

Annex SFB

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

Responsible: Faculty of Physics and Astronomy

Examination regulations version: 2016

Abbreviations used: Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V**

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB:

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Information on assessment procedures:

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

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

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

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

ASP02015

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

13-Apr-2016 (2016-68) except for mandatory elective 11-SSC-172 added in Fast Track procedure at a later time

14-Mar-2018 (2018-17)

12-Jun-2024 (2024-76)

14-Nov-2024 (2024-96)

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 of		l if applica	if applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants and allocation of places		ocati- 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 (60 ECTS	S credits)								
Subfield Physics (5	5 ECTS cred	dits)								
Advanced Laborato	ry Course (9 ECTS credit	s)							
11-P-FM1-161-m01	Advanced	Laboratory Co	ourse l	Master Part 1						
	ECTS 3	Duratio		1 semester Method of grading (not) successfully completed Modul level graduate						
<u> </u>	Courses		P (3)							
	Method of	assessment	Stude an ex perim modu	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: German and/or English						
	other prer	<u> </u>	Preparation and safety briefing.							
11-P-FM2-161-m01		Laboratory Co		Master Part 2						
	ECTS 3	Duratio		1 semester	Method of grading	(not) successfully complete	ed Modul level	graduate		
	Courses		P (3)							
	Method of	assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: German and/or English							
	other prer	equisites	Preparation and safety briefing.							
11-P-FM3-161-m01	Advanced	Laboratory Co	ourse l	Master Part 3						
	ECTS 3	Duratio		1 semester	Method of grading	(not) successfully complete	ed Modul level	graduate		
	Courses		P (3)							
		assessment	practical examination Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: German and/or English							
	other prer	equisites	Prepa	ration and safety bri	efing.					

11-P-FM4-161-m01	Advanc	ced Lab	oratory Co	ourse l	urse Master Part 4							
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	graduate			
	Course	:S		P (3)		•						
	Metho	d of ass	essment	pract	ical examination							
				an ex perim modu	Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment: German and/or English							
	other p	rerequi	sites	Prepa	aration and safety b	riefing.						
Advanced Seminar	(5 ECTS	credits)									
11-OSP-A-161-m01	Advanc	ced Sem	ninar Phys	sics A								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S		S (2) Modu	ıle taught in: Germa	an or English						
	Metho	d of ass	essment		alk with discussion (30 to 45 minutes) anguage of assessment: German and/or English							
	other prerequisites				ssion prerequisite t	to assessment: regula	r attendance (minimum 85% of	sessions).				
				acado lificat that r sessr If a st	sidered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students hat meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.							
11-OSP-B-161-m01	Advand	ced Sem	ninar Phys	sics B								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S		S (2) Modu	ıle taught in: Germa	an or English						
	Metho	d of ass	essment		vith discussion (30 uage of assessment	to 45 minutes) t: German and/or Engl	ish					
	other p	rerequi	sites	Admi	ssion prerequisite t	to assessment: regula	r attendance (minimum 85% of	sessions).				
	Additional Information			Registration: If a student registers for the seminar and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.								
Master's with 1 major Phy	/sics (2016))					JMU Würzburg • generated 19-Apr-20	25 • exam. reg. data r	record 88 128 - - H 2016 page 4 / 39			

Experimental Phys	ics (10 E	CTS cre	dits)								
11-BSV-161-m01	Image a	and Sig	nal Proce	ssing i	n Physics						
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S			+ Ü (2) le taught in: Germar	n or English					
				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-QUI-161-m01	Quantum Information Technology										
	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	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-OHL-161-mo1	Organio	Semi	conductor	S			,					
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	5			+ 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) pro	oject report (appro	ox. 8 to 10 pages) or						
				e) pro	esentation/talk (a vritten examination	pprox. 30 minutes) 1 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	amester				
 11-PMM-161-m01	Physics	of Adv	anced Ma			the semester in which the course is offered and i	Ti tile subsequent so					
111111111111111111111111111111111111111		6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				+ R (1)			3				
				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.							
				Lang	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	Spintro		15					1				
		6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses	5		V (3) + R (1) Module taught in: German or English								
	Method	l of ass	essment		a) written examination (approx. 90 to 120 minutes) or							
	memou	. 0. 455	essinent	b) ora	al examination of	one candidate each (approx. 30 minutes) or						
						groups (groups of 2, approx. 30 minutes per candi	date) or					
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).								
				lf 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								
						the semester in which the course is offered and i	n the subsequent so	emester				
						,						

