

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Computational 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

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.

Examination regulations version: 2022

Examination regulations version: 2022

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)):

02-Feb-2022 (2022-7)

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	o be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessme	ent								
	Only after su completion o		l if applica	if applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		cati- if applica	if applicable							
	Additional information		on if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Compulsory Electiv	es (90 E	CTS cre	dits)									
Subfield Numerical	Mather	natics a	nd Optim	ization	(30 ECTS credits)							
10-M=AAAN-161-	Applie	d Analys	is									
mo1	ECTS	10	Duration	1	1 semester	graduate						
	Course	:S			V (4) + Ü (2) Module taught in: German and/or English							
	Method	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) c. anguage 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-	Selecte	ed Topic	s in Optir	nizatio	n							
T-161-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	·S			V (4) + Ü (2) Module taught in: German and/or English							
	Method of assessment			b) ora c) ora Langu Asses	tten examination (ap l examination of one l examination in grou age of assessment: sment offered: In the able for bonus	emester						
10-M=VMPH-161-	Selecte	ed Topic	s in Math	ematio	al Physics			,				
mo1	ECTS	10	Duration	1	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=AOP-	Basics	Basics in Optimization											
T-161-m01	ECTS	10	Duration	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 asso	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-	Mather	matical	Continuu	m Mec	hanics								
KOM-161-mo1	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (3) + Modu	- Ü (1) le taught in: Germaı	n and/or English							
	Method	d of asso	essment	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 reditable for bonus								
10-M=ANG-	Numeric of Large Systems of Equations												
G-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 asso	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=VN-	Numeri	ic of Par	tial Diffe	rential	Equations								
PE-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: Germaı	n and/or English							
	Method	d of asso	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=VOST-161-	Optima	Optimal Control											
mo1	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S			V (3) + Ü (1) Module taught in: German and/or English								
			essment	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 reditable for bonus								
10-M=VI-	Inverse	Proble	ms 1			·							
PR-222-m01	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (3) - Modu	+ Ü (1) lle taught in: Germa	nn and/or English							
	Method of 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) 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=VIP2-222-	Inverse	Inverse Problems 2											
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses				V (3) + Ü (1) Module taught in: German and/or English								
	Method of 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) 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	ed Topic	s in Num	erical a	and Applied Mather	matics							
NAM-192-m01	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S			$V(4) + \ddot{U}(2)$ 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								

Subfield Mathemat	tics (10 ECT	S credits)										
10-M=AAL-	Topics in A	Algebra										
G-161-m01	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	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or									
				o) oral examination of one candidate each (approx. 20 minutes) or c) 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									
			Assessment offered: In creditable for bonus	the semester in which the course is offered	and in the subsequent s	emester						
10-M=ADG-	Differentia	l Geometry	creditable for bollas									
M-161-mo1	ECTS 10		n 1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses		V (4) + Ü (2)			10						
			Module taught in: Gern									
	Method of	od of assessment a) written examination (approx. 90 to 120 minutes, usually chosen) or										
				one candidate each (approx. 20 minutes) or groups (groups of 2, 15 minutes per candida								
			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-	Complex A	nalveie	creditable for bollus									
H-161-mo1	ECTS 10		n 1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses	Baratio	V (4) + Ü (2)	method of grading humeneat grade	Modulitevel	Siddate						
			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 assessme		ite)							
			Assessment offered: In	the semester in which the course is offered	d and in the subsequent s	emester						
AA ACAAC (0 11	<u>C </u>	creditable for bonus		,							
10-M=AGMS-161- mo1		Structures	n Lacomostor	Mathad of avading humavical avada	Modul level	avaduata						
	ECTS 10 Courses	Duratio		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		, 							
Master's with 1 major Co	mputational Mat	hematics (2022)		JMU Würzburg • gene	rated 19-Apr-2025 • exam. reg. data	record 88 f24 - - H 2022 page 6 / 55						

10-M=AIST-161-	Industr	Industrial Statistics 1											
mo1	ECTS	10	Duration	1	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) c. anguage of assessment: German or English chasessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=ALTH-161-	Lie The	eory											
mo1	ECTS	10	Duration		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	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=ARTH-161-	Contro	Control Theory											
mo1	ECTS	10	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				$V(4) + \ddot{U}(2)$ 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=ASM-	Stocha	stic Mo	dels of Ri	sk Mar	nagement								
R-161-m01	ECTS	10	Duration		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	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=AST-	Stochas	stical P	rocesses										
P-161-m01	ECTS	10	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S			/ (4) + Ü (2) Module taught in: German and/or English								
	Method	l of ass	essment	b) ora c) ora Langu Asses	n) written examination (approx. 90 to 120 minutes, usually chosen) or n) oral examination of one candidate each (approx. 20 minutes) or n) oral examination in groups (groups of 2, 15 minutes per candidate) nanguage of assessment: German or English nanguage of assessment offered: In the semester in which the course is offered and in the subsequent semester neditable for bonus								
10-M=A-	Topolog	gy											
TOP-161-mo1	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S			+ Ü (2) lle taught in: Germ	an and/or English							
	Method	l of ass	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or color of one candidate each (approx. 20 minutes) or color or color of one candidate each (approx. 20 minutes) or color or color of								
10-M=AVS-	Insuran	Insurance Mathematics 1											
M-161-m01	ECTS	10	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S			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=AZ-	Time Se	eries Aı	nalysis										
RA-212-m01	ECTS	10	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S			+ Ü (2) le taught in: Germ	nan and/or English							
	Method	l of ass	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=AZTH-161-	Number Theory												
mo1	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S	·	V (4) -		an and /or English	,						
	Mothod	l of acc	essment		Module taught in: German and/or English a) written examination (approx. 90 to 120 minutes, usually chosen) or								
	Method	ı 01 ass	essillelli) 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-		ni Prod	i Lecture (Maste	r)								
Cin-152-mo1	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (3) -	+ Ü (1) le taught in: Englis	sh							
	Method	d of ass	essment			approx. 60 to 90 minutes, usually chosen) or							
						ne candidate each (approx. 15 minutes) or	ate)						
				Langu	c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) Language of assessment: English								
					ssessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus								
10-M=VA-	Solocto	d Toni	s in Analy		able for bonus		1						
NA-161-mo1	-	10	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	ļ	Duration	V (4) -		Method of glading numerical glade	Modulitevel	graduate					
	Course				Module taught in: German and/or English								
	Method	d of ass	essment	a) wri	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)								
				Langu	age of assessmen	t: German or English							
				Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M=VFN-	Selecte	d Topic	cs in Finan		athematics								
M-161-m01	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S			V (4) + Ü (2)								
	Method	l of ass			Module taught in: German and/or English a) written examination (approx. 90 to 120 minutes, usually chosen) or								
	Wethor	. 01 uss	Coomen	b) ora	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=VGDS-161-	Groups and their Representations												
mo1	ECTS	10	Duration	1	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 asso		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=VIST-161-	Industr	rial Stat	istics 2										
mo1	ECTS	10	Duration)	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (4) + Modu	- Ü (2) le taught in: Germaı	n and/or English							
	Method	d of asse		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) 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=V-	Mather	Mathematical Statistics											
STA-212-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		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=VVS-	Insurar	nce Mat	hematics	2									
M-161-mo1	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course			V (4) + Ü (2) Module taught in: German and/or English									
	Method	d of asse		b) ora c) oral Langu Asses	n) written examination (approx. 90 to 120 minutes, usually chosen) or n) oral examination of one candidate each (approx. 20 minutes) or n oral examination in groups (groups of 2, 15 minutes per candidate) n anguage of assessment: German or English n assessment offered: In the semester in which the course is offered and in the subsequent semester n reditable for bonus								

10-M=VD-	Dynam	ical Sy	stems		1	,							
SY-161-mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	es			/ (3) + Ü (1) Module taught in: German and/or English								
	Metho	d of ass	essment	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 ssessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus								
10-M=VMB-	Mathe	matical	Imaging										
V-161-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	es			+ Ü (1) ıle taught in: Germ	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 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-	Select	Selected Topics in Control Theory											
TRT-161-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			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-		near An	alysis										
NAN-161-m01	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	es		V (3) · Modu	+ Ü (1) ıle taught in: Germ	an and/or English							
	Metho	d of ass	essment	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) 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=VV-	Netwo	Networked Systems											
SY-161-mo1	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	es.			/ (3) + Ü (1) Module taught in: German and/or English								
	Metho	d of ass	essment	b) ora c) ora Langu Asses	n) written examination (approx. 60 to 90 minutes, usually chosen) or n) oral examination of one candidate each (approx. 15 minutes) or n) oral examination in groups (groups of 2, approx. 10 minutes per candidate) nanguage of assessment: German or English nanguage of assessment offered: In the semester in which the course is offered and in the subsequent semester areditable for bonus								
10-M=VK-	Compl	ex Geor	netry										
GE-161-m01	ECTS	10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	25			+ Ü (2) ıle taught in: Germa	an and/or English							
				b) ora c) ora Langu Asses credit	o written examination (approx. 90 to 120 minutes, usually chosen) or								
10-M=VPD-		Partial Differential Equations of Mathematical Physics											
P-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	Courses			V (4) + Ü (2) Module taught in: German and/or English								
	Method of assessment			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-	Pseudo	o Riema	nnian and	Riem	annian Geometry								
PRG-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	25			+ Ü (2) ıle taught in: Germa	an and/or English							
	Metho	d of ass	essment	b) ora c) ora Langu Asses	vritten examination (approx. 90 to 120 minutes, usually chosen) or								

10-M=AF-	Functional Analysis												
AN-161-mo1	ECTS	10	Duration	1	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 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=VAD-	Applied	Differe	ntial Geo	metry									
G-161-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses	5		V (4) + Modu	- Ü (2) le taught in: Germaı	n and/or English		,					
			essment	b) ora c) ora Langu Asses credit) 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=VG-	Giovanni Prodi Lecture Selected Topics (Master)												
PSin-152-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			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-	Giovani	ni Prodi	Lecture A	Advanc	ed Topics (Master)								
PAin-152-mo1	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: English									
	Method of assessment			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-	Giovanni Pro	di Lecture	Moder	n Topics (Master)								
M=VGPMin-152-	ECTS 10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
m01	Courses			+ Ü (2) ıle taught in: English			•					
	Method of as	sessment	b) ora c) ora Langu Asses	written examination (approx. 90 to 120 minutes, usually chosen) or								
10-M=EL-	Learning by 1	eaching 1										
T1-192-m01	ECTS 5	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Courses		Ü (2)									
	Method of as	sessment	Asses Langu	ssessment of tutoring activities by supervising lecturers or exercise supervisors (1 to 2 teaching units) anguage of assessment: German								
	Additional Inf	formation	Appli	cation and selection	with the teaching co	ordinator for mathematics						
10-M=VGFT-192-	Geometric Complex Analysis											
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 as	sessment	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-	Cryptography	//Coding T	heory	,								
KRY-192-m01	ECTS 10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			+ Ü (2) ıle taught in: Germar	n and/or English							
	Method of as	sessment	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-	Compu	iter Alge	ebra									
CAL-192-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S			+ Ü (2) le taught in: Germa	n and/or 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: German or English ssessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus							
10-M=VAZ-	Algorit	hmic Nu	umber Th	eory								
T-192-m01	ECTS 10 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S			/ (4) + Ü (2) Module taught in: German and/or 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: German or English assessment offered: In the semester in which the course is offered and in the subsequent semester reditable for bonus							
10-M=VA-	Algebraic Geometry											
GE-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	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=AAZ-	Analyti	ic Numb	er Theory	/								
T-222-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 of assessment			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=VAFT-222-	Selected Topics in Complex Analysis												
mo1	ECTS 5	Duration	1 semester	Method of grading numerical grade	Modul level	graduate							
	Courses		V (3) + Ü (1) Module taught in: Ger	rman and/or English									
	Method of	assessment	b) oral examination oc) oral examination inLanguage of assessm) 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 reditable for bonus									
10-M=VAT-	Algebraic	Topology											
P-161-m01	ECTS 10			Method of grading numerical grade	Modul level	graduate							
	Courses		V (4) + Ü (2) Module taught in: Ger	rman 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 Arithmetics												
KAR-161-m01	ECTS 10			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-	Discrete N	Nathematics											
DIM-161-m01	ECTS 5	Duration		Method of grading numerical grade	Modul level	graduate							
	Courses		V (3) + Ü (1) Module taught in: Ger										
	Method of	assessment	b) oral examination o c) oral examination in Language of assessm	amination (approx. 60 to 90 minutes, usually chosen) or ination of one candidate each (approx. 15 minutes) or nation in groups (groups of 2, approx. 10 minutes per candidate) assessment: German or English offered: In the semester in which the course is offered and in the subsequent semester r bonus									

10-M=V-	Aspects of Geometry											
GEO-161-mo1	ECTS 5	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				+ Ü (1) ıle taught in: Germa	n and/or English		,				
	Method	of asse	essment	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 reditable for bonus							
10-M=VMPH-161-	Selected	Topic	s in Math	emati	cal Physics			'				
mo1	ECTS 1	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		,		(4) + Ü (2) odule 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=VMT-	Module 1	Theory	,									
H-161-mo1	ECTS 5	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses				V (3) + Ü (1) Module taught in: German and/or English							
	Method	of asse	essment	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) 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=MP1-161-	Analysis	and G	eometry	of Clas	ssical Systems							
mo1	ECTS 1	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			b) ora c) ora Langu	al examination of on	e candidate each (apups (groups of 2, 15	utes, usually chosen) or prox. 20 minutes) or minutes per candidate)					

10-M=MP2-161-	Algebr	Algebra and Dynamics of Quantum Systems												
mo1	ECTS	10	Duration	ı 1 sem	ester	Method of grading	numerical grade	Modul level	graduate					
	Course	!S		V (4) + Ü (2) Module tauş	ght in: Germa	an and/or English								
	Method	d of ass	essment	b) oral examc) oral examLanguage of	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=E-	Interns	ship Ma	thematics	,										
PRK-161-mo1	ECTS	10	Duration	ı 1 sem	ester	Method of grading	numerical grade	Modul level	graduate					
	Course			P (o)										
	Method	d of ass	essment		a) placement report (15 to 30 pages) or b) talk (30 to 60 minutes)									
	other p	er prerequisites In advance, please consult with a lecturer who agrees to be your supervisor.												
Subfield Research	in Group	os and S	d Seminars (10 ECTS credits)											
Applied Mathemat	ics (10 E	CTS cre	dits)											
10-M=GM-	Research in Groups - Mathematics in the Sciences													
SC-161-mo1	ECTS	10	Duration	ı 1 sem	ester	Method of grading	numerical grade	Modul level	graduate					
	Course	!S		V (2) + S (2) Module taught in: German 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=GN-	Resear	ch in G	roups - Nu	merical Math	nematics and	d Applied Analysis								
MA-161-mo1	ECTS	10	Duration	ı 1 sem	ester	Method of grading	numerical grade	Modul level	graduate					
	Course	!S		V (2) + S (2) Module taug	tht in: Germa	an and/or English								
	Method	d of ass												
10-M=GROC-161-		ch in G	roups - Ro	botics, Optin	nization and	Control Theory								
mo1	ECTS	10	Duration					graduate						
	Course	!S		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=SGP-	Giovan	ni Prodi	Seminar	(Mast	er)	1						
Cin-152-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		S (2) Modu	le taught in: English							
	Method	d of asse	essment	Langi	alk (60 to 120 minutes) .anguage of assessment: English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
10-M=SID-	Interdi	sciplina	ry Semin	ar								
C-161-mo1	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		S (2) Modu	le taught in: Germar	n and/or English		·				
	Method	d of asse	essment	Langi	oo to 120 minutes) lage of assessment: sment offered: In th		the course is offered	and in the subsequent se	emester			
10-M=SM-	Semina	r Mathe	ematics i	n the S	ne Sciences							
SC-161-m01	ECTS 5 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			S (2) Modu	le taught in: Germar	n and/or English						
	Method of assessment			Langi	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 in Numerical Mathematics and Applied Analysis											
MA-161-mo1	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=SOP-	Semina	ar in Opt	timizatio	n				'				
T-161-m01	ECTS	5	Duratio			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=SA-	Sem	inar App	lied Mathe	matics	3			'						
MA-192-m01	ECT5	5 5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Cou	rses		S (2) Modu	ıle taught in: Germaı	n and/or English								
	Met	hod of as	sessment	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=GIN-	Res	Research in Groups - Inverse Problems												
P-222-m01	ECTS 10 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses				V (2) + S (2) Module taught in: German and/or English									
	Met	hod of as	sessment	Langi	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									
Mathematics														
10-M=GAL-	Res	esearch in Groups - Algebra												
G-161-m01	ECT5	5 10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses				+ S (2) ıle taught in: Germar	n and/or English								
	Method of assessment			Langi	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-	Research in Groups - Discrete Mathematics													
DIM-161-m01	ECTS	5 10	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Cou	rses			V (2) + S (2) Module taught in: German and/or English									
	Met	hod of as	sessment	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-	Res	earch in (Groups - Dy	namic	al Systems and Con	trol Theory		'						
SC-161-m01	ECTS	ECTS 10 Duratio												
	Cou	rses		V (2) + S (2) Module taught in: German and/or English										
	Met	hod of as	sessment	Langi	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-	Rese	arch in G	roups - Co	mplex	Analysis								
COA-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	ses			+ S (2) le taught in: Germar	n and/or English		,					
	Meth	nod of ass	essment	Langi	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=GGM-	Research in Groups - Geometry and Topology												
T-161-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+ S (2) le taught in: Germar	n and/or English							
	Meth	od 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=GM-	Research in Groups - Mathematics in Context												
CX-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	ses			+ S (2) le taught in: Germar	n and/or English							
	Meth	nod of ass	essment	Langi	50 to 120 minutes) lage of assessment: sment offered: In th		the course is offered a	nd in the subsequent se	emester				
10-M=G-	Rese	Research in Groups - Measure and Integral											
MAI-161-m01	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	ses		V (2) + S (2) Module taught in: German and/or English									
	Meth	nod 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=GT-	Rese	arch in G	oups - Tir	ne Ser	ies Analysis			'					
SA-161-m01	ECTS	10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	ses		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-	Rese	earch in G	oups - St	atistic	 S			-	-				
STA-161-m01	ECTS	3 10	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	rses			+ S (2) le taught in: Germar	n and/or English							
	Meth	nod of ass	essment	Langi	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-	Research in Groups - Number Theory												
mo1	ECTS	5 10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				/ (2) + S (2) Module taught in: German and/or English								
	Meth	nod of ass	essment	Langi	lk (60 to 120 minutes) Inguage of assessment: German or English Seessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=GC-	Rese	earch in Gi	roups - Co	ntrol T	heory of Quantum N	Mechanical Systems		'					
QS-161-mo1	ECTS	5 10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	rses			+ S (2) le taught in: Germar	n and/or English							
	Meth	nod of ass	essment	Langi	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-	Research in Groups - Differential Geometry												
GE-161-mo1	ECTS	3 10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (2) + S (2) Module taught in: German and/or English									
	Meth	nod 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=GDF-	Rese	earch in Gi	oups - De	forma	tion Quantization			'					
Q-161-m01	ECTS	5 10	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cour	rses		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=GN-	Resear	ch in G	roups - No	n-line	ar Analysis			,					
LA-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			+ S (2) lle taught in: Germar	n and/or English		,					
	Method	d of ass	essment		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=GO-	Docoor	ah in C	****** O	perator Algebras									
PA-161-mo1	ECTS		Duratio		1 semester	Method of grading	numorical grado	Modul level	graduate				
	Course	10	Duratio			Method of grading	numencai grade	Modul level	graduate				
	Course	5			V (2) + S (2) Module taught in: German and/or English								
	Method	d of ass	sessment	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=GLIE-192-	Resear	esearch in Groups - Lie Theory											
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				+ S (2) Ile taught in: Germar	n and/or English		•					
	Method of assessment			Langi	uage of assessment:		the course is offered a	and in the subsequent se	emester				
10-M=GAD-	Research in Groups - Applied Differential Geometry												
G-192-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			+ S (2) Ile taught in: German	n and/or English		·					
	Method	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							emester				
10-M=G-	Resear	ch in G	roups - M	athem	atical Physics								
MAP-192-m01	ECTS	10	Duratio					graduate					
	Course	S	,	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=GHST-222-	Resear	ch in Gr	oups - Hi	gher S	tructures								
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2) -		.,		•					
					Module taught in: German and/or English								
	Method	l of asse	essment		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=G-	Resear	ch in Gr	oups - Fu		ctional Analysis								
FAN-222-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2) - Modu	+ S (2) le taught in: German	and/or English							
	Method	l of asse	essment	Langu	oo to 120 minutes) lage of assessment: sment offered: In the		the course is offered and	d in the subsequent se	emester				
10-M=SAD-	Semina	ır in App	lied Diffe	erentia	ntial Geometry								
G-161-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			S (2) Modu	le taught in: German	and/or English							
	Method of assessment			Langi	So to 120 minutes) lage of assessment: sment offered: In the		the course is offered and	d in the subsequent se	emester				
10-M=SAL-	Seminar in Algebra												
G-161-mo1	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	l of asse	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=SD-	Semina	r in Dyr	namical S	ystem	s and Control								
SC-161-m01	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		S (2) Module taught in: German and/or English									
	Method of assessment												

10-M=S-	Sem	inar i	n Complex	Analysis	"			-					
COA-161-m01	ECT5	S 5	Dura	tion	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cou	rses	·	S (2) Mod	ule taught in: Germar	n and/or English							
	Metl	hod o	fassessme		alk (60 to 120 minutes)								
				Lang	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-	Sem	inar i	n Financia		Insurance Mathematics								
FIM-161-mo1	ECTS		Dura		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cou	rses		S (2) Mod	ule taught in: Germar	'		'	,,,				
	Met	hod o	f assessme	Lang	(60 to 120 minutes) Iguage of assessment: German or English Resessment offered: In the semester in which the course is offered and in the subsequent semester								
10-M=S-	Sem	inar i	n Geometr	and Top	opology								
GTO-161-m01	ECTS 5 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			S (2) Mod	ule taught in: Germar	n and/or English							
	Met	hod o	fassessme	Lang	(60 to 120 minutes) ruage of assessment: ssment offered: In th	German or English e semester in which	the course is offered	and in the subsequent se	emester				
10-M=S-	Seminar in Statistics												
STA-161-m01	ECT5	S 5	Dura	tion	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses				S (2) Module taught in: German and/or English								
	Met	hod o	f assessme	Lang	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-	Sem	inar i	n Non-line	r Analys	is			'					
LA-161-m01	ECTS	S 5	Dura	tion					graduate				
	Cou	rses			S (2) Module taught in: German and/or English								
	Method of assessment			Lang	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								

Subfield Applicatio	n Subject (10 ECTS	credits)								
Application Subject	t Biology and Medic	cine								
07-MS2BI-152-m01	Bioinformatics									
	ECTS 10 Du	ıration	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + S (1) Module taught in: German and/or English							
	Method of assessr	c) or d) or	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 Du	ıration	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	Mod) + S (1) ule taught in: Germa							
	Method of assessr	b) lo c) or d) or e) pr	g (15 to 30 pages) or al examination of one	e candidate each (30 oups of up to 3 candio minutes)	dates (30 to 60 minutes)	ŕ				
07-MS2BIF2-152-	Bioinformatics F2									
mo1	ECTS 15 Du	ıration	1 semester	Method of grading	(not) successfully comp	leted Modul level	graduate			
	Courses		9) + S (1) ule taught in: Germa	n and/or English						
	Method of assessr	b) lo c) or d) or e) pr	g (15 to 30 pages) or al examination of one	e candidate each (30 oups of up to 3 candio minutes)	dates (30 to 60 minutes)	·				
07-MBI-B-152-m01										
	ECTS 5 Du	ıration	1 semester	Method of grading	(not) successfully comp	leted Modul level	graduate			
	Courses	V (2) Mod	ule taught in: Germa	n and/or English						
	Method of assessr	c) or d) or	al examination of one	e candidate each (30 oups of up to 3 candid	dates (30 to 60 minutes)	estions) or				

07-MS3S-152-m01	System	s Biolo	gy		,	,							
	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (2)				,					
					lle taught in: Germa								
	Method	d of ass	essment) written examination (30 to 60 minutes, including multiple choice questions) or) oral examination of one candidate each (30 to 60 minutes) or								
				d) ora	oral examination in groups of up to 3 candidates (30 to 60 minutes)								
			-1-	Langu	anguage of assessment: German and/or English								
07-MS3SYF1-152-	System				1	1							
mo1	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			+ S (1) lle taught in: Germa	an and/or English							
	Method	d of ass	essment				luding multiple choice question	s) or					
					g (15 to 30 pages) o		o to 60 minutes) 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) pre	e) presentation (20 to 45 minutes)								
		Language of assessment: German and/or English											
07-MS3SYF2-152-	System	s Biolo							,				
mo1	ECTS	15	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Course) + S (1) Ile taught in: Germa	an and/or English							
	Method	d of ass	essment	a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (15 to 30 pages) or									
						। ne candidate each (३०	o to 60 minutes) or						
				d) ora	al examination in gr	roups of up to 3 cand	idates (30 to 60 minutes) or						
					esentation (20 to 45	5 minutes) t: German and/or Eng	dich						
07-MS-B-152-m01	System	s Riolo	ov R	Lange	age of assessifier	t. definan and/or Life	3030						
0, 11,5 1,5 11,61		5	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Course			V (2)	1		7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2						
					ıle taught in: Germa	an and/or English							
	Method	d of ass	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								
				30			,						

Application Subjec	t Chemic	e									
08-PCM1a-161-	Laser S	pectros	сору								
mo1	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			S (2) + Ü (1) Module taught in: German or English						
	Method	d of asse	essment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) Language of assessment: German and/or English							
08-PCM1b-161-	Advanc	ed Phys	sical Che	mistry	(Lab)						
mo1	ECTS 5 Durati			n	1 semester	Method of grading	(not) successfully completed	Modul level	graduate		
	Course	S	•	P (4) Modu	le taught in: Germar	n or English					
	Method	d of asse	essment	and a	ortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each and assessment of practical performance (2 to 4 random examinations) anguage 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-PCM2-161-m01	Statist	ical Med	hanics a	and Reaction Dynamics							
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		S (2) - Modu	+ Ü (1) le taught in: Germar	n or English					
	Method	d of asse	essment	b) ora c) talk	l examination of one (approx. 30 minute		prox. 20 minutes) or				
08-PCM3-161-m01	Nanoso	ale Mat	erials								
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			S (2) + Ü (1) Module taught in: German or English							
	Method	d of asse	essment	b) ora c) talk Langu	l examination of one (approx. 30 minute		prox. 20 minutes) or				

08-PCM4-161-m01	Ultrafa	st spect	roscopy a	and qua	antum-control			1	-		
·	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	S		S (2) + Modu	- + Ü (1) le taught in: German	n or English					
	Method	l of asse	essment	b) ora c) talk Langu) written examination (approx. 90 minutes) or) oral examination of one candidate each (approx. 20 minutes) or) talk (approx. 30 minutes) anguage of assessment: German and/or English						
		rerequis					B-PCM1b recommended.	-			
08-PCM5-161-m01		al Chem	 		olecular Assemblies						
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	S			2) + Ü (1) dule 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	ranced 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	l of asse	essment	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English							

o8-TCM3-161-mo1	Numerical N	lethods and	Programming	,							
	ECTS 5	Duration	1 seme	ster	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 e) presentation (approx. 30 minutes)								
			Language of a	issessmen	it: German and/or Englis	sh					
08-TCM4-161-m01	Quantum Dy	/namics			,						
	ECTS 5	Duration	1 seme	ster	Method of grading	numerical grade	Modul level	graduate			
	Courses		S (2) + Ü (2)								
	Method of a	ssessment			approx. 90 to 180 minut						
					ne candidate each (20 t						
			d) log (approx			tes (approx. 15 minutes per d	candidate) or				
			e) presentation								
				nguage of assessment: German and/or English							
08-TCM1-161-m01	Selected To	pics in Theo	retical Chemis	etical Chemistry							
	ECTS 5	Duration	n 1 seme	ster	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							
			e) presentation								
			Language of a	issessmen	nt: German and/or Englis	sh					
08-TCAP1-161-m01	Theoretical	Chemistry -	Project course	quantum	chemistry						
	ECTS 5	Duration	1 seme	ster	Method of grading (not) successfully completed	Modul level	graduate			
	Courses		P (5)								
	Method of a	ssessment	presentation								
					it: German and/or Englis						
	Additional Ir					ck taught lab course with ap	prox. 20 working	g days.			
08-TCAP2-161-m01					<u> </u>						
	ECTS 5	Duration		ster	Method of grading (not) successfully completed	Modul level	graduate			
	Courses		P (5)					_			
	Method of a	ssessment		presentation (approx. 30 minutes)							
					it: German and/or Englis						
	Additional Ir	ntormation	Additional inf	ormation o	on module duration: blo	ck taught lab course with ap	prox. 20 working	g days.			

Application Subject	t Computer	Science and A	Aerospace Computer Sci	ence					
10-I=SEM3-212-	Seminar 1	- Current Topi	cs in Computer Science						
mo1	ECTS 5	Duratio	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		S (2) Module taught in: German and English The course is offered in parallel in both German and English.						
	Method of		term paper (10 to 15 pages) and presentation (30 to 45 minutes) with subsequent discussion on a topic from the field of computer science Language of assessment: German and/or English						
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, KI, ES, LR, HCI, GE						
10-I=APR-212-m01	Advanced	Programming							
	ECTS 5	Duratio	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2)						
	Method of	assessment	If announced by the led of one candidate each date).	anguage of assessment: German and/or English					
			Focuses available for st ES,GE,SEC	tudents of the Master's programme Informatik (Computer Science, 12	o ECTS credits): SE,KI,LR, HCI,			
10-I=AA-152-m01	Advanced A	Automation							
	ECTS 8	Duratio	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		V (4) + Ü (2)						
	Method of	assessment	written examination (ap creditable for bonus	oprox. 60 to 120 minutes)					
	Additional	Information	Focuses available for st IT,IS,ES,LR,GE	tudents of the Master's programme Informatik (Computer Science, 12	o ECTS credits):			
	Referred to	in LPO I	§ 22 II Nr. 3 b)						
10-l=A-	Algorithms	s for Geograp	hic Information Systems	3					
GIS-212-m01	ECTS 5	Duratio	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses	,	V (2) + Ü (2)						
	Method of		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,KI,HCI,LR						
Master's with 1 major Co	mputational Mat	hematics (2022)		JMU Würzburg • generated :	19-Apr-2025 • exam. reg. data 1	record 88 f24 - - H 2022 page 31 / 55			

10-l=AG-161-m01	Comput	tational G	ieometry			·	-				
!	ECTS	5 C	Duration	1 semester	Method of grading numerical grade	Modul level	graduate				
ļ	Courses	5	V	(2) + Ü (2)	·	•					
	Method	of assess	If a	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							
			cre								
	Additio	nal Inform		cuses available for st 「,HCI,GE	udents of the Master's programme Informatik (0	Computer Science, 12	o ECTS credits):				
10-l=APA-161-m01	Approx	imation A	lgorithms	,							
	ECTS	5 C	Duration	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	5	V	(2) + Ü (2)		*					
	و نعاد اد		of da La cre	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							
		d to in LPC		22 II Nr. 3 b)							
10-I=AUT-212-m01	r					1					
			Duration	1 semester	Method of grading numerical grade	Modul level	graduate				
	Method of assessment			V (2) + 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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
	Additio	nal Inform	nation Fo	cuses available for st	udents of the Master's programme Informatik (G	Computer Science, 12	o ECTS credits): AT, IT, ES, HCI, GE				
	Referre	d to in LPC	0 I § 2	22 II Nr. 3 b)							

10-l=AVS-161-m01	Avionic	s Syste	ems									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	S		V (2) ·	$V(2) + \ddot{U}(2)$							
	Method	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	nal Info	rmation	Focus ES,LR		dents of the Master's	programme Informatik (C	Computer Science, 120	ECTS credits):			
10-HCI=M-	Multim	odal Us	er Interfa	ces								
MUI-161-mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	S		V (2) ·	+ Ü (2)				-			
	Method	l of ass	essment	Langu	esentation of project results (approx. 40 minutes) nguage of assessment: German and/or English editable for bonus							
	Additio	nal Info	rmation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI,GE.								
	Referre	d to in I	LPO I	§ 22 l	§ 22 Nr. 3 b)							
10-l=BER-212-m01	Comput	tability	Theory									
	ECTS	5	Duration 1 semester Method of grading numerical grade Modul level graduate									
	Courses			V (2) ·								
	Method	l 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 odate). Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
	Additio	nal Info	rmation	Focus	es available for stud	dents of the Master's	programme Informatik (C	Computer Science, 120	o ECTS credits): AT,SE,IT,KI,GE			
	Referre	d to in I	LPO I	§ 22 l	Nr. 3 b)							
07-Bl-161-m01	Bioinfo	rmatics	3									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S		V (2) ·	+ Ü (2)							
	Method	l 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								

10-I=CB-161-m01	Compil	er Cons	truction									
	ECTS	5	Duratio	n .	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S	·	V (2) -	$V(2) + \ddot{U}(2)$							
	Additional Information			If ann of one date). Langu credit	Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info	ormation	Focus SE,IT,		dents of the Master's programme Informatik (Co	omputer Science, 12	o ECTS credits):				
10-I=DDB-212-m01	Deduct	ive Dat	abases									
	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (2) -	+ Ü (2)							
	Method	i or 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							
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's programme Informatik (Co	omputer Science, 12	o ECTS credits): AT,SE,IT,KI				
	Referre	d to in I	LPO I	§ 22 l	l Nr. 3 b)							
10-l=EL-212-m01	E-Learn	ing			-							
	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course				+ 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							
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's programme Informatik (Co	omputer Science, 12	o ECTS credits): SE, IT, KI, HCI, GE				

10-l=ES-161-m01	Embedo	ded Sys	tems			'		,			
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	5		V (4) -	+ Ü (2)			•			
	Method	l of asso	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	nal Info		Focus		dents of the Master	s programme Informatik	(Computer Science, 1	20 ECTS credits):		
10-I=PA-161-m01	Analysi	s and D	esign of l	Progra	ms	,					
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	S	•	V (2) -	+ Ü (2)	•	•	•			
	Method	l of asso	essment	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						
	Additional Information			Focus SE,IS,		dents of the Master	s programme Informatik	(Computer Science, 1	20 ECTS credits):		
10-I=IR-212-m01	Informa	ation Re	etrieval								
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (2) -							
	Method	l of asso	essment	If ann of one date).	ounced by the lecture candidate each (a		of the course, the writte or an oral examination ir		e replaced by an oral examination res (approx. 15 minutes per candi-		
	Additio	nal Info	rmation	Focus	es available for stu	dents of the Master	s programme Informatik	(Computer Science, 1	20 ECTS credits): IT,KI,HCI,GE		
10-HCl=3DUI-161-	3D Use	r Interfa	aces								
mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V (2) -							
	Method of assessment			Langu	presentation of project results (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus						
	Additio	nal Info	rmation	Focus	es available for stu	dents of the Master	s programme Informatik	(Computer Science, 1	20 ECTS credits): HCI,GE.		
	Referre	d to in l	_PO I	§ 22 l	Nr. 3 b)						

10-I=KT2-212-m01	Compu	tationa	l Complex	ity II								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (2) -	+ Ü (2)							
	Method	l 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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
			-			dents of the Master's programme Informatik (Compu	uter Science, 12	o ECTS credits): AT, SE, IT, ES				
	Referre			§ 22 l	l Nr. 3 b)							
10-l=Kl1-212-m01			igence 1		r							
		5	Duration	-	1 semester Method of grading numerical grade Modul level graduate (2) + Ü (2)							
	Course			` ,								
	Method	1 OT 455	essmem	If ann of one date).	ounced by the lecture candidate each (a	rox. 60 to 120 minutes) For at the beginning of the course, the written exam For at the beginning of the course, the written exam For an oral examination in groups For German and/or English						
	Additio	nal Info	rmation	Focus	es available for stu	dents of the Master's programme Informatik (Compu	uter Science, 12	o ECTS credits): AT,SE,KI,HCI				
10-l=Kl2-212-m01	Artificia	al Intell	igence 2									
	ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate				
	Course			V (2) -								
	Method	l 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	nal Info	rmation	Focus	es available for stu	dents of the Master's programme Informatik (Compu	uter Science, 12	o ECTS credits): AT,SE,KI,HCI,GE				

10-l=LVS-161-m01	Perform	nance E	valuation	of Dis	tributed Systems	<u> </u>					
	ECTS	8	Duration)	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	S		V (4)	+ Ü (2)			•			
	Method	d of asse		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			ses available for s	students of the Master'	s programme Informatik	(Computer Science, 12	o ECTS credits):		
10-l=ML-212-m01	Mather	matical	Logic					,			
	ECTS	5	Duration)	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	<u></u> S		V (2)	+ Ü (2)			•			
				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 Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus							
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,KI,ES							
	Referre	d to in L	PO I	§ 22	II Nr. 3 b)						
10-l=Ml-212-m01	Medica	l Inform	atics								
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			$V(2) + \ddot{U}(2)$							
	Method	d of asse	essment	written examination (approx. 60 to 120 minutes) If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info	rmation	Focus	ses available for s	students of the Master'	s programme Informatik	(Computer Science, 12	o ECTS credits): SE, IT, KI, HCI, GE		
	Referre	d to in L	PO I	§ 22	II Nr. 3 b)						

10-I=PEB-182-mo1	Performano	e Engineerin	g and	Benchmarking of Co	omputer Systems		, ,				
	ECTS 5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			+ Ü (2)							
				le taught in: English							
	Method of a	assessment		n examination (app uage of assessment	rox. 90 to 120 minut	es)					
				able for bonus	. Liigiisii						
10-I=RAM-161-m01	Computer A	Arithmetic									
	ECTS 5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) -	+ Ü (2)			'	•			
	Method of a	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							
	Additional	Information	Focus AT,ES	cuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): T,ES							
10-I=R01-212-m01	Robotics 1										
	ECTS 8	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (4) - Modu	+ Ü (2) ıle taught in: English	1						
	Method of a	assessment	If ann of one date). Separ	ounced by the lectue candidate each (a	pprox. 20 minutes) of the student of	of the course, the writte or an oral examination in		replaced by an oral examinatior s (approx. 15 minutes per candi-			
	Additional	Information	Focus	ses available for stu	dents of the Master's	s programme Informatik	(Computer Science, 120	ECTS credits): KI, ES, LR, HCI, (
10-l=RO2-212-m01	Robotics 2			1	1		,				
	ECTS 8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (4) - Modu	+ Ü (2) ıle taught in: English	1						
	Method of a	assessment	written examination (approx. 60 to 90 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: English creditable for bonus								
	Additional	Information	Focus	es available for stu	dents of the Master's	s programme Informatik	(Computer Science, 120	ECTS credits): IT, ES, LR			
Master's with 1 major Co	mputational Math	ematics (2022)				JMU Würzburg • generated	d 19-Apr-2025 • exam. reg. data re	ecord 88 f24 - - H 2022 page 38 / 5			

10-l=ST-212-m01	Discret	te Event	Simulation	n							
	ECTS	8	Duration	ı	1 semester	Method of grading numerical grade		Modul level	graduate		
	Course	es		V (4)	+ Ü (2)	·	-				
	Metho	d of ass	essment	written examination (approx. 60 to 120 minutes)							
				of one date) Langu	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		Focus IT,KI,E		students of the Master's programme Inforn	natik (Comput	er Science, 12	o ECTS credits):		
10-HCI-PRIS-212-	Princip	oles of I	nteractive	Syste	ms						
mo1	ECTS	5	Duration	า	1 semester	Method of grading numerical grade		Modul level	graduate		
	Course	es			+ Ü (2) le taught in: Gerr	man and/or English					
	Metho	d of ass	essment	b) ora Langu) written examination (approx. 90 minutes) or) oral examination of one candidate each (approx. 30 minutes) anguage of assessment: German and/or English reditable for bonus						
10-I=SAR-161-m01	Softwa	re Arch	itecture								
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade		Modul level	graduate		
	Course			V (2)							
	Metho	d of ass	essment	If ann of one date) Langu	ounced by the le e candidate each	pprox. 60 to 120 minutes). cturer at the beginning of the course, the v (approx. 20 minutes) or an oral examinati ent: German and/or English					
	Additio	onal Info	ormation	Focus SE,IT,		students of the Master's programme Inforn	natik (Comput	er Science, 12	o ECTS credits):		
	Referre	ed to in I	LPO I	§ 22 l	l Nr. 3 b)						
10-HCI=M-	Machin	ne Learr	ning (for U	ser Int	erfaces)						
LUI-161-m01	ECTS	5	Duration	1	1 semester	Method of grading numerical grade		Modul level	graduate		
	Course	es		V (2)	+ Ü (2)						
	Metho	d of ass	essment	presentation of project results (approx. 40 minutes) Language of assessment: German and/or English creditable for bonus							
	Additio	onal Info	rmation	Focus	es available for s	students of the Master's programme Inforn	natik (Comput	er Science, 12	o ECTS credits): HCI,GE.		
	Referre	ed to in	LPO I	§ 22 l	l Nr. 3 b)						

10-I=VG-161-m01	Visuali	zation (of Graphs							
	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						
				AT,IT,	HCI,GE	tudents of the Master's programme Informatik	(Computer Science, 120	o ECTS credits):		
	Referre				l Nr. 3 b)					
10-I=AKA-161-m01		ed Topic	s in Algo	ithms						
	ECTS 5 Duratio			1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (2)	+ Ü (2)					
	Wethor	u 01 u33	CSSITETT	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 examinatior of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candi- date). Language of assessment: German and/or English creditable for bonus					
	Additional Information			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT						
10-l=AKT-161-m01	Selecte	ed Topio	s in Theo	ry	·		,			
	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	nal Info	rmation	Focus AT	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits):					

10-l=SSS-212-m01	Securit	y of Softwa	re System	<u> </u>						
		<u> </u>	ıration	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S) + Ü (2) dule taught in: Englis	sh					
	Method	d of assessi	If ar of o 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: English creditable for bonus						
	Additio	nal Informa	tion Foci ES,		udents of the Master's programme Informatik (0	Computer Science, 12	o ECTS credits): SE, KI, LR, HCI,			
10-I=NLP-212-m01	Machin	e Learning	for Natura	l Language Processi	ing					
	ECTS	5 Du	ıration	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	V (2) + Ü (2)	·	·				
			of o date Lan	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 Informa	tion Foci	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,KI,HCI						
	Referre	d to in LPO	l § 22	§ 22 II Nr. 3 b)						
10-I=PM-212-m01	Profess	sional Proje	ct Manage	ement			_			
	ECTS	5 Du	ıration	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	V (4	.)						
	Method	d of assessi	If ar of o 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						
	other p	rerequisite	We	recommend complet	ting module 10-I=PRJAK in parallel.					
	Additio	nal Informa		uses available for stu T,KI,ES,LR,HCI,GE	udents of the Master's programme Informatik (Computer Science, 12	o ECTS credits):			

10-I=PRJAK-212-	Project	- Curre	nt Topics	in Con	nputer Science						
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical gra	ide	Modul level	graduate		
	Courses	S		P (4)							
	Method	l of ass	essment	project report (10 to 15 pages) and presentation of project (15 to 30 minutes) Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered (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)							
	Additio	nal Info			Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, SE, IT, KI, ES, LR, HCI, GE						
10-I=STM-162-m01	<u></u> ,	d Text M	Mining								
	ECTS	5	Duration		1 semester	Method of grading numerical gra	ide	Modul level	graduate		
	Courses	S		V (2) -	+ Ü (2)						
	Method of assessment			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						
	Additio	nal Info	rmation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT, IT, HCI.							
	Referre	d to in I	_PO I	§ 22 l	l Nr. 3 b)						
10-I=SNA-222-m01	Statisti	cal Net	work Ana	lysis	,						
	ECTS	5	Duration	1	1 semester	Method of grading numerical gra	ide	Modul level	graduate		
	Courses	S			+ Ü (2) lle taught in: Engli	sh					
	Method	l of ass	essment	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-						

Application Subjec	t Physik										
11-BSV-161-m01	Image and	l Signal Proce	ssing i	n Physics							
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V (2) + Ü (2) Module taught in: German or English								
	Method of	fassessment	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-PMM-161-mo1	Physics of	f Advanced Ma									
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	·	V (3) - Modu	+ R (1) lle taught in: Germa	n 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-SPI-161-m01	Spintronics	i								
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			V (3) + R (1)						
				ıle taught in: Gerr						
	Method of a	assessment	a) wr	itten 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						
			d) pro							
			e) pre	esentation/talk (a ritten examination	pprox. 30 minutes). n was chosen as method of assessment, this may	he changed and as	sessment may instead take the			
					ation of one candidate each or an oral examinatio					
					m 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 s	emester			
11-FKS-161-m01	Solid State	Spectrocopy		33ilicili olicica. II	The semester in which the course is offered and i	Ti tile subsequent se				
111183 101 11101	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	assessment	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) pre	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							
		1	Asses	ssment offered: Ir	the semester in which the course is offered and i	n the subsequent se	emester			
11-MAG-161-mo1	Magnetism									
	ECTS 6	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			+ R (1) ıle taught in: Gerr	nan or English					
	Method of a	assessment			(approx. 90 to 120 minutes) or					
					one candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per candi	data) or				
					ox. 8 to 10 pages) or	date) of				
			e) pre	esentation/talk (a	pprox. 30 minutes).					
			If a w	ritten examination	n was chosen as method of assessment, this may ation of one candidate each or an oral examinatio	be changed and as:	sessment may instead take the			
					n students about this by four weeks prior to the o					
			Langi	uage of assessme	nt: German and/or English					
			Asses	ssment offered: Ir	the semester in which the course is offered and i	n the subsequent s	emester			

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 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 in form of an oral examination of one candidate each or an oral examination in groups. If the method of ast the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester	may instead take the assessment is changed,
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 in form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
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 in form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
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 n form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
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 in form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
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 in form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment in form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	assessment is changed,
the lecturer must inform students about this by four weeks prior to the original examination date at the Language of assessment: German and/or English	
Language of assessment: German and/or English	e idiesi.
Assessment offered: In the semester in which the course is offered and in the subsequent semester	l
11-ASM-161-mo1 Methods of Observational Astronomy	
ECTS 6 Duration 1 semester Method of grading numerical grade Modul level graduate	e
Courses V (3) + R (1) 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 n	
form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the	
Language of assessment: German and/or English	e idlest.
Assessment offered: In the semester in which the course is offered and in the subsequent semester	
11-TPE-161-m01 Experimental Particle Physics	
ECTS 6 Duration 1 semester Method of grading numerical grade Modul level graduate	.e
Courses V (3) + R (1)	
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 n	may instead take the
form of an oral examination of one candidate each or an oral examination in groups. If the method of as the lecturer must inform students about this by four weeks prior to the original examination date at the	
Language of assessment: German and/or English	c latest.
Assessment offered: In the semester in which the course is offered and in the subsequent semester	

11-ASP-161-m01	Introduct	tion to Spac	e Phys	sics						
	ECTS 6	6 Dura	tion	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			(3) + R (1)						
				Module taught in: German or English						
	Method o	of assessme			n (approx. 90 to 120 minutes) or					
				o) oral examination of one candidate each (approx. 30 minutes) or) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
					rox. 8 to 10 pages) or	ardate) or				
			e)	presentation/talk (a	approx. 30 minutes).					
					on was chosen as method of assessment, this may nation of one candidate each or an oral examination					
					rm students about this by four weeks prior to the c					
			La	nguage of assessme	ent: German and/or English	_				
		1			n the semester in which the course is offered and	in the subsequent se	emester			
11-MAS-161-mo1		velength As								
	ECTS 6	6 Dura		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			/ (3) + R (1) Module taught in: German or English						
	Method o	of assessme		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,						
					rm students about this by four weeks prior to the c ent: German and/or English	oligiliai exallillation	uate at the tatest.			
					n the semester in which the course is offered and	in the subsequent se	emester			
11-QM2-161-m01	Quantum	n Mechanics	Ш							
	ECTS 8	B Dura	tion	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			(4) + R (2)						
				odule taught in: Ger						
	Method o	of assessme	nt a)	written examination	n (approx. 90 to 120 minutes) or					
			(0	oral examination in	fone candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per cand	didate) or				
					rox. 8 to 10 pages) or	ardate) or				
					approx. 30 minutes).					
					on was chosen as method of assessment, this may					
					nation of one candidate each or an oral examination rm students about this by four weeks prior to the c					
					ent: German and/or English	onginal chammanom	aute at the fatest.			
					n the semester in which the course is offered and	in the subsequent se	emester			

11-RTT-161-m01	Theory	of Rela	tivity								
	ECTS	6	Duration	n	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	essment	a) wri	tten 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).						
				e) pre	esentation/taik (a ritten examination	pprox. 30 minutes). 1 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	on in groups. If the m	ethod of assessment is changed,			
						n students about this by four weeks prior to the o	original examination	date at the latest.			
						nt: German and/or English the semester in which the course is offered and i	in the subsequent se	emester			
11-PKS-161-mo1	Physics	of Cor	nplex Sys								
		6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses				/ (2) + R (2) 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) 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 lecturer must inform students about this by four weeks prior to the original examination date at the latest.						
				the le							
				Langi	uage of assessme						
11-TFK-161-mo1	Theoret	tical So	olid State			the semester in which the course is offered and	in the subsequent se	emester			
11-15K-101-11101		8	Duration	<u> </u>	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses		Daration		+ R (2)	method of glading humered glade	moduliteret	Siddate			
				Module taught in: German or English							
	Method	l of ass	essment			(approx. 90 to 120 minutes) or					
						one candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per cand	idata) or				
						ox. 8 to 10 pages) or	idate) of				
				e) pre	esentation/talk (a	pprox. 30 minutes).					
						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					
				Langi	uage of assessme	nt: German and/or English					
				Asses	ssment offered: In	the semester in which the course is offered and i	in the subsequent se	emester			

11-TFK2-161-m01	Theoretic	cal Solid Stat	e Physi	CS 2							
	ECTS 8	B Durat	on	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	·		V (4) + R (2)							
		<u> </u>		Module taught in: German or English							
	Method	of assessmen		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) pr	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 examina	ation of one candidate each or an oral examinatior	n in groups. If the m	ethod of assessment is changed,				
					n 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	the subsequent se	emester				
11-CMS-161-m01	Computa	tional Materi				· ···· suppopulation					
	ECTS 8			1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	•		(4) + R (2) Module taught in: German or English							
	Method o	of assessmen	_	a) written examination (approx. 90 to 120 minutes) or							
			b) or	b) oral examination of one candidate each (approx. 30 minutes) or							
			c) 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 v	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 ass the lecturer must inform students about this by four weeks prior to the original examination date at the la Language of assessment: German and/or English							
			Asse	ssment offered: In	the semester in which the course is offered and in	the subsequent se	emester				
11-KFT-161-m01	Conforma	al Field Theor	у								
	ECTS 6	Durat		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses			+ R (1)							
	Mathada	of accossmon		ule taught in: Gern							
	Method	oi assessinen			(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or						
			c) or	al examination in ક્	groups (groups of 2, approx. 30 minutes per candic	date) or					
			d) pr	oject report (appro	ox. 8 to 10 pages) or						
			lf a v	esentation/taik (a vritten examinatioi	pprox. 30 minutes). It was chosen as method of assessment, this may be	he changed and ass	sessment 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								
					n students about this by four weeks prior to the or	iginal examination	date at the latest.				
				anguage of assessment: German and/or English ssessment offered: In the semester							
			7,1330		the semester in which the course is officied that if	- and Jubbequent st					

11-KFT2-161-m01	Conformal Field Theory 2											
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	;		V (3) + R (1)								
					le taught in: Germ							
	Method	of asse	essment	a) wri	tten examination ((approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or						
						roups (groups of 2, approx. 30 minutes) or	date) or					
				d) pro	ject report (appro	x. 8 to 10 pages) or	2010) 0.					
				e) pre	esentation/talk (ap	pprox. 30 minutes).						
						was chosen as method of assessment, this may be tion of one candidate each or an oral examination						
						n students about this by four weeks prior to the ori						
				Langu	uage of assessmer	nt: German and/or English						
						the semester in which the course is offered and in	the subsequent se	emester				
11-CRP-161-mo1					itical Phenomena							
		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 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-BWW-161-mo1	Bosonisation and Interactions in One Dimension											
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	;		V (3) + R (1)								
				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) pre	e) presentation/talk (approx. 30 minutes).							
						was chosen as method of assessment, this may lation of one candidate each or an oral examination						
						n students about this by four weeks prior to the ori						
						nt: German and/or English	iginat examination	date at the latest.				
				Asses	ssment offered: In	the semester in which the course is offered and in	the subsequent se	emester				

11-GGD-161-m01	Introduction to Gauge/Gravity Duality											
	ECTS 8	Duration	1 seme	ester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (4) + R (2)									
			Module taugl									
	Method o	fassessment	a) written exa	amination (approx. 90 to 120 minutes) or ne candidate each (approx. 30 minutes) or							
					oups (groups of 2, approx. 30 minutes) or	lidate) or						
			d) project rep	ort (approx	k. 8 to 10 pages) or							
			e) presentation	on/talk (ap	prox. 30 minutes).							
					was chosen as method of assessment, this may tion of one candidate each or an oral examination							
					students about this by four weeks prior to the o							
					t: German and/or English							
A1/14		'	Assessment	offered: In t	the semester in which the course is offered and	in the subsequent se	emester					
11-AKM-161-m01	Cosmolog											
	ECTS 6	Duration		ester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1) Module taught in: German or English									
	Method o	fassessment	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-AST-161-m01		al Astrophysic										
	ECTS 6	Duration		ester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (2) + R (2) Module taught in: German or English									
	Method o	f 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).									
					was chosen as method of assessment, this may							
					tion of one candidate each or an oral examination students about this by four weeks prior to the c							
					t: German and/or English	onginal examination	uate at the latest.					
					the semester in which the course is offered and	in the subsequent se	emester					
		•										

11-APL-161-m01	High Energy Astrophysics											
	ECTS 6	Duratio	n 1 S	emester	Method of grading numerical grade	Modul level	graduate					
	Courses	·		V (3) + R (1)								
					nan or English							
	Method o	of assessment	a) written	examination	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or							
					groups (groups of 2, approx. 30 minutes) of	ate) or						
			d) project	report (appro	ox. 8 to 10 pages) or	,						
			e) present	tation/talk (a	pprox. 30 minutes).	a shangad and as	coccment may instead take the					
					n was chosen as method of assessment, this may be ation of one candidate each or an oral examination							
			the lecture	er must inforr	n students about this by four weeks prior to the orig							
					nt: German and/or English							
0.57				ent offered: In	the semester in which the course is offered and in	the subsequent se	emester					
11-QFT2-161-m01		Field Theory I										
	ECTS 8	Duratio		emester	Method of grading numerical grade	Modul level	graduate					
	Courses			V (4) + R (2) Module taught in: German or English								
	Method o	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-TEP-161-m01	Theoretical Elementary Particle Physics											
	ECTS 8	Duratio	n 1 S	emester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (4) + R (2)									
			Module taught in: German or English									
	Method o	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).								
					n was chosen as method of assessment, this may be ation of one candidate each or an oral examination							
					n students about this by four weeks prior to the orig							
			Language	of assessme	nt: German and/or English							
			Assessme	ent offered: In	the semester in which the course is offered and in	the subsequent se	emester					

11-ATTP-161-m01	Selected Topics of Theoretical Elementary Particle Physics											
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	,	V (3) + Modu	- R (1) le taught in: Germ	an or English							
	Method of as	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 of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
11-BSM-161-m01	Models Beyo	nd the Sta	ndard Model of Elementary Particle Physics									
	ECTS 6 Duration		n	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1) Module taught in: German or English									
	Method of as	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 of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									

11-FK2-201-m01	Solid S	Solid State Physics 2												
	ECTS 8 Duration		n	1 semester	Method of grading	numerical grade	Modul level	graduate						
	Courses	5	·	V (4) + R (2) Module taught in: German or English										
	Method	l 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										
	other p	rerequi	sites	Approval from examination committee required.										
11-HPH-201-m01	Semiconductor Physics													
	ECTS 6 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate						
	Courses			V (3) + R (1) Module taught in: German or English										
	Method	l 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-FFK-201-m01	Field Theory in Solid State Physics											
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	S			/ (4) + R (2)							
					ıle taught in: Germa							
	Method	of ass				approx. 90 to 120 minutes) or ne candidate each (approx. 30 minutes) or						
						oups (groups of 2, approx. 30 minutes) of	e) or					
				d) pro	oject report (approx.	. 8 to 10 pages) or	o, c.					
					esentation/talk (app							
						was chosen as method of assessment, this may be ion of one candidate each or an oral examination in						
						students about this by four weeks prior to the origin						
				Langi	uage of assessment	: German and/or English						
	- "					he semester in which the course is offered and in th	ie subsequent se	emester				
11-QIC-201-m01					Computing and Qua							
		6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				V (3) + R (1) Module taught in: German 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-TEFK-201-m01	Topological Effects in Solid State Physics											
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	S		V (4) + R (1)								
				Module taught in: German or English								
	Method	l 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).							
						was chosen as method of assessment, this may be ion of one candidate each or an oral examination in						
						students about this by four weeks prior to the origin						
				Langi	uage of assessment	: German and/or English						
				Asses	ssment offered: In th	he semester in which the course is offered and in th	e subsequent se	emester				

11-PTS-201-m01	Pheno	Phenomenology and Theory of Superconductivity												
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate							
	Course	es		V (3) + R (1)										
				Module taught in: Germ			-							
	Metho	d of ass		b) oral examination of o	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) c									
				c) oral examination in gd) project report (appro.	roups (groups of 2, approx. 30 minutes pe	er candidate) or								
				e) presentation/talk (approx										
				If a written examination	was chosen as method of assessment, th									
					tion of one candidate each or an oral exarn students about this by four weeks prior t									
					it: German and/or English	o the original examination	date at the latest.							
					the semester in which the course is offere	d and in the subsequent se	emester							
11-QFT1-201-m01	Quanti	um Field	l Theory I											
	ECTS	8	Duration		Method of grading numerical grade	Modul level	graduate							
	Course	es		V (4) + R (2)										
		1 6		Module taught in: German or English										
	Metho	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) 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										
	- 41			Assessment offered: In the semester in which the course is offered and in the subsequent semester										
	<u> </u>	orerequi	sites	Approval from examination committee required.										
Thesis (30 ECTS cre														
10-M=MACM-161-				ional Mathematics		1								
mo1	ECTS	30	Duration		Method of grading numerical grade	Modul level	graduate							
	Course			No courses assigned to module										
	Metho	d of ass		Master's thesis (750 to 900 hours total)										
				Registration and assignment of topic in consultation with supervisor. Language of assessment: German or English										
	other p	orerequi		The supervisor may mal te for the assignment of	ke the successful completion of certain mo	odules that are relevant for	the respective topic a prerequisi-							
	Additio	onal Info	ormation	Time to complete: 6 mo	nths									