

## **Annex SFB**

## Studienfachbeschreibung (subject description, SFB) for the subject Mathematics as a Master's with 1 major with the degree "Master of Science" (120 ECTS credits)

Responsible: Faculty of Mathematics and Computer Science

Responsible: Institute of Mathematics

Examination regulations version: 2019

Examination regulations version: 2019

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

= lecture

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

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

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

= list of modules

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

Conventions for the

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

modules in this SFB: ditable for bonus.

Information on Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the meassessment procedures: thod of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the

customary manner.

Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all

individual assessments.

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

## ASP02015

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

## 27-Mar-2019 (2019-24)

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	be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y								
	Method of as	ssessm	ent									
	Only after su completion of		ıl if applica	f applicable								
	Other prereq	uisites	if applica	ble								
	Participants on of places		ocati- if applica	if applicable								
	Additional in	format	ion if applica	ble								
	Referred to in	n LPO I	if applica	ble (examination re	gulations for teaching	g-degree programmes)						

Compulsory Elective	/es (90 l	ECTS cre	dits)									
Subfield Mathema	tics (30	ECTS cre	dits)									
10-M=AAAN-161-	Applie	d Analys	is									
mo1	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	es			(4) + Ü (2) Module taught in: German and/or English							
	Metho	d of asse	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) canguage of assessment: German or English cansessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
10-M=AAL-	Topics	in Algeb	ra					,				
G-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	vurses V (4) + Ü (2) Module taught in: German and/or English										
	Metho	d of asse	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
10-M=ADG-	Differe	ntial Ge	ometry					'				
M-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	es		V (4) + Modu	- Ü (2) le taught in: Germar	n and/or English						
	Method of assessment  a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus											

10-M=AFT-	Comple	x Analy	/sis										
H-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		V (4) - Modu	+ Ü (2) le taught in: Germaı	n and/or English							
	Method	l of asse	essment	b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester editable for bonus								
10-M=AGMS-161-	Geomet	tric Stru	ıctures										
mo1	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		V (4) - Modu	- Ü (2) le taught in: Germaı	n and/or English							
	Method	l of asse	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus										
10-M=AIST-161-	Industr	ial Stat	istics 1	•									
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S			V (4) + Ü (2) Module taught in: German and/or English								
	Method	l of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, 15 r German or English	ninutes per candidate)		emester				
10-M=ALTH-161-	Lie The	ory											
mo1	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		\ \ \ \	V (4) + Ü (2) Module taught in: German and/or English								
	Method	l of asse	essment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									

10-M=ANG-	Numeric of Large Systems of Equations												
G-161-mo1	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		V (4) + Modu	+ Ü (2) le taught in: Germar	n and/or English							
	Method	l of asse	essment	b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) or nguage of assessment: German or English sessment offered: In the semester in which the course is offered and in the subsequent semester editable for bonus								
10-M=AOP-	Basics	in Optin	nization										
T-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		V (4) + Modu	+ Ü (2) le taught in: Germar	n and/or English							
				b) ora c) ora Langu Asses	l examination of one l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, 15 I German or English	utes, usually chosen) or prox. 20 minutes) or minutes per candidate) the course is offered and	in the subsequent so	emester				
10-M=ARTH-161-	Control	Theory											
mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				/ (4) + Ü (2) Module taught in: German and/or English								
	Method	l of asse	essment	b) ora c) ora Langu Asses	l examination of one l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, 15 I German or English	utes, usually chosen) or prox. 20 minutes) or minutes) or minutes per candidate) the course is offered and	in the subsequent so	emester				
10-M=ASM-	Stocha	stic Mod	dels of Ri	sk Mar	nagement	1							
R-161-m01	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S		V (4) + Modu	- Ü (2) le taught in: Germar	n and/or English							
	Method	l of asse	essment	b) ora c) ora Langu Asses	l examination of one l examination in gro lage of assessment:	on (approx. 90 to 120 minutes, usually chosen) or of one candidate each (approx. 20 minutes) or n groups (groups of 2, 15 minutes per candidate) nent: German or English In the semester in which the course is offered and in the subsequent semester							

10-M=AST-	Stochas	tical P	rocesses										
P-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) - Modu	+ Ü (2) le taught in: Germa	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester editable for bonus								
10-M=A-	Topolog	y											
TOP-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	;			4) + Ü (2) dule taught in: German and/or English								
	Method	of asse	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=AVS-	Insurance Mathematics 1												
M-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	i			V (4) + Ü (2) Module taught in: German and/or English								
	Method	of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap oups (groups of 2, 15 r German or English	ninutes per candidate)		emester				
10-M=AZ-	Time Se	ries An	alysis 1										
RA-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	i		V (4) + Ü (2) Module taught in: German and/or English									
	Method	of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap oups (groups of 2, 15 r German or English	ninutes per candidate)		emester				

10-M=AZTH-161-	Number	Number Theory												
mo1	ECTS 1	10 Du	ration	1	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (4) + Module		an and/or English								
		of assessn		b) oral c) oral Langua Assess credita	) written examination (approx. 90 to 120 minutes, usually chosen) or ) oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English ssessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus									
10-M=AGP-		i Prodi Lec	ture (I	Master)	)									
Cin-152-m01	ECTS 5	5 Du	ration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (3) + Ü (1) Module taught in: English										
	Method	of assessn		b) oral c) oral Langua Assess	a) written examination (approx. 60 to 90 minutes, usually chosen) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) c.anguage of assessment: English c.assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M=VA-	Selected Topics in Analysis													
NA-161-m01	ECTS 1	10 Du	ration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (4) + Module		an and/or English			_					
	Method	of assessn		b) oral c) oral Langua Assess	examination of o examination in gr age of assessmen	ne candidate each (ap roups (groups of 2, 15 t: German or English	nutes, usually chosen) oprox. 20 minutes) or minutes per candidate the course is offered		emester					
10-M=VAT-	Algebrai	c Topolog	y											
P-161-m01	ECTS 1	10 Du	ration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (4) + Module		an and/or English								
	Method	of assessn		b) oral c) oral Langua Assess	examination of o examination in gr age of assessmen	ne candidate each (ap roups (groups of 2, 15 t: German or English	nutes, usually chosen) oprox. 20 minutes) or minutes per candidate the course is offered		emester					

10-M=VFN-	Selected	Topics	in Finan	cial M	ial Mathematics								
M-161-mo1	ECTS 1	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Modu	- Ü (2) le taught in: Germaı	n and/or English							
	Method	of asse	ssment	b) ora c) oral Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester editable for bonus								
10-M=VGDS-161-	Groups a	and the	ir Repres	entati	tations								
mo1	ECTS 1	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+Ü (2) ule taught in: German and/or English								
	Method	of asse	ssment	b) ora c) oral Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=V-	Geometrical Mechanics												
GEM-161-m01	ECTS 1	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				V (4) + Ü (2) Module taught in: German and/or English								
	Method	of asse	ssment	b) ora c) oral Langu Asses	l examination of on examination in gro age of assessment:	e candidate each (ap ups (groups of 2, 15 r German or English	ninutes per candidate)		emester				
10-M=VIST-161-	Industria	al Stati	stics 2										
mo1	ECTS 1	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									

10-M=V-	Field A	rithmet	ics										
KAR-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (4) - Modu	+ Ü (2) le taught in: Germa	n and/or English							
	Method	d of ass	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap oups (groups of 2, 15 r German or English	minutes per candidate)		emester				
10-M=VN-	Numeri	ic of Pai	tial Diffe	rential	Equations								
PE-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			4) + Ü (2) odule taught in: German and/or English								
	Method	d of ass	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=VOP-	Selected Topics in Optimization												
T-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			V (4) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap oups (groups of 2, 15 r German or English	ninutes per candidate)		emester				
10-M=V-	Statist	ical Ana	lysis										
STA-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			V (4) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap oups (groups of 2, 15 r German or English	ninutes per candidate)		emester				

10-M=VVS-	Insuran	ce Matl	hematics	2				·					
M-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	;			+ Ü (2) le taught in: Germaı	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English ssessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus								
10-M=VZ-	Time Se	ries An	alysis 2					'					
RA-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	;			- Ü (2) le taught in: Germaı	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, 15 r German or English	minutes per candidate		emester				
10-M=V-	Discrete	Mathe	ematics					,					
DIM-161-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	;		V (3) - Modu	+ Ü (1) le taught in: Germaı	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, app German or English	prox. 10 minutes per ca		emester				
10-M=VD-	Dynami	cal Sys	tems										
SY-161-m01		5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	i		V (3) - Modu	+ Ü (1) le taught in: Germaı	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, app German or English	prox. 10 minutes per ca		emester				

10-M=V-	Aspects of	Geometry										
GEO-161-mo1	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (3) - Modu	- Ü (1) le taught in: Germaı	n and/or English							
	Method of a	assessment	b) ora c) ora Langu Asses	written examination (approx. 60 to 90 minutes, usually chosen) or oral examination of one candidate each (approx. 15 minutes) or oral examination in groups (groups of 2, approx. 10 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester editable for bonus								
10-M=V-	Mathemati	cal Continuu	m Mec	lechanics								
KOM-161-mo1	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (3) - Modu	+ Ü (1) le taught in: Germaı	n and/or English							
	Method of a	assessment	b) ora c) ora Langu Asses	a) written examination (approx. 60 to 90 minutes, usually chosen) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) c) anguage of assessment: German or English c) Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=VMB-	Mathemati	cal Imaging	•									
V-161-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (3) - Modu	- Ü (1) le taught in: Germaı	n and/or English							
	Method of a	assessment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, app German or English	tes, usually chosen) or prox. 15 minutes) or	ndidate)	emester				
10-M=VMPH-161-	Selected To	pics in Math	ematio	al Physics								
mo1	ECTS 10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		V (4) - Modu	+ Ü (2) le taught in: Germaı	n and/or English							
	Method of a	assessment	b) ora c) ora Langu Asses	l examination of on l examination in gro lage of assessment:	e candidate each (ap ups (groups of 2, 15 r German or English	utes, usually chosen) or prox. 20 minutes) or minutes per candidate) the course is offered an		emester				