11-BMT-161-m01	Biophysical Measurement Technology in Medical Science											
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (3) + R (1)		,						
					Module taught in: German or English							
	Method	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								
					prox. 8 to 10 pages) or							
				e) presentation/talk If a written examinati	(approx. 30 minutes) ion was chosen as method of assessment, thi	is may be changed and as	sessment may instead take the					
				form of an oral exam	ination of one candidate each or an oral exam	nination in groups. If the m	ethod of assessment is changed,					
					orm students about this by four weeks prior to	the original examination	date at the latest.					
					nent: German and/or English In the semester in which the course is offered	d and in the subsequent so	emester					
11-FK2-161-m01	Solid S	tate Ph										
	ECTS 8 Duratio			1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (4) + R (2) Module taught in: Ge								
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or								
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,								
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-FKS-161-m01	Calid C	tata Ca			in the semester in which the course is offered	and in the subsequent so	emester					
11-FKS-101-III01		6	Duration		Method of grading numerical grade	Modul level	graduate					
	Course			V (3) + R (1)	Method of glading humereat glade	Modulitevel	gradate					
	Course	9		V (3) + K (1) Module taught in: German or English								
	Method	of ass			on (approx. 90 to 120 minutes) or							
					of one candidate each (approx. 30 minutes) o							
					n groups (groups of 2, approx. 30 minutes per prox. 8 to 10 pages) or	r candidate) of						
				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	d and in the subsequent se	emester					

11-MAG-161-m01	Magnetism											
	ECTS 6	6 Dura	tion	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	·) + R (1)								
				lule taught in: Germ								
	Method	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) p	roject report (appro	x. 8 to 10 pages) or							
			e) p	resentation/talk (ap	oprox. 30 minutes).	ha shangad and as	coccment may instead take the					
			form	written examinatior o of an oral examina	n was chosen as method of assessment, this may lation of one candidate each or an oral examination	be changed and as: n in groups. If the m	sessment may instead take the nethod of assessment is changed					
					n students about this by four weeks prior to the or							
					nt: German and/or English							
		1 . 51		essment offered: In	the semester in which the course is offered and ir	n the subsequent se	emester					
11-HLPH-161-mo1		ductor Phys		T								
	ECTS 6	6 Dura		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		Mod	V (3) + R (1) Module taught in: German or English								
	Method	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) p	d) project report (approx. 8 to 10 pages) or								
			e) p	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.								
			Lang	Language of assessment: German and/or English								
				Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-HNS-161-m01				nductor Nanostruc								
	ECTS 6	6 Dura		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses			V (3) + R (1)								
	Mathaal	-6		Module taught in: German or English a) written examination (approx. 90 to 120 minutes) or								
	Method	or assessme	nt a) w	ritten examination ral examination of ((approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or							
			c) oi	ral examination in g	groups (groups of 2, approx. 30 minutes per candid	date) or						
					x. 8 to 10 pages) or							
					oprox. 30 minutes).	ho changed and ac	coccment 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 change								
			the	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								
		<u> </u>	Asse	essment offered: In	the semester in which the course is offered and in	n the subsequent so	emester					

11-QTH-161-m01	Quantu	ım Tran	sport									
	ECTS	6	Duration	1 semes	er	Method of grading numeric	cal grade	Modul level	graduate			
	Course	S		V (3) + R (1)								
	24 1			Module taught					_			
	Method	d of ass				pprox. 90 to 120 minutes) or e candidate each (approx. 30	minutes) or					
				c) oral examina	c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).								
				e) presentation	talk (appr nination w	ox. 30 minutes). as chosen as method of asse	essment, this may be o	changed and ass	sessment may instead take the			
				form of an oral	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,							
						tudents about this by four we	eks prior to the origin	nal examination	date at the latest.			
						German and/or English e semester in which the cour	se is offered and in th	e subsequent se	emester			
11-NOP-161-mo1	Nano-C	otics		7.556551116111 011	- Crea. III till	e semester in which the cour	se is offered and in th	e subsequent se	inester			
	ECTS 6 Duratio			1 semes	er	Method of grading numeric	cal grade	Modul level	graduate			
	Course	S		V (3) + R (1)				ļ				
				Module taught in: German or English								
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or								
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,								
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-NDS-161-mo1	Low Div	mensio	nal Structi									
11 1105 101 11101		6	Duration		er	Method of grading numeric	cal grade	Modul level	graduate			
	Course			V (3) + R (1)		0 01			10			
	Method	d of ass	essment	a) written exam		prox. 90 to 120 minutes) or			_			
						candidate each (approx. 30		`				
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) 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 of 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								
İ	other n	rerequi	sites	Approval from examination committee required.								

11-SUP-161-m01	Superc	onducti	ivity		-	,						
	ECTS	6	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			+ R (1)							
					le taught in: Germ							
08 DCM (161 mgs	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
o8-PCM4-161-mo1	Ultrafa	st spec	troscopy a		antum-control	,						
·	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			S (2) + Ü (1) Module taught in: German or English							
	Method	Method of assessment			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							
	other p	rerequi	sites	Prior completion of modules o8-PCM1a and o8-PCM1b recommended.								
11-CSFM-161-m01			-	d Stat	State Physics							
	ECTS	6	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S	- V	V (3)	+ R (1)			•				
				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								
	other p	rerequi	sites	Appro	oval from examina	tion committee require	ed.					

