
	Method of assessment			Assessment of tutoring activities or correcting work by supervising lecturers or exercise supervisors (1 to 2 teaching units or approx. 5 pieces of correcting work)										
	Addition	Additional Information			Please direct application to teaching coordinator Mathematics, he/she will select participants.									
	Referred to in LPO I			§ 22 II Nr. 3 f)										
10-M-VHB1-152-	E-Learnir	ng and	Blended	d Learning Mathematics 1										
m01	ECTS 2 Duration		Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses			Ü (2) Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)										
	Method of assessment			project (web-based, 15 to 20 hours) Assessment offered: Once a year, winter semester										
10-M-VHB2-152-	E-Learnir	ng and	Blended	Learning Mathematics 2										
m01	ECTS 2	2	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses			Ü (2) Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)										
	Method of assessment			project (web-based, 15 to 20 hours) Assessment offered: Once a year, summer semester										

Subject-specific Key Skills (15 ECTS credits)												
Subject-specific Ke	Subject-specific Key Skills, Compulsory Courses (11 ECTS credits)											
10-M-COM-152-	Computational Mathematics											
m01	ECTS 4 Duration		1 semester Method of grading (not) successfully completed Modul level undergraduate									
	Courses		/ (1) + Ü (2)									
	Method of asse		project in the form of programming exercises (approx. 20 to 25 hours) Language of assessment: German and/or English Assessment offered: Once a year, winter semester									
	Referred to in L	-	§ 22 Nr. 3 f)									
10-M-PRG-152-m01	Programming o	ourse fo	r students of Mathematics and other subjects									
	ECTS 3	Duratio	n 1 semester Method of grading (not) successfully completed Modul level undergraduate									
	Courses		P (2)									
	Method of assessment		project in the form of programming exercises (approx. 20 to 25 hours) Language of assessment: German and/or English Assessment offered: Once a year, summer semester									
	Referred to in LPO I		§ 22 Nr. 3 f)									
10-M-GBM-152-	Basic Notions a	and Meth	ods of Mathematical Reasoning									
m01	ECTS 2 Duratio		n 1 semester Method of grading (not) successfully completed Modul level undergraduate									
	Courses		$V(1) + \ddot{U}(1)$									
	Method of asse	essment	project (10 to 15 pages) Language of assessment: German and/or English									
	Additional Info	rmation	Additional information on module duration: block taught prior to the beginning of the lecture period.									
	Referred to in LPO I		§ 22 Nr. 1 h) § 22 Nr. 2 f)									
10-M-ASM-152-	Reasoning and	Writing	1 Mathematics									
m01	ECTS 2	Duratio										
	Courses		$V(1) + \ddot{U}(1)$									
	Method of assessment		project (10 to 20 pages) Language of assessment: German and/or English									
Subject-specific Ke	y Skills, Compu	lsory Ele	ctives (4 ECTS credits)									
10-M-SEM2-152-	Supplementary	/ Semina	r Mathematics									
m01	ECTS 4	Duratio	1 semester Method of grading (not) successfully completed Modul level undergraduate									
	Courses		S (2)									
	Method of asse	essment	talk (60 to 120 minutes) Language of assessment: German and/or English									

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10-M-EFM-152-m01	Introdu	Introduction to Stochastic Financial Mathematics												
	ECTS	9	Duratior	ו	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses	5		V (4) -	+ Ü (2)			_						
	Method	ofasse	essment			approx. 90 to 180 minutes, usually chosen) or								
				b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)										
				Language of assessment: German and/or English										
	In the day	-41 4 -	Tenelo		able for bonus									
10-M-TOP-152-m01			Topology	·				· · · · ·						
		5	Duratior		1 semester	Method of grading (not) successfully complete	d Modul level	undergraduate						
	Courses	-		V (2) -										
	Method	of asse	essment			approx. 90 to 180 minutes, usually chosen) or								
				b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)										
				Language of assessment: German and/or English										
				Assessment offered: In the semester in which the course is offered and in the subsequent semester										
	creditable for bonus													
10-M-GES-152-m01	Selected Topics in History of Mathematics													
	ECTS 5 Duratio				1 semester	Method of grading (not) successfully complete	d Modul level	undergraduate						
	Courses	5		V (2) -										
	Method	ofasse	essment	a) talk (45 to 90 minutes) or										
				b) term paper (10 to 15 pages) or										
				c) project work (15 to 25 hours) Language of assessment: German and/or English										
				Assessment offered: In the semester in which the course is offered and in the subsequent semester										
	Referred to in LPO I			§ 22 II Nr. 3 f)										
10-M-MSC-152-	Mathen	natical	Writing											
m01	ECTS	5	Duration	1	1 semester	Method of grading (not) successfully complete	d Modul level	undergraduate						
	Courses	5		V (2) + Ü (2)										
	Method	ofasse	essment		k (45 to 90 minutes									
					m paper (10 to 15 p									
					ject work (15 to 25									
						t: German and/or English he semester in which the course is offered and in t	ha subsequent s	omostor						
	Deferre	dtaird	DOI				subsequent s							
	Referred	u to in L	PUT	§ 22 II Nr. 3 f)										

	1		-											
10-M-SCH-152-m01	School	School Mathematics from a Higher Perspective												
	ECTS	5	Duratio	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Course	:S		V (2) +	- + Ü (2)		· · · ·							
	Metho	d of ass	essment		a) talk (approx. 45 minutes) or									
					b) term paper (10 to 15 pages) or c) project work (15 to 25 hours) Language of assessment: German and/or English									
		-				e semester in which	the course is offered and in the	subsequent se	emester					
	Referred to in LPO I				§ 22 Nr. 1 h)									
					§ 22 II Nr. 2 f) § 22 II Nr. 3 f)									
	_	·												
10-M-PRO-152-m01		ninar Ma	1											
	ECTS	4	Duratio	-	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Course	S		S (2)	S (2)									
	Metho	d of ass	essment	talk (60 to 120 minutes)										
				Language of assessment: German and/or English										
				Assessment offered: In the semester in which the course is offered										
Thesis (11 ECTS cre	dits)													
10-M-BAC-152-m01	Bachel	or Thes	is Compu	tationa	l Mathematics									
	ECTS	11	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		No co	No courses assigned to module									
	Metho	d of ass	essment	Bachelor's thesis (approx. 275 to 330 hours)										
	other p	orerequi	sites		The supervisor may make the successful completion of certain modules that are relevant for the respective topic a prerequisi- te for the assignment of the topic.									
	Additio	nal Info	rmation	Time t	o complete: 10 weel	<s.< td=""><td></td><td></td><td></td></s.<>								