10-M=V-	Selected	Topics	in Conti	rol The	· ·							
TRT-161-m01	ECTS 1	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (4) + Modu	- Ü (2) le taught in: Germar	n and/or English						
	Method	of asse	ssment	b) ora c) oral Langu Asses	l examination of one examination in gro age of assessment:	e candidate each (ap ups (groups of 2, 15 r German or English	minutes per candidate		emester			
10-M=VI-	Inverse F	Problen	ns									
PR-161-m01	ECTS 5	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) +	- Ü (1) le taught in: Germar	n and/or English						
	Method o	of asse	ssment	b) ora c) oral Langu Asses	a) written examination (approx. 60 to 90 minutes, usually chosen) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) c. anguage of assessment: German or English c. Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
10-M=VMT-	Module 1											
H-161-m01	ECTS 5 Duratio		Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + Modu	- Ü (1) le taught in: Germar	n and/or English						
	Method o	of asse	ssment	b) ora c) oral Langu Asses	l examination of one examination in gro age of assessment:	e candidate each (ap ups (groups of 2, app German or English	prox. 10 minutes per ca		emester			
10-M=V-	Non-line	ar Anal	ysis					,				
NAN-161-m01	ECTS 5	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (3) + Modu	- Ü (1) le taught in: Germar	n and/or English						
	Method o	of asse	ssment	b) ora c) oral Langu Asses	l examination of one examination in gro age of assessment:	e candidate each (ap ups (groups of 2, app German or English	prox. 10 minutes per ca		emester			

10-M=VOST-161-	Optima	Optimal Control												
mo1	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	es		V (3) -	+ Ü (1) le taught in: Germa	an and/or English								
	Metho	d of ass	essment	b) ora c) ora Langu Asses	written examination (approx. 60 to 90 minutes, usually chosen) or									
10-M=VV-		rked Sy	stems											
SY-161-m01	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	es		V (3) - Modu	+ Ü (1) le taught in: Germa	an and/or English								
	Metho	d of ass	essment	b) ora c) ora Langu Asses	vritten examination (approx. 60 to 90 minutes, usually chosen) or or or or one candidate each (approx. 15 minutes) or									
10-M=VK-	Complex Geometry													
GE-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	es		V (4) - Modu	+ Ü (2) le taught in: Germa	an and/or English								
	Metho	d of ass	essment	b) ora c) ora Langu Asses	l examination of or l examination in gr lage of assessmen	ne candidate each (ap oups (groups of 2, 15 t: German or English	nutes, usually chosen) or oprox. 20 minutes) or minutes per candidate) the course is offered and	in the subsequent se	emester					
10-M=VPD-	Partial	Differe	ntial Equa	tions (	of Mathematical Ph	ysics								
P-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	es		V (4) - Modu	+ Ü (2) le taught in: Germa	an and/or English								
	Metho	d of ass	essment	b) ora c) ora Langu Asses	l examination of or l examination in gr lage of assessmen	ne candidate each (ap oups (groups of 2, 15 t: German or English	utes, usually chosen) or oprox. 20 minutes) or minutes per candidate) the course is offered and	in the subsequent se	emester					

10-M=V-	Pseudo Riemannian and Riemannian Geometry											
PRG-161-m01	ECTS	10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i		V (4) + Modu	- Ü (2) le taught in: Germa	n and/or English		•				
	Method	of asse	essment	b) ora c) ora Langu Asses	) written examination (approx. 90 to 120 minutes, usually chosen) or ) oral examination of one candidate each (approx. 20 minutes) or ) oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus							
10-M=AF-	Function	nal Ana	lysis									
AN-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i			(4) + Ü (2)  odule taught in: German and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	) written examination (approx. 90 to 120 minutes, usually chosen) or ) oral examination of one candidate each (approx. 20 minutes) or ) oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus							
10-M=VAD-	Applied Differential Geometry											
G-161-m01	ECTS 10 Duratio			1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i		V (4) + Ü (2) Module taught in: German and/or English								
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=VG-	Giovann	i Prodi	Lecture S	Selecte	d Topics (Master)							
PSin-152-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	i		V (4) + Ü (2) Module taught in: English								
	Method of assessment		a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									

10-M=VG-	Giovanni Prodi Lecture Advanced Topics (Master)												
PAin-152-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S	-		⊦ Ü (2) le taught in: English								
	Method	d of ass	essment	b) ora c) ora Langu Asses	) written examination (approx. 90 to 120 minutes, usually chosen) or ) oral examination of one candidate each (approx. 20 minutes) or ) oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: English assessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus								
10-	Giovan	ni Prodi	Lecture	Moderi	Topics (Master)								
M=VGPMin-152-	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
mo1	Courses			V (4) - Modu	+ Ü (2) le taught in: English								
	Method	d of ass	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=MP1-161-	Analysi	Analysis and Geometry of Classical Systems											
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
		Courses			V (4) + Ü (2) Module taught in: German and/or English								
	Method of assessment			b) ora c) ora Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English creditable for bonus								
10-M=MP2-161-	Algebra	a and D	ynamics o	of Quar	tum Systems								
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			b) ora c) ora Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English creditable for bonus								

10-M=VGFT-192-	Geomet	tric Com	plex Ana	lysis									
mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5			+ Ü (2) le taught in: Germaı	n and/or English							
	Method	of asse	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=V-	Selecte	d Topic	s in Num	erical a	and Applied Mathem	natics							
NAM-192-mo1	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5			4) + Ü (2) odule taught in: German and/or English								
	Method	of asse	essment	b) ora c) ora Langu Asses	) written examination (approx. 90 to 120 minutes, usually chosen) or ) oral examination of one candidate each (approx. 20 minutes) or ) oral examination in groups (groups of 2, 15 minutes per candidate) anguage of assessment: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus								
10-M=V-	Cryptography/Coding Theory												
KRY-192-m01	ECTS 10 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				V (4) + Ü (2) Module taught in: German and/or English								
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M=V-	Comput	ter Alge	bra										
CAL-192-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5		V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or								

10-M=VAZ-	Algorit	hmic N	umber The	eory				"				
T-192-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (4) + Ü (2) Module taught in: German and/or English							
	Method	d of ass	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
10-M=VA-	Algebra	aic Geo	metry									
GE-192-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			+ Ü (2) ıle taught in: Germaı	n and/or English						
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
Subfield Research					rs credits)							
10-M=GAL-		ch in G	roups - Al	gebra	gebra							
G-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			+ S (2) Ile taught in: Germai	n and/or English						
	Method	d of ass	talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
10-M=G-	Resear	ch in G	roups - Di	screte	Mathematics							
DIM-161-m01	ECTS	10	Duratio									
	Course	S		V (2) + S (2) Module taught in: German and/or English								
				talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								

10-M=GD-	Resea	arch in Gr	oups - Dy	namic	al Systems and Cont	rol Theory		-					
SC-161-m01	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	ses	·		/ (2) + S (2) Module taught in: German and/or English								
	Meth				alk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=G-		arch in Gr			plex Analysis								
COA-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	ses		V (2) - Modu	+ S (2) le taught in: German	and/or English							
	Method of assessment			Langu	alk (60 to 120 minutes) .anguage of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GGM-	Resea	arch in Gr	oups - Ge	ometr	ometry and Topology								
T-161-mo1	ECTS 10 Duratio		1	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (2) - Modu	S (2) le taught in: German	and/or English							
	Meth	od of ass	essment	Langu	talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GM-	Research in Groups - Mathematics in Context												
CX-161-m01	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	ses		V (2) + S (2) Module taught in: German and/or English									
	Method of assessment												
10-M=GM-	Resea	arch in Gr	oups - Ma	thema	tics in the Sciences								
SC-161-m01	ECTS	10	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (2) + S (2) Module taught in: German and/or English									
	Method of assessment			talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									

10-M=G-	Resea	Research in Groups - Measure and Integral											
MAI-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es	•		+ S (2)								
					Module taught in: German and/or English								
	Metho	od of ass	essment		alk (60 to 120 minutes)								
				Langu	Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GN-	Resea	arch in Gr	oups - Nu		nerical Mathematics and Applied Analysis								
MA-161-mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es			+ S (2)				10				
				Modu	le taught in: German	and/or English							
	Metho	od of ass	essment		60 to 120 minutes)								
					anguage of assessment: German or English								
10-M=GROC-161-	Resea	arch in Gr	ouns - Ro		Assessment offered: In the semester in which the course is offered and in the subsequent semester of otics, Optimization and Control Theory								
mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		Duration		+ S (2)	Method of glading	numerical grade	Modulitevel	graduate				
	Cours				le taught in: German	and/or English							
	Metho	od of ass	essment		so to 120 minutes)								
					Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
M. CT	D		т.										
10-M=GT- SA-161-m01		_			e Series Analysis								
5/( 101 11101	ECTS	10	Duratio										
	Cours	es		V (2) + S (2) Module taught in: German and/or English									
	Metho	od of ass	essment	talk (60 to 120 minutes)									
	Metri	54 01 455	essinent	Langi	age of assessment:								
				Asses	sment offered: In the	e semester in which	the course is offered a	nd in the subsequent se	emester				
10-M=G-		arch in Gr	oups - St	atistic	5								
STA-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (2) + S (2) Module taught in: German and/or English									
	Meth	nd of acc	essment	talk (60 to 120 minutes)									
				Language of assessment: German or English									
				Assessment offered: In the semester in which the course is offered and in the subsequent semester									

10-M=GNTH-161-	Resea	arch in Gr	oups - Nu	mber 1	Theory								
mo1	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es			+ S (2)			,					
					Module taught in: German and/or English								
	Metho	od of asso	essment		alk (60 to 120 minutes) anguage of assessment: German or English								
				Asses	Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GC-	Resea	arch in Gr	oups - Co	ntrol T	trol Theory of Quantum Mechanical Systems								
QS-161-m01	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es		V (2) - Modu	- F S (2) le taught in: German	and/or English							
	Method of assessment			Langu	alk (60 to 120 minutes) .anguage of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GD-	Resea	arch in Gr	oups - Di	ferent	erential Geometry								
GE-161-m01	ECTS 10 Duration			ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+ S (2) le taught in: German	and/or English							
	Metho	od of asso	essment	Langu	talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GDF-	Research in Groups - Deformation Quantization												
Q-161-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es	•	V (2) + S (2) Module taught in: German and/or English									
	Method of assessment												
10-M=GN-	Resea	arch in Gr	oups - No	n-line	ar Analysis			'					
LA-161-m01	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	es		V (2) + S (2) Module taught in: German and/or English									
	Method of assessment												

10-M=GO-	Researc	:h in G	roups - Op	erato	Algebras								
PA-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5			(2) + S(2)								
					Module taught in: German and/or English								
	Method	Method of assessment			alk (60 to 120 minutes)								
					anguage of assessment: German or English. Assessment offered: In the semester in which the course is offered and in the subsequent semester.								
10-M=SAD-	Semina	r in An	nlied Diff		ential Geometry								
G-161-mo1		5 5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses		Duration	S (2)	1 Semester	Method of grading	numencat grade	Modulitevel	graduate				
	Courses	•			ıle taught in: Germaı	n and/or English							
	Method	of ass	essment		60 to 120 minutes)	, ,							
				Langi	uage of assessment:								
				Asses	sessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=SAL-	Semina					1							
G-161-m01		ECTS 5 Duratio			1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	Courses		S (2) Modu	ıle taught in: Germaı	n and/or English							
	Method	Method of assessment			60 to 120 minutes)								
					Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=SD-	Seminar in Dynamical Systems and Control												
SC-161-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5	'	S (2)									
					Module taught in: German and/or English								
	Method	of ass	essment	talk (60 to 120 minutes)									
					Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=S-	Semina	r in Co	mplex Ana		-	- The semiconer in winer	The course is offered at	na m me sassequent se					
COA-161-m01		5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			S (2)									
				Module taught in: German and/or English									
	Method	of ass	essment	talk (60 to 120 minutes)									
				Language of assessment: German or English  Assessment offered in the semester in which the course is offered and in the subsequent semester.									
				Asses	Assessment offered: In the semester in which the course is offered and in the subsequent semester								

10-M=S-	Semina	r in Fin	ancial an	d Insu	ance Mathematics	,						
FIM-161-m01	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		S (2) Modu	le taught in: Germa	n and/or English		·				
	Method	of ass	essment		talk (60 to 120 minutes)							
					Language of assessment: German or English							
10-M=S-	Somina	r in Go	omotry ar		Assessment offered: In the semester in which the course is offered and in the subsequent semester  Topology							
GTO-161-mo1		5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course		Daratio	S (2)	le taught in: Germa		Hameheat glade	Modulitevel	Siduate			
	Method of assessment			talk ( Langı	alk (60 to 120 minutes) anguage of assessment: German or English ssessment offered: In the semester in which the course is offered and in the subsequent semester							
10-M=SGP-	Giovan	ni Prod	i Seminar	(Mast	er)			·				
Cin-152-m01	ECTS 5 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			S (2) Modu	le taught in: English	1		·				
	Method of assessment			Langi	lage of assessment:		the course is offered	and in the subsequent se	emester			
10-M=SID-	Interdisciplinary Seminar											
C-161-m01	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		S (2) Module taught in: German and/or English								
	Method	l of ass	essment	talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=SM-	Semina	r Math	ematics i	the S	ciences							
SC-161-m01	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		S (2) Module taught in: German and/or English								
	Method of assessment			talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								

10-M=SN-	Seminar ir	Seminar in Numerical Mathematics and Applied Analysis											
MA-161-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		S (2) Modu	5 (2) Module taught in: German and/or English									
	Method of	assessment	Langi	alk (60 to 120 minutes) anguage of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
10-M=SOP-	Seminar ir	Optimizatio	n										
T-161-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		S (2) Modu	ıle taught in: Germar	n and/or English								
	Method of	assessment	Langi	anguage of assessment: German or English ssessment offered: In the semester in which the course is offered and in the subsequent semester									
10-M=S-	Seminar ir	Statistics		·			'						
STA-161-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		S (2) Modu	ıle taught in: Germar	n and/or English								
	Method of	assessment	Langi	60 to 120 minutes) uage of assessment: ssment offered: In th		the course is offered ar	nd in the subsequent se	emester					
10-M=SN-	Seminar in Non-linear Analysis												
LA-161-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		S (2) Module taught in: German and/or English										
	Method of	assessment	talk (60 to 120 minutes) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester										
10-M=SA-	Seminar A	pplied Mathe	matics										
MA-192-m01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses		S (2) Module taught in: German and/or English										
	Method of	assessment											

10-M=GLIE-192-	Resear	ch in G	roups - Lie	Theo	y				·				
mo1	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	Courses			( (2) + S (2)  Module taught in: German and/or English								
	Method	d of ass	essment	Langi	alk (60 to 120 minutes) anguage of assessment: German or English ssessment offered: in the semester in which the course is offered and in the subsequent semester								
10-M=GAD-	Resear	ch in G	roups - Ap	plied I	lied Differential Geometry								
G-192-m01	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			+ S (2) le taught in: Germa	an and/or English							
	Method of assessment			Langi									
10-M=G-	Resear	ch in G	roups - Ma	thema	atical Physics			,					
MAP-192-m01	ECTS 10 Duratio			1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+ S (2) le taught in: Germa	an and/or English		•					
	Method of assessment			Langi	lage of assessment	t: German or English he semester in which	the course is offered and in th	e subsequent s	emester				
Subfield Learning	and Teac	hing											
10-M=EL-	Learnin	ng by Te	eaching 1										
T1-192-m01		5	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Course			Ü (2)			· '		-				
	Method	d of ass	essment	Assessment of tutoring activities by supervising lecturers or exercise supervisors (1 to 2 teaching units) Language of assessment: German									
	Additio	nal Info	ormation	Appli	cation and selectio	n with the teaching co	ordinator for mathematics						
10-M=EL-	Learnin	g by Te	eaching 2			<u> </u>		'					
T2-192-m01	ECTS	5	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Course	 S	,	Ü (2)									
				Assessment of tutoring activities by supervising lecturers or exercise supervisors (1 to 2 teaching units) Language of assessment: German									
				Application and selection with the teaching coordinator for mathematics									

Subfield Optional A	Subfield Optional Application Subject and/or Intership												
Application Subject	t Biology												
07-MS2BI-152-m01	Bioinformatics												
	ECTS 10 Durati	on 1 semester	Method of grading	numerical grade	Modul level	graduate							
	Courses	V (2) + S (1) Module taught in: German and/or English											
	Method of assessment	a) written examination (30 to 60 minutes, including multiple choice questions) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (30 to 60 minutes) Language of assessment: German and/or English											
07-MS2BIF1-152-	Bioinformatics F1												
mo1	ECTS 10 Durati		Method of grading	numerical grade	Modul level	graduate							
	Courses	P (14) + S (1) Module taught in: Germa											
	Method of assessment	a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (15 to 30 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (30 to 60 minutes) or e) presentation (20 to 45 minutes) Language of assessment: German and/or English											
07-MS2BIF2-152-	Bioinformatics F2												
mo1	ECTS 15 Durati		Method of grading	(not) successfully compl	eted   Modul level	graduate							
	Courses	P (29) + S (1) Module taught in: Germa	n and/or English										
	Method of assessment	b) log (15 to 30 pages) or c) oral examination of on	e candidate each (30 oups of up to 3 candio minutes)	to 60 minutes) or dates (30 to 60 minutes) o	·								
07-MBI-B-152-m01	Bioinformatics B												
	ECTS 5 Durati		Method of grading	(not) successfully compl	eted   Modul level	graduate							
	Courses	V (2) Module taught in: Germa	n and/or English										
	Method of assessmen	a) written examination (30 to 60 minutes, including multiple choice questions) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (30 to 60 minutes) Language of assessment: German and/or English											

07-MS3S-152-m01	System	ıs Biolo	gy						-		
	ECTS	10	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S	·	V (2)		nan and/or English		,			
	Method of assessment			a) wri c) ora d) ora	a) written examination (30 to 60 minutes, including multiple choice questions) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (30 to 60 minutes) Language of assessment: German and/or English						
07-MS3SYF1-152-	System	ıs Biolo	gy F1	•							
mo1	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			+ S (1) lle taught in: Germ	nan and/or English					
	Method of assessment				a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (15 to 30 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (30 to 60 minutes) or e) presentation (20 to 45 minutes) Language of assessment: German and/or English						
07-MS3SYF2-152-	System	ıs Biolo	gy F2					,			
mo1	ECTS	15	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate		
	Courses			P (29) + S (1) Module taught in: German and/or English							
	Method	d of ass	essment	b) log c) ora d) ora e) pre	(15 to 30 pages) l examination of call examination in § esentation (20 to 2	or one candidate each (3c groups of up to 3 candi	dates (30 to 60 minutes) or	ns) or			
07-MS-B-152-m01	System	ıs Biolo	gy B								
	ECTS	5	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate		
	Courses			V (2) Modu	lle taught in: Germ	nan and/or English					
	Method of assessment			c) ora d) ora	l examination of c ાl examination in ફ	ne candidate each (3c	dates (30 to 60 minutes)	ns) or			

Application Subject	t Chemi	ie									
08-PCM1a-161-	Laser	Spectros	сору								
mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	es		S (2) + $\ddot{U}$ (1) Module taught in: German or English							
	Metho	d of asse	ssment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) Language of assessment: German and/or English							
o8-PCM1b-161-	Advan	ced Phys	ical Cher	mistry (	(Lab)			,			
mo1	ECTS	5	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	graduate		
	Course	es		P (4) Modu	le taught in: German	or English					
	Metho	d of asse	essment	and as	ortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) nd assessment of practical performance (2 to 4 random examinations) anguage of assessment: German and/or English						
	Additi	onal Info	rmation	Additi	onal information on	module duration: bl	ock taught lab course with app	rox. 20 working	days.		
08-PCM2-161-m01	1 Statistical Mechanics and Reaction Dynamics										
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses				S (2) + Ü (1) Module taught in: German or English						
	Metho	d of asse	essment	b) ora c) talk	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) talk (approx. 30 minutes) Language of assessment: German and/or English						
08-PCM3-161-m01	Nanos	cale Mat	erials					,			
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses				S (2) + $\ddot{\text{U}}$ (1) Module taught in: German or English						
	Method of assessment			b) ora c) talk Langu	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) talk (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus						

08-PCM4-161-m01	Ultrafast spectroscopy and quantum-control												
·	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S	•		S (2) + $\ddot{\text{U}}$ (1) Module taught in: German or English								
	Method	l of asse	essment	b) ora c) talk Langu	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) talk (approx. 30 minutes) Language of assessment: German and/or English								
		rerequis					3-PCM1b recommended.						
08-PCM5-161-m01		al Chem	<del> </del>		olecular Assemblies	•							
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	S			(2) + Ü (1) lodule taught in: German or English								
	Method	l of asse	essment	b) ora c) talk	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) talk (approx. 30 minutes) Language of assessment: German and/or English								
08-PCM6-161-m01	Physica	al Chem	istry (Adv	/anced	anced Lab)								
	ECTS	5	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Courses	S		P (4) Modu	le taught in: German	n or English							
	Method	l of asse	essment		presentation (approx. 20 minutes) Language of assessment: German and/or English								
	Additio	nal Info	rmation	Additi	onal information on	module duration: bl	ock taught lab course with app	rox. 20 working	days.				
08-TCM2-161-m01	Basics	and App	plications	of Qua	antum Chemistry								
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			S (2) +									
	Method of assessment				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								

o8-TCM3-161-mo1	Numerical N	lethods and	Programming								
	ECTS 5	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	<del></del>	S (2) + Ü (2)								
	Method of a	ssessment	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 assessm	anguage of assessment: German and/or English							
08-TCM4-161-m01	Quantum Dy	namics		<u> </u>							
	ECTS 5	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		S (2) + Ü (2)								
	Method of a	ssessment		n (approx. 90 to 180 minutes) or							
				one candidate each (20 to 30 minutes) or	11.1.1						
			d) log (approx. 20 pag	groups of up to 3 candidates (approx. 15 minutes) or	s per candidate) or						
			e) presentation (appro								
				nguage of assessment: German and/or English							
08-TCM1-161-m01	Selected To	pics in Theo	retical Chemistry		'						
	ECTS 5	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	`	S (2) + Ü (2)	·							
	Method of a	ssessment	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								
				a) log (approx. 20 pages) or e) presentation (approx. 30 minutes)							
			anguage of assessment: German and/or English								
08-TCAP1-161-m01	Theoretical	Chemistry -	Project course quantu	m chemistry							
	ECTS 5	Duration	1 semester	Method of grading (not) successfully comp	oleted Modul level	graduate					
	Courses		P (5)								
	Method of a	ssessment	presentation (approx.								
		,		ent: German and/or English							
	Additional Ir			n on module duration: block taught lab course wi	th approx. 20 working	g days.					
08-TCAP2-161-m01			Project course quantu	<del>-</del>							
	ECTS 5	Duration		Method of grading (not) successfully comp	oleted   Modul level	graduate					
	Courses		P (5)			_					
	Method of a	ssessment		presentation (approx. 30 minutes)							
				ent: German and/or English							
	Additional Ir	ntormation	Additional information	n on module duration: block taught lab course wi	th approx. 20 working	g days.					

Application Subjec	t Computer	Science and A	Aerospace Computer S	icience						
10-l=SEM3-161- mo1	Seminar 1	- Current Topi	ics in Computer Science	ce						
mo1	ECTS 5	Duration		Method of grading	numerical grade	Modul level	graduate			
	Courses		S (2)							
	Method of	fassessment	term paper (10 to 15 pages) and presentation (30 to 45 minutes) with subsequent discussion on a topic from the field of combuter science  Language of assessment: German and/or English							
	Additiona	l Information	Focuses available for LR, HCI´, GE.	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, IS, ES, .R, HCI´, GE.						
10-I=APR-161-m01	Advanced	Programming								
	ECTS 5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2)			·				
	Method of	assessment	If announced by the l of one candidate eac date).	anguage of assessment: German and/or English						
	Additiona	l Information	Focuses available for SE,IS,LR, HCI, ES,GE	students of the Master's	programme Informatik	(Computer Science, 12	o ECTS credits):			
10-l=AA-152-m01	Advanced	Automation				,				
	ECTS 8	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		/ ( <sub>4</sub> ) + Ü ( <sub>2</sub> )							
	Method of	fassessment	written examination (approx. 60 to 120 minutes) creditable for bonus							
	Additiona	l Information	Focuses available for IT,IS,ES,LR,GE	students of the Master's	programme Informatik	(Computer Science, 12	o ECTS credits):			
	Referred to	o in LPO I	§ 22 II Nr. 3 b)							
10-l=AGIS-161-m01	Algorithm	s for Geograp	hic Information System	ms						
	ECTS 5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	•	V (2) + Ü (2)	•	•	•				
	Method of	fassessment	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Additiona	l Information	Focuses available for AT,IS,HCI	students of the Master's	programme Informatik	(Computer Science, 12	o ECTS credits):			

10-l=AG-161-m01	Compu	tationa	l Geometr	v							
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Course	S		V (2) -	+ Ü (2)	<u>.</u>					
	Method	d of ass	essment	If ann of one date).	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
			· i	AT,HC		udents of the Master's programme Informatik (Cor	nputer Science, 12	o ECTS credits):			
10-I=APA-161-m01	Approx	imation	Algorith	ms							
	ECTS	5	Duration	1	1 semester	Method of grading   numerical grade	Modul level	graduate			
	Course	S		V (2) -	+ Ü (2)						
				If ann of one date). Langu credit	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,IT,GE							
	Referre	d to in I	_PO I	§ 22 l	§ 22 II Nr. 3 b)						
10-l=AUT-161-m01	Automa	ata The	ory								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	_	V (2) -	+ Ü (2)						
				If ann of one date). Langu credit	Language of assessment: German and/or English creditable for bonus						
	Additio	nal Info	rmation	Focus	es available for st	udents of the Master's programme Informatik (Cor	mputer Science, 12	o ECTS credits): AT, IT, ES, HCI, GE			

10-I=AVS-161-m01	Avionic	s Syste	ms								
	ECTS	5	Duration		ster	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (2) + Ü (2)		,		*			
	Method	d 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 candidate). Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info		Focuses availa ES,LR	ıble for s	tudents of the Master's	programme Informa	tik (Computer Science, 1	20 ECTS credits):		
10-HCI=M-	Multim	odal Us	er Interfa	ces		,					
MUI-161-m01	ECTS	5	Duration	1 semes	ster	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (2) + Ü (2)							
	Method of assessment			Language of a	presentation of project results (approx. 40 minutes) Language of assessment: German and/or English creditable for bonus						
	Additional Information			Focuses availa	ıble for s	tudents of the Master's	programme Informa	tik (Computer Science, 1	20 ECTS credits): HCI,GE.		
	Referred to in LPO I			§ 22 II Nr. 3 b)							
10-l=BER-161-m01	Computability Theory										
	ECTS	5	Duration	1 semes	ster	Method of grading	numerical grade	Modul level	graduate		
	Course	S		$V(2) + \ddot{U}(2)$							
	Method	d of ass	essment	If announced to of one candidate). Language of as	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 ex of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes   date). Language of assessment: German and/or English creditable for bonus						
	Additio	nal Info	rmation	Focuses availa AT,SE,IT,IS,GE	ıble for s	tudents of the Master's	programme Informa	tik (Computer Science, 1	20 ECTS credits):		
07-BI-161-m01	Bioinfo	rmatics	•								
	ECTS	5	Duration	1 semes	ster	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2) + Ü (2)							
	Method of assessment			written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus							

10-l=CB-161-m01	Compil	er Cons	truction				,	,			
	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	N	Nodul level	graduate	
	Course	S		V (2) +	+ Ü (2)			,			
	Method of assessment			If annotate).	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus						
	Additio	nal Info	rmation		es available for st	udents of the Master	s programme Informa	tik (Computer	r Science, 12	o ECTS credits):	
10-l=DDB-161-m01	Deduct	ive Data	abases		'	'					
	ECTS 8 Duratio			ı	1 semester	Method of grading	numerical grade	N	Nodul level	graduate	
	Courses			V (4) +	+ Ü (2)		•	-			
	Method of assessment			written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focus AT,SE		udents of the Master	s programme Informa	tik (Computer	r Science, 12	o ECTS credits):	
10-l=EL-161-m01	E-Learr	ning									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	N	Nodul level	graduate	
	Course	S		V (2) +	V (2) + Ü (2)						
	Method of assessment			If annotate).	vritten examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per date).  Language of assessment: German and/or English  Exercitable for bonus						
	Additional Information				es available for st IS,HCI,GE	tudents of the Master	s programme Informa	tik (Computer	r Science, 12	o ECTS credits):	
10-MCS=H-	Introdu	ıction ir	ito Humar	ı-Comp	outer Interaction						
Cl-161-mo1	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	N	Nodul level	graduate	
	Course	S		V (2) +	+ Ü (2)	·	•				
	Method	d of ass	essment	Langu		results (approx. 30 m nt: German and/or En					

10-I=ES-161-m01	Embed	ded Sy	stems							
	ECTS	8	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	·S	•	V (4) ·	+ Ü (2)		•	•		
				written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus						
			-	AT,SE	,ES,LR,GE	dents of the Master's programme Informatik (C	omputer Science, 120	o ECTS credits):		
10-I=PA-161-m01	Analys	is and I	Design of I	Progra	ms					
	ECTS 5 Duratio			1	1 semester	Method of grading   numerical grade	Modul level	graduate		
	Courses			V (2) ·	+ Ü (2)					
	Method of discission			written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus						
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): SE,IS,ES,GE						
10-l=IR-161-m01	Inform	ation R	etrieval							
	ECTS	5	Duration	1	1 semester	Method of grading   numerical grade	Modul level	graduate		
	Course	:S		V (2) ·	+ Ü (2)					
	Method	d of ass	essment	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus						
	Additio	onal Info			es available for stu HCI,GE	dents of the Master's programme Informatik (C	omputer Science, 120	o ECTS credits):		

-	3D User Inte	rfaces									
mo1	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	·	V (2) ·	+ Ü (2)							
	Method of as	ssessment	presentation of project results (approx. 30 minutes)								
				Language of assessment: German and/or English creditable for bonus							
	Additional Ir	formation			dents of the Master's programme Informatik (Co	mnutar Science 12	o FCTS cradits). HCL GF				
	Referred to i			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI,GE. § 22 II Nr. 3 b)							
10-l=KT2-161-m01	Computation										
101 112 101 11101	ECTS 5	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses	2 4.4	V (2)	<u> </u>	method of Stating   name to at State	1110000110101	Januaria				
	Method of as	ssessment			rox. 60 to 120 minutes).		-				
			If ann	ounced by the lectu	rer at the beginning of the course, the written ex						
			of one	•	pprox. 20 minutes) or an oral examination in gro	oups of 2 candidate	s (approx. 15 minutes per candi-				
					: German and/or English						
			credit	able for bonus							
	Additional Ir		Focus	ocuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, ES							
10-l=Kl1-161-m01	Artificial Inte				,		,				
	ECTS 5	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses		V (2) ·								
	Method of as	ssessment		written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination							
			of one	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-							
			date).	date).							
				Language of assessment: German and/or English creditable for bonus							
	Additional Ir	formation			dents of the Master's programme Informatik (Co	moutor Science 12	o ECTS crodits).				
	Additionatii	iioiiiatioii		,IS,HCl	dents of the master's programme informatik (Co	inputer science, 12	o Let's credits).				
10-l=Kl2-161-m01	Artificial Inte	elligence 2				'					
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses		V (2) ·	+ Ü (2)							
	Method of as	ssessment			rox. 60 to 120 minutes).						
			If ann	ounced by the lectu e candidate each (a	rer at the beginning of the course, the written express, an amount of the course, the written express, or an oral examination in gro	kamination may be	replaced by an oral examination				
			date).	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).							
					: German and/or English						
	A 1 1'	<b>.</b>		creditable for bonus							
	Additional Ir	itormation		ses available for stu ,IS,HCI,GE	dents of the Master's programme Informatik (Co	mputer Science, 12	o ECIS credits):				
			/ 11,JL	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1					

10-l=LVS-161-m01	Performance Evaluation of Distributed Systems											
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (4)	+ Ü (2)			10				
	Method of assessment			If and of on date) Lang	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focu: AT,IT		students of the Master's programme Informatik (Co	omputer Science, 12	o ECTS credits):				
10-l=ML-161-m01	Mather	matical	Logic				-					
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (2)	+ Ü (2)	·						
	Method				If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,IS,ES								
10-l=Ml-161-m01	Medica	al Inforr	natics		'		'					
	ECTS	5	Duration	1	1 semester	Method of grading   numerical grade	Modul level	graduate				
	Course	S		V (2)	+ Ü (2)							
	Method	d of ass	essment	If and of on date) Lang	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info	ormation		ses available for s ,IS,HCI,GE	students of the Master's programme Informatik (Co	omputer Science, 12	o ECTS credits):				

10-I=PEB-161-m01	Perform	ance E	ngineerin	g & Benchmarking of C	omputer Systems	-					
	ECTS	5	Duration	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	5		V (2) + Ü (2)	·	•					
	Method	of asse		If announced by the le of one candidate each date).	Language of assessment: German and/or English						
	Addition	nal Info		Focuses available for s SE,IT,ES,HCI,GE	students of the Master's programme Informatik (	Computer Science, 12	o ECTS credits):				
10-I=RAM-161-m01	Comput	er Arith	metic								
	ECTS	5	Duration	1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses	5		V (2) + Ü (2)							
	Method	of asse		If announced by the le of one candidate each date).	anguage of assessment: German and/or English						
	Addition	nal Info		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,ES							
10-l=R01-152-m01	Robotic	S 1									
	ECTS	8	Duration	1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses	5		V (4) + Ü (2)							
	Method	of asse	essment	written examination (a creditable for bonus	pprox. 60 to 90 minutes)						
	Addition	nal Info	rmation	Focuses available for s IS,ES,LR,HCI	students of the Master's programme Informatik (	Computer Science, 12	o ECTS credits):				
	Referred	d to in L	PO I	§ 22 II Nr. 3 b)							
10-l=RO2-152-m01	Robotic	S 2									
	ECTS	8	Duration	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	;		V (4) + Ü (2)		,					
	Method	of asse	essment	written examination (a creditable for bonus	pprox. 60 to 90 minutes)						
	Addition	nal Info	rmation	Focuses available for s	tudents of the Master's programme Informatik (	Computer Science, 12	o ECTS credits): IT, ES, LR				
	Referred	d to in L	PO I	§ 22 II Nr. 3 b)							

10-l=ST-161-m01	Discrete Eve	ent Simulati	on			<u>'</u>				
	ECTS 8	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (4)	+ Ü (2)	•					
	Method of a	ssessment		written examination (approx. 60 to 120 minutes).						
			If anr	f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination						
			of on date)	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidates)						
				anguage of assessment: German and/or English						
			credi	creditable for bonus						
	Additional I	nformation	Focus IT,IS,		idents of the Master's programme Informatik (C	omputer Science, 12	o ECTS credits):			
10-HCI=RIS-161-	Real-Time II	nteractive S	ystems	5						
mo1	ECTS 5	Duratio	n	1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses	· ·	V (2)	+ Ü (2)			•			
	Method of a	ssessment			prox. 60 to 120 minutes).	1				
					urer at the beginning of the course, the written					
			of on date)		approx. 20 minutes) or an oral examination in g	roups of 2 candidate	s (approx. 15 minutes per candi-			
				Language of assessment: German and/or English						
				creditable for bonus						
10-I=SAR-161-m01	Software Ar	chitecture								
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (2)	+ Ü (2)						
	Method of a	ssessment		written examination (approx. 60 to 120 minutes).						
			If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidates cash (approx, as minutes) or an oral examination in groups of a candidates (approx, as minutes) or an oral examination in groups of a candidates (approx, as minutes) or an oral examination in groups of a candidates (approx, as minutes) or an oral examination in groups of a candidates (approx, as minutes) or an oral examination in groups of a candidates (approx, as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes) or an oral examination in groups of a candidate (approx) as minutes							
			date)	of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate)						
			Langi	Language of assessment: German and/or English						
				table for bonus						
	Additional I	nformation	Focus SE,IT,		idents of the Master's programme Informatik (C	omputer Science, 12	o ECTS credits):			
	Referred to	in LPO I	§ 22	II Nr. 3 b)		'				
10-HCI=M-	Machine Le	arning (for U				,				
LUI-161-m01	ECTS 5	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses	<b>,</b>	V (2)	+ Ü (2)						
	Method of a	ssessment	prese	presentation of project results (approx. 40 minutes)						
				Language of assessment: German and/or English creditable for bonus						
	Additional I	nformation	Focus	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI,GE.						
	Referred to	in LPO I	§ 22	§ 22 II Nr. 3 b)						
Macter's with 1 major M			•	IMILWiirzhurg a generated 10 Apr. 2025 a evam reg data record 88 105 L. IHlando page 28 / 57						

10-l=VG-161-m01	Visuali:	zation c	of Graphs									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	S		V (2) -	+ Ü (2)							
	Method	l of asso		If ann of one date).	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English creditable for bonus							
				AT,IT,	HCI,GE	tudents of the Master's programme Informatik (0	Computer Science, 120	o ECTS credits):				
	Referre				I Nr. 3 b)							
10-I=AKA-161-m01	Selecte	d Topic	s in Algor	ithms								
	ECTS	5	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses	S		V (2) -	$(2) + \ddot{U}(2)$							
				of one date). Langu	If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral exam of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per date). Language of assessment: German and/or English creditable for bonus							
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT								
10-l=AKT-161-m01	Selecte	d Topic	s in Theo	ry								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	S		V (2) -	+ Ü (2)							
	Method	l of asso		If ann of one date).	written examination (approx. 60 to 120 minutes). f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info		Focus AT	es available for s	tudents of the Master's programme Informatik (0	Computer Science, 120	o ECTS credits):				

10-l=SSS-172-m01	Securit	y of So	ftware Sy	stems		,		,			
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			V (2) + Ü (2) Module taught in: English						
				If ann of one date) Langu credit	ritten examination (approx. 60 to 120 minutes). announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination f one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate). anguage of assessment: English reditable for bonus						
	Additio	nal Info	ormation	ES.		tudents of the Master' owledge in C is require	, .	k (Computer Science, 120	o ECTS credits): SE, IS, LR, HCI,		
10-l=NLP-182-m01	Machir	ie Learr	ning for Na	atural	Language Process	sing					
	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (2)	+ Ü (2)	•		-			
	Method of assessment			If ann of one date) Langu	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus						
	Additio	nal Info	ormation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, IS, HCI.							
10-l=PM-182-m01	Profess	sional P	roject Ma	nagen	nent	,		'			
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (4)	•				•		
	Method of assessment			If ann of one date) Langu	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi-						
	other p	rerequi	sites	We re	commend comple	eting module 10-I=PRJ	AK in parallel.				
	Additio	nal Info	ormation	Focus HCI, C		tudents of the Master'	s programme Informatik	k (Computer Science, 12	o ECTS credits): SE, IT, IS, ES, LR,		

10-I=PRJAK-162-	Project - Cı	urrent Topics	in Computer Science							
mo1	ECTS 5	Duratio	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		P (4)							
			Each project is offered Assessment can, the Language of assessn Assessment offered:	project report (10 to 15 pages) and presentation of project (15 to 30 minutes)  Each project is offered one time only. The project will not be repeated; there will not be another project with the same topic.  Assessment can, therefore, only be offered for the project offered in the respective semester.  Language of assessment: German and/or English  Assessment offered: In the semester in which the course is offered						
			Focuses available for LR, HCI, GE.	students of the Master's	programme Informatik (	Computer Science, 12	o ECTS credits): AT, SE, IT, IS, ES,			
10-I=STM-162-m01	NLP and Te	xt Mining								
	ECTS 5	Duratio	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2)			, and the second				
	metriod of t	ussessment	written examination (approx. 60 to 120 minutes).  If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).  Language of assessment: German and/or English							
	Additional	Information	Focuses available for	students of the Master's	programme Informatik (	Computer Science, 12	o ECTS credits): AT, IT, HCI.			
	Referred to	in LPO I	§ 22    Nr. 3 b)							
Application Subjec	t Physik									
11-BSV-161-m01	Image and	Signal Proce	ssing in Physics							
	ECTS 6	Duratio	n 1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2) Module taught in: Ge	erman or English						
	Method of a	assessment	b) oral examination of c) oral examination in d) project report (apple) presentation/talk If a written examinatiform of an oral examinating the lecturer must infollows:	on (approx. 90 to 120 minum of one candidate each (ap on groups (groups of 2, apporox. 8 to 10 pages) or (approx. 30 minutes). ion was chosen as metho ination of one candidate of orm students about this benent: German and/or Englanthe	prox. 30 minutes) or prox. 30 minutes per can do of assessment, this makes or an oral examinately four weeks prior to the lish	ay be changed and assition in groups. If the me original examination				

11-QUI-161-m01	Quantum Information Technology											
	ECTS 6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses		V (3) + R (1)		,							
	AA		Module taught in: German or English									
	Method of	assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
			d) project report (appr									
			If a written examination	e) presentation/talk (approx. 30 minutes). f a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
			form of an oral examir	nation of one candidate each or an oral examination	on in groups. If the m	ethod of assessment is changed,						
				rm students about this by four weeks prior to the c ent: German and/or English	original examination	date at the latest.						
				n the semester in which the course is offered and	in the subsequent se	emester						
11-PMM-161-mo1	Physics of	Advanced Ma			•							
	ECTS 6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses		V (3) + R (1) Module taught in: Ger	man or English								
	Method of	assessment	a) written examination (approx. 90 to 120 minutes) or									
			b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
			d) project report (approx. 8 to 10 pages) or									
			e) presentation/talk (approx. 30 minutes).									
			If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.									
			Language of assessment: German and/or English									
11-SPI-161-m01	Spintronic	<u> </u>	Assessment onered: I	Assessment offered: In the semester in which the course is offered and in the subsequent semester								
	ECTS 6	Duration	1 semester	Method of grading   numerical grade	Modul level	graduate						
	Courses		V (3) + R (1)			, -						
			Module taught in: German or English									
	Method of	assessment		n (approx. 90 to 120 minutes) or fone candidate each (approx. 30 minutes) or								
				groups (groups of 2, approx. 30 minutes) or	didate) or							
			d) project report (appr	rox. 8 to 10 pages) or								
			e) presentation/talk (a		who shanged and ass	secoment may instead take the						
			If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed to the control of the method of assessment is changed to the control of the method of assessment is changed to the control of the method of assessment is changed to the control of the method of assessment is changed to the control of the control									
			the lecturer must infor	e lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
			Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
			Assessment onerea: I	ii the semester in which the course is offered and	iii tiie Subsequent Se	emester						

11-FK2-161-m01	Solid S	tate Ph	ysics 2								
	ECTS	8	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	·		+ R (2)		,				
					Module taught in: German or English						
	Method	of ass	essment	a) wr	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or						
				e) pro	esentation/taik (a  ritten examinatior	oprox. 30 minutes). I was chosen as method of assessment, this may	be changed and ass	sessment may instead take the			
				form	of an oral examina	ation of one candidate each or an oral examinatio	n in groups. If the m	ethod of assessment is changed,			
						n students about this by four weeks prior to the o	riginal examination	date at the latest.			
						nt: German and/or English the semester in which the course is offered and i	n the subsequent se	emester			
11-FKS-161-m01	Solid S	tate Sp	ectrocopy								
		6	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Course	S	•		+ R (1) ule taught in: Gern	nan or English					
	Method of assessment			b) ora c) ora d) pro e) pro If a w	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the						
				the le	form of an oral examination of one candidate each or an oral examination in groups. If the method of assessmenthe lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-MAG-161-mo1	Magnet	tism		ASSE	Sament offered. III	the semester in which the course is offered and i	ii tiie subsequeiit st	emester			
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: German or English							
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-HLPH-161-m01	Semiconductor Physics											
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	·		+ R (1)		,						
				Module taught in: German or English								
	Method of a	ssessment	a) wr	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or								
			lf a w	esentation/taik (af ritten examination	oprox. 30 minutes). I was chosen as method of assessment, this may	he changed and as	sessment may instead take the					
			form	of an oral examina	ation of one candidate each or an oral examinatio	n in groups. If the m	ethod of assessment is changed,					
					n students about this by four weeks prior to the o	riginal examination	date at the latest.					
					nt: German and/or English the semester in which the course is offered and i	n the subsequent so	emester					
11-HNS-161-m01	Optical Prop	erties of Se		ductor Nanostruct								
	ECTS 6	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate					
	Courses			+ R (1)			•					
				Module taught in: German or English								
	Method of a	ssessment	a) wr	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or								
			c) ora	c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
			d) pro	d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,								
			the le	the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English  Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-QTH-161-m01	Quantum Tr	ansnort	Assessment offered: In the semester in which the course is offered and in the subseque				it semester					
11 Q111 101 11101	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3)	+ R (1)			10					
			Module taught in: German or English									
	Method of a	ssessment			(approx. 90 to 120 minutes) or							
					one candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per candi	date) or						
			d) pro	oject report (appro	x. 8 to 10 pages) or	date) of						
				e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is change the lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
			Langi	uage of assessmei	nt: German and/or English							
			Asses	ssment offered: In	the semester in which the course is offered and i	n the subsequent se	emester					

11-ASM-161-mo1	Methods of Observational Astronomy											
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	5		V (3) + R (1)		·						
	20.41			Module taught in: German or English								
	Method	l of asso	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).								
				e) presentation/talk ( If a written examination	approx. 30 minutes). on was chosen as method of assessment, this ma	v be changed and ass	sessment may instead take the					
				form of an oral exami	nation of one candidate each or an oral examinati	ion in groups. If the m	ethod of assessment is changed,					
					rm students about this by four weeks prior to the	original examination	date at the latest.					
					ent: German and/or English In the semester in which the course is offered and	I in the subsequent se	emester					
11-TPE-161-m01	Experim	nental F	Particle Ph									
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	5		V (3) + R (1) Module taught in: Ger	rman or English	•						
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or								
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,								
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
				Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-ASP-161-m01			Space Ph	nysics								
	ECTS	6	Duration		Method of grading   numerical grade	Modul level	graduate					
	Courses	5		V (3) + R (1) Module taught in: German or English								
	Method	of asso	essment	a) written examinatio	n (approx. 90 to 120 minutes) or							
					f one candidate each (approx. 30 minutes) or							
				<ul><li>d) project report (app</li></ul>	n groups (groups of 2, approx. 30 minutes per cand	didate) or						
				e) presentation/talk (								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
				orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, he lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
					ent: German and/or English	oligiliai examination	uate at the latest.					
					In the semester in which the course is offered and	I in the subsequent se	emester					

11-MAS-161-m01	Multi-wavel	Multi-wavelength Astronomy											
	ECTS 6	Duratio	1 semester	Method of grading numerical grade	Modul level	graduate							
	Courses		V (3) + R (1)		,								
	20 11 1 5			Module taught in: German or English									
	Method of a	ssessment	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or										
			If a written examination form of an oral examination the lecturer must infound Language of assessm	presentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the rm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, e lecturer must inform students about this by four weeks prior to the original examination date at the latest. In suggesting the instance of assessment: German and/or English is sessment offered: In the semester in which the course is offered and in the subsequent semester									
11-QM2-161-m01	Quantum M	echanics II											
	ECTS 8	Duratio	1 semester	Method of grading numerical grade	Modul level	undergraduate							
	Courses	,	V (4) + R (2) Module taught in: Ger	rman or English	'								
	Method of a		b) oral examination of c) oral examination in d) project report (appre) e) presentation/talk (all If a written examination form of an oral examination the lecturer must infor Language of assessm		y be changed and as on in groups. If the m original examination	nethod of assessment is changed, date at the latest.							
11-RTT-161-m01	Theory of Re												
	ECTS 6	Duratio		Method of grading   numerical grade	Modul level	graduate							
	Courses		V (3) + R (1) Module taught in: German or English										
	Method of a	ssessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is chang the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester										

11-QVTP-161-mo1	Many B	Many Body Quantum Theory												
	ECTS	8	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	S			V (4) + R (2) Module taught in: German or English									
	Method	d of asse	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester										
11-PKS-161-mo1	Physics	s of Con	plex Sys	tems										
	ECTS	6	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	S		V (2) - Modu	- R (2) le taught in: Germar	or English		,						
	Method	d of asse	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester										

11-QIC-161-m01	Quantu	m Infor	rmation ar	nd Qua	ntum Computing					
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses	S		V (3) - Modu	+ R (1) le taught in: Gern	nan or English				
	Modules successfully			a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
	Module comple		essfully	11-QM2 or 11-TFK						
11-TFK-161-m01	Theoret	tical So	lid State I							
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses	S		V (4) - Modu	+ R (2) le taught in: Gern	nan or English				
	Method	l of ass		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-TFK2-161-m01	Theoret	tical So	lid State F	hysics	2		,				
	ECTS	8	Duration	1	ı semester	Method of grading numerical grade	Modul level	graduate			
	Courses	S			V (4) + R (2) Module taught in: German or English						
	Method	of asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or							
				If a writ form of the lect Langua	e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English  Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-FTFK-161-m01	Field Th	neory in	Solid Sta	te Phys	ics						
	ECTS	8	Duration	1	ı semester	Method of grading numerical grade	Modul level	graduate			
	Courses	S		V (4) + Module	R (2) e taught in: Germ	an or English					
				b) oral c c) oral c d) proje e) preso If a writ form of the lect Langua	examination of o examination in great report (approxentation/talk (ap etten examination an oral examination turer must informage of assessmen	tion of one candidate each or an oral examination i	(approx. 30 minutes) or approx. 30 minutes per candidate) or thod of assessment, this may be changed and asseste each or an oral examination in groups. If the me is by four weeks prior to the original examination definition				
11-TOPO-161-mo1	Topolog						1				
	ECTS	6	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses	Courses			V (3) + R (1) Module taught in: German or English						
	Method	l of asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is change the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

Topology in Solid State Physics												
ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate						
Course	S		V (3) + R (1) Module taught in: German or English									
		-										
Method	d of ass		a) written examination	(approx. 90 to 120 minutes) or								
					idate) or							
			d) project report (approx. 8 to 10 pages) or									
			e) presentation/talk (a	pprox. 30 minutes). n was chosen as method of assessment, this may	he changed and ass	sessment may instead take the						
			form of an oral examin	ation of one candidate each or an oral examinatio	on in groups. If the m	ethod of assessment is changed,						
					riginal examination	date at the latest.						
					in the subsequent so	emester						
Theory	of Supe			The semester in which the course is offered and i	m the subsequent se							
			<u> </u>	Method of grading numerical grade	Modul level	graduate						
Course	S					,						
			Module taught in: German or English									
Method	d of ass		a) written examination (approx. 90 to 120 minutes) or									
			b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
			d) project report (approx. 8 to 10 pages) or									
			e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,									
			the lecturer must inform students about this by four weeks prior to the original examination date at the latest.									
			Language of assessment: German and/or English									
Comput	tations											
				Method of grading numerical grade	Modul level	graduate						
		J		Method of grading   numerical grade	Modulitevel	graduate						
Course.	3											
Method	of ass	essment	a) written examination	(approx. 90 to 120 minutes) or	1							
					• • • •							
					idate) or							
			e) presentation/talk (a	e) presentation/talk (approx. 30 minutes).								
			If a written examinatio	n was chosen as method of assessment, this may								
					in the subsequent se	emester						
	ECTS Course Method ECTS Course Method Compu ECTS Course Compu ECTS	ECTS 6 Courses  Method of ass  Theory of Superior   ECTS 6 Courses  Method of ass  Computationa ECTS 8 Courses	ECTS 6 Duration  Courses  Method of assessment  Theory of Superconduct  ECTS 6 Duration  Courses  Method of assessment  Computational Materials  ECTS 8 Duration  Courses  Method of assessment	Courses	Courses	Courses						

11-KFT-161-m01	Conformal F	ield Theory				,				
	ECTS 6	Duratio	n 19	semester	Method of grading numerical grade	Modul level	graduate			
	Courses	`		V (3) + R (1)						
				aught in: Gern	<del>_</del>		_			
	Method of a	ssessment	a) writter	n examination	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or					
					groups (groups of 2, approx. 30 minutes) of	ate) or				
					ox. 8 to 10 pages) or					
			e) preser	itation/talk (a en examinatio	pprox. 30 minutes). 1 was chosen as method of assessment, this may be	e changed and as	sessment may instead take the			
			form of a	n oral examina	ation of one candidate each or an oral examination i	in groups. If the m	ethod of assessment is changed,			
					m students about this by four weeks prior to the orig	inal examination	date at the latest.			
					nt: German and/or English the semester in which the course is offered and in t	the subsequent s	amester			
11-KFT2-161-m01	Conformal F	ield Theory		ciit oiicica. iii	the semester in which the course is officied and in	the subsequent so				
11 11 12 101 11101	ECTS 6	Duratio		semester	Method of grading   numerical grade	Modul level	graduate			
	Courses		V (3) + R				10			
			Module t	Module taught in: German or English						
	Method of a	ssessment	a) written examination (approx. 90 to 120 minutes) or							
			b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
			d) project report (approx. 8 to 10 pages) or							
			e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.							
			Language	Language of assessment: German and/or English						
MCF		1.0 1 51	Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-MSF-161-m01	Magnetism ECTS 6	Duratio		comoctor	Method of grading numerical grade	Modul level	graduate			
	Courses	Duratio		semester	Method of grading   numerical grade	Modul level	graduate			
	Courses		V (3) + R (1) Module taught in: German or English							
	Method of a	ssessment		a) written examination (approx. 90 to 120 minutes) or						
					one candidate each (approx. 30 minutes) or					
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).						
					n was chosen as method of assessment, this may be					
					ation of one candidate each or an oral examination in students about this by four weeks prior to the orig					
					nt: German and/or English	illat examination	uate at the latest.			
					the semester in which the course is offered and in	the subsequent s	emester			

11-TQP-161-m01	Topolo	gical Q	uantum Ph	nysics							
	ECTS	6	Duration	ı	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			V (3) + R (1)						
					le taught in: Germ	<del>_</del>					
	Method	d of ass	sessment	a) writ	tten examination ( Lexamination of o	approx. 90 to 120 minutes) or					
					b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
						x. 8 to 10 pages) or					
				e) pres	sentation/taik (ap itten examination	prox. 30 minutes). was chosen as method of assessment, this may l	be changed and ass	sessment may instead take the			
				form o	of an oral examina	tion of one candidate each or an oral examinatior	n in groups. If the m	ethod of assessment is changed,			
						students about this by four weeks prior to the or	iginal examination	date at the latest.			
						it: German and/or English the semester in which the course is offered and ir	n the subsequent se	emester			
11-CRP-161-mo1	Renorn	nalizati			itical Phenomena						
	ECTS	6	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Course	S		V (3) +			•				
	AA a tila a	J - E		Module taught in: German or English							
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or							
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
				d) project report (approx. 8 to 10 pages) or							
				e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the							
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English							
				Language or assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-BWW-161-mo1											
	ECTS	6	Duration	ו	1 semester	Method of grading   numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1)							
	0.0			Module taught in: German or English  a) written examination (approx. 90 to 120 minutes) or							
	Method	d of ass				approx. 90 to 120 minutes) or ne candidate each (approx. 30 minutes) or					
				c) oral	l examination in g	roups (groups of 2, approx. 30 minutes per candid	date) or				
				d) project report (approx. 8 to 10 pages) or							
				e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the							
						tion of one candidate each or an oral examination					
						students about this by four weeks prior to the or	iginal examination	date at the latest.			
						nt: German and/or English the semester in which the course is offered and ir	n the cubcequent co	amastar			
				73363	Jineni onereu. III	the semester in which the course is offered and if	i the subsequent st	Linestei			

11-EIT-161-m01	Gauge	Theoric	es							
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	S		V (3) + R (1)						
					le taught in: Gerr					
	Method	d of ass	sessment	a) writ	tten examination	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or				
						groups (groups of 2, approx. 30 minutes) of	idate) or			
				d) pro	ject report (appro	ox. 8 to 10 pages) or				
				e) pre	sentation/talk (a	pprox. 30 minutes).	h			
						n was chosen as method of assessment, this may ation of one candidate each or an oral examinatio				
						m students about this by four weeks prior to the o				
						nt: German and/or English				
CCD (			- 14			the semester in which the course is offered and i	n the subsequent se	emester		
11-GGD-161-m01			o Gauge/G							
		8	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate		
	Course			V (4) + Modu	+ R (2) le taught in: Gerr	nan or English				
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or						
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
				d) project report (approx. 8 to 10 pages) or						
				e) presentation/talk (approx. 30 minutes).						
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the						
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed the lecturer must inform students about this by four weeks prior to the original examination date at the latest.						
				Langu	Language of assessment: German and/or English					
				Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-EFQ-161-m01		ction t	o Fraction	al Quai	ntisation					
	ECTS	6	Duration	1	1 semester	Method of grading   numerical grade	Modul level	graduate		
	Course	S		V (3) + R (1)						
					Module taught in: German or English					
	Method	Method of assessment				(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or				
						groups (groups of 2, approx. 30 minutes) of	idate) or			
				d) project report (approx. 8 to 10 pages) or						
				e) presentation/talk (approx. 30 minutes).  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the						
						n was chosen as method of assessment, this may ation of one candidate each or an oral examinatio				
						n students about this by four weeks prior to the o				
				Langu	age of assessme	nt: German and/or English				
				Asses	sment offered: Ir	the semester in which the course is offered and i	n the subsequent se	emester		

11-TEF-161-m01	Topolog	gical Ef	fects in Ele	ectronic Systems		'				
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses	5		V (3) + R (1)						
				Module taught in: Ge						
	Method	l of ass	essment	a) written examination of	n (approx. 90 to 120 minutes) or fone candidate each (approx. 30 minutes) or					
					n groups (groups of 2, approx. 30 minutes) or	ndidate) or				
				d) project report (app						
				e) presentation/talk (	(approx. 30 minutes). on was chosen as method of assessment, this ma	ay he changed and ass	sessment may instead take the			
				form of an oral exami	nation of one candidate each or an oral examinat	tion in groups. If the m	ethod of assessment is changed,			
					orm students about this by four weeks prior to the	e original examination	date at the latest.			
					nent: German and/or English In the semester in which the course is offered and	d in the subsequent se	emester			
11-FTAS-161-m01	Field Th	eoretic		s of Solid State Physic		a in the subsequent se				
		6	Duration		Method of grading   numerical grade	Modul level	graduate			
	Courses	5		V (3) + R (1)			,			
				Module taught in: Ge						
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or						
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
				d) project report (approx. 8 to 10 pages) or						
				e) presentation/talk (approx. 30 minutes).						
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,						
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest.						
				Language of assessment: German and/or English						
11-AKM-161-mo1	Cosmol	0001		Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-AKW-161-11101		6	Duration	ı 1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses			V (3) + R (1)						
	Courses	,		Module taught in: German or English						
	Method	l of ass			n (approx. 90 to 120 minutes) or					
	method of dissessiment				f one candidate each (approx. 30 minutes) or	- d:d-4-)				
					n groups (groups of 2, approx. 30 minutes per can	ididate) or				
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).						
					on was chosen as method of assessment, this ma					
					nation of one candidate each or an oral examinat orm students about this by four weeks prior to the					
					nent: German and/or English	e oligiliai examination	uate at the tatest.			
					In the semester in which the course is offered and	d in the subsequent se	emester			

11-AST-161-m01	Theoretical A	Astrophysic	:s	-		'				
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses	<del></del>		V (2) + R (2)						
				ıle taught in: Gern			_			
	Method of a	ssessment	a) wr	itten examination	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or					
					groups (groups of 2, approx. 30 minutes) of	didate) or				
			d) pro	oject report (appro	ox. 8 to 10 pages) or	•				
			e) pre	esentation/talk (a	pprox. 30 minutes). 1 was chosen as method of assessment, this may	y he changed and acc	secoment may instead take the			
					ation of one candidate each or an oral examination					
			the le	ecturer must inform	n students about this by four weeks prior to the o					
					nt: German and/or English the semester in which the course is offered and	in the subsequent so	amactar			
11-APL-161-m01	High Energy	Astronhysi		- Sillellt olleled: III	the semester in which the course is offered and	iii tile subsequelit se	eniestei			
TI-AI L-IOI-IIIOI	ECTS 6	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses	Duratio		+ R (1)	Method of glading manifested glade	Modulitevel	graduate			
	Courses			ıle taught in: Gern	nan or English					
	Method of a	ssessment	a) written examination (approx. 90 to 120 minutes) or							
			b) ora	b) oral examination of one candidate each (approx. 30 minutes) or						
			c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or							
			e) presentation/talk (approx. 30 minutes).							
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
			Lang							
11-RQFT-161-m01	Relativistic									
	ECTS 8	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses		V (4) + R (2) Module taught in: German or English							
	Method of a	ssessment			(approx. 90 to 120 minutes) or					
					one candidate each (approx. 30 minutes) or	didata) ar				
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or						
			e) pre	e) presentation/talk (approx. 30 minutes).						
					n was chosen as method of assessment, this may					
					ation of one candidate each or an oral examination of one candidate each or an oral examination students about this by four weeks prior to the control of th					
						onginal examination	date at the latest.			
				Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						

11-QFT2-161-m01	Quantu	m Field	Theory II				,		
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate	
	Courses	5			+ R (2)				
					ıle taught in: Germ			_	
	Method	l of ass	essment	b) ora	al examination of o	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or			
						roups (groups of 2, approx. 30 minutes per candi x. 8 to 10 pages) or	date) or		
				e) pre	esentation/talk (ap	pprox. 30 minutes).			
				form	of an oral examina	was chosen as method of assessment, this may ution of one candidate each or an oral examination students about this by four weeks prior to the or	n in groups. If the m	ethod of assessment is changed,	
				Langi	uage of assessmei	nt: German and/or English			
						the semester in which the course is offered and in	n the subsequent se	emester	
11-TEP-161-m01					le Physics		1		
		8	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate	
	Courses				+ R (2) ule taught in: Germ	an or English			
	Method	i or ass		b) ora c) ora d) pro e) pro If a w form the le Lange	al examination of onlead examination in going of the property of the property of an oral examination of an oral examination oral examination oral examination of an oral examination oral examination or an or	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or croups (groups of 2, approx. 30 minutes per candix. 8 to 10 pages) or oprox. 30 minutes).  I was chosen as method of assessment, this may ution of one candidate each or an oral examination students about this by four weeks prior to the ont: German and/or English the semester in which the course is offered and in	be changed and as n in groups. If the m riginal examination	ethod of assessment is changed, date at the latest.	
11-ATTP-161-m01					l Elementary Parti				
	ECTS	6	Duration		1 semester	Method of grading   numerical grade	Modul level	graduate	
	Courses	S		V (3) + R (1) Module taught in: German or English					
	Method	l of ass		b) ora c) ora d) pro e) pro If a w form the lo Lange	al examination of onlead examination in going of the property of the property of the property of an oral examination of assessments.	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or croups (groups of 2, approx. 30 minutes per candix. 8 to 10 pages) or opprox. 30 minutes). It was chosen as method of assessment, this may ution of one candidate each or an oral examination students about this by four weeks prior to the orat: German and/or English the semester in which the course is offered and in	be changed and as n in groups. If the m riginal examination	ethod of assessment is changed, date at the latest.	

11-BSM-161-m01	Models	Beyon	d the Sta	ndard I	Model of Element	ary Particle Physics					
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			V (3) + R (1) Module taught in: German or English						
	Method	l of ass	essment	b) ora c) ora d) pro e) pre If a wi form of the le Langu	written examination (approx. 90 to 120 minutes) or or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or project report (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. anguage of assessment: German and/or English assessment offered: In the semester in which the course is offered and in the subsequent semester						
Internship											
10-M=E-	Internship Mathematics										
PRK-161-m01	ECTS	ECTS 10 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		P (o)							
	Method of assessment			a) placement report (15 to 30 pages) or b) talk (30 to 60 minutes)							
	other p	other prerequisites			In advance, please consult with a lecturer who agrees to be your supervisor.						
Thesis (30 ECTS cr	edits)										
10-M=MAAR-161-	Master	Thesis	Mathema	atics							
mo1	ECTS	30	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		No courses assigned to module							
	Method	l of ass	essment	Master's thesis (750 to 900 hours total) Registration and assignment of topic in consultation with supervisor. Language of assessment: German or English							
	other prerequisites			The supervisor may make the successful completion of certain modules that are relevant for the respective topic a prerequisite for the assignment of the topic.							
	Additional Information			Time	to complete: 6 mo	onths					