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

11-MAS-161-m01	Multi-wavelength Astronomy											
[ECTS	6	Duration)	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses	5		V (3) -								
ļ <u></u>					le taught in: Germa	_						
	Method	l of asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) pro	d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination may instead take the							
				form (of an oral examinati	ion of one candidate	each or an oral examination in	groups. If the m	ethod of assessment is changed,			
				the le	cturer must inform	students about this b	y four weeks prior to the origin					
						: German and/or Eng		1 .				
CCAM . (A diverse	- d T:				ne semester in which	the course is offered and in th	ie subsequent se	emester			
! <u>L</u>		ea ropi 6	cs in Astro		1 semester	Method of grading	I numarical grado	Modul level	graduate			
ļ .	Courses		J			Method of grading	numerical grade	Modul level	graduate			
					V(3) + R(1)							
	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)								
				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.								
ļ .	ath ar provequisites			Language of assessment: German and/or English								
		er prerequisites Approval from examination committee required. vanced Magnetic Resonance Imaging										
! · .		eu mag 6	Duration		1 semester	Method of grading	numorical grado	Modul level	graduate			
	Courses			V (3) -		Method of grading	numerical grade	Modulitevel	graduate			
	Courses	,			le taught in: English	n						
İ	Method	l of asse	essment	a) wri	tten examination (a	pprox. 90 to 120 min	utes) or					
				b) ora	l examination of on	ie candidate each (ap	prox. 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								
					sentation/talk (app							
			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-SSC-172-m01	Surface	Scienc	:e					,					
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (3) -									
					Module taught in: English a) written examination (approx. 90 to 120 minutes) or								
	Method	d of asso	essment	b) ora c) ora d) pro e) pre If a wi form o the le	l examination of or l examination in gro ject report (approx sentation/talk (app ritten examination v of an oral examinati cturer must inform	ne candidate each (apoups (groups of 2, apoups). 8 to 10 pages) or orox. 30 minutes) was chosen as metho ion of one candidate students about this b	prox. 30 minutes) or prox. 30 minutes per candidate do do do do do do do do do do do do do	changed and ass groups. If the m	sessment may instead take the ethod of assessment is changed, date at the latest.				
					anguage of assessment: German and/or English ssessment offered: In the semester in which the course is offered and in the subsequent semester								
11-FPA-161-m01		g Resea			-	,		_					
	ECTS	10	Duratio			Method of grading	numerical grade	Modul level	graduate				
	Course		_	R (o)									
					oroject report (10 to 20 pages) Language of assessment: German and/or English								
	other p	rerequi	sites	Approval from examination committee required.									
11-EXE5-161-mo1	Current	t Topics	in Experi	imental Physics									
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course		_	V (2) -	• •								
	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									
	other p	rerequi	sites	Appro	val from examinati	on committee require	d.						

11-EXE6-161-mo1	Current	Current Topics in Experimental Physics											
	ECTS	6	Duration)	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	:S		V (3)	+ R (1)	·							
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or									
				b) oral examination of one candidate each (approx. 30 minutes) or									
				c) ora	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	e changed and as	sessment may instead take the					
				form	of an oral examina	tion of one candidate each or an oral examination i	in groups. If the m	ethod of assessment is changed,					
				the le	ecturer must inform	students about this by four weeks prior to the orig	inal examination	date at the latest.					
						nt: German and/or English							
		rerequi		<u> </u>		tion committee required.							
11-EXE7-161-mo1			in Experi		al Physics								
	ECTS	7	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course				+ R (1)								
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or									
				b) or	al examination of c	one candidate each (approx. 30 minutes) or							
				d) nr	al examination in g niect report (appro	roups (groups of 2, approx. 30 minutes per candida x. 8 to 10 pages) or	ite) or						
				e) pro	esentation/talk (ap	pprox. 30 minutes)							
				If a w	f 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									
	other n	rerequi	sites	Approval from examination committee required.									
11-EXE8-161-mo1			in Experi				1						
		8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	!S	·	V (4)	+ R (2)		,						
	Method	d of ass				(approx. 90 to 120 minutes) or							
						one candidate each (approx. 30 minutes) or							
						roups (groups of 2, approx. 30 minutes per candida	ate) or						
					d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes)								
					If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is change									
					he lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
						nt: German and/or English							
	other p	rerequi	sites	Appr	oval from examina	tion committee required.							

11-EXE6A-161-mo1	Current	t Topics	in Experi	menta	l Physics		,					
	ECTS	6	Duration	ı	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S	·	V (3) -	+ R (1)		`					
	Method of assessment			b) ora c) ora d) pro e) pre If a wi form o the le	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							
	other p	rerequi	sites		pproval from examination committee required.							
11-EXP6-161-m01			in Physik	ζ		·	,					
	ECTS	6	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S	,	V (3) -	+ R (1)	,						
				c) ora d) pro e) pre If a wi form o the le Langu	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							
	other p	rerequi	sites	Approval from examination committee required.								
Theory of Physics (10 ECTS	credits)									
11-QM2-161-m01			hanics II									
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S 			+ R (2) le taught in: German	n or English						
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								

11-RTT-161-m01	Theory	of Rela	ativity								
	ECTS	6	Duration	ı	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	:S	·		(3) + R (1)						
				Module taught in: German or English							
	Method	d of ass	sessment	b) ora	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.						
				d) pro e) pro If a w form							
				Langi	uage of assessme	nt: German and/or English the semester in which the course is offered and i					
11-QVTP-161-m01	Many E	Body Q	uantum Th	eory			,				
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			+ R (2) lle taught in: Germ	nan or English					
	Method of assessment			b) ora c) ora d) pro e) pro If a w form the le Lange	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 insteform of an oral examination of one candidate each or an oral examination in groups. If the method of assessment he 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-RMFT-161-m01		_			ds in Field Theory						
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	Courses			V (4) + R (2) Module taught in: German or English						
	Method	d of ass	sessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-PKS-161-m01	Physics of Complex Systems											
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (2) + R (2) Module taught in: German or English								
	Method	d of asse	b) o c) oi d) p e) p If a v form the Lang	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-QIC-161-m01	Quantu	ım Inforn		nd Quantum Computing								
		6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		+ R (1) ule taught in: Germ	an or English							
			b) o c) or d) p e) p If a v form the Lang Asse	ral examination of cal examination in g roject report (appro resentation/talk (ap written examination of an oral examina ecturer must inforn guage of assessmen essment offered: In	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or roups (groups of 2, approx. 30 minutes per cand x. 8 to 10 pages) or oprox. 30 minutes). I was chosen as method of assessment, this may ation of one candidate each or an oral examination students about this by four weeks prior to the ont: German and/or English the semester in which the course is offered and	/ be changed and ass on in groups. If the m original examination (ethod of assessment is changed, date at the latest.					
	Module comple	es succes eted	ssfully 11-Q	M2 or 11-TFK								

11-TDO-161-mo1	Thermodyn	Thermodynamics and Economics											
	ECTS 6	Duration	1 semester	Method of grading (not) successfully completed	Modul level	graduate							
	Courses		V (3) + R (1)										
			Module taught in: German or English										
	Method of	assessment	a) written examination	a) written examination (approx. 90 to 120 minutes) or									
			o) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or										
			d) project report (appr	d) project report (approx. 8 to 10 pages) or									
			e) presentation/talk (a	approx. 30 minutes) on was chosen as method of assessment, this may be o	rhanged and as	sessment may instead take the							
				nation of one candidate each or an oral examination in									
				m students about this by four weeks prior to the origin	al examination	date at the latest.							
				ent: German and/or English n the semester in which the course is offered and in th	a subsaguant s	emester							
11-TFK-161-m01	Theoretical	l Solid State I		in the semester in which the course is offered and in th	<u> subsequent s</u>								
	ECTS 8	Duration		Method of grading numerical grade	Modul level	graduate							
	Courses		V (4) + 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) 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										
TEV	Theoretical	Calid Ctata	Assessment offered: In the semester in which the course is offered and in the subsequent semester										
11-TFK2-161-m01	ECTS 8	Duration		Method of grading numerical grade	Modul level	graduate							
	Courses			Method of grading numerical grade	Modul level	graduate							
	Courses		V (4) + R (2) Module taught in: German or English										
	Method of		a) written examination	ı (approx. 90 to 120 minutes) or									
				one candidate each (approx. 30 minutes) or	`								
				groups (groups of 2, approx. 30 minutes per candidate	e) 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									
				nation of one candidate each or an oral examination in rm students about this by four weeks prior to the origin									
				ent: German and/or English	iai examination	date at the fatest.							
				n the semester in which the course is offered and in th	e subsequent s	emester							

11-FTFK-161-m01	Field Th	Field Theory in Solid State Physics											
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S		V (4) +		·	•						
				Module taught in: German or English									
	Method	l of ass	essment	a) writ	tten 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	sentation/talk (ap	oprox. 30 minutes).							
						was chosen as method of assessment, this mation of one candidate each or an oral examina							
						n students about this by four weeks prior to the							
						nt: German and/or English							
				Asses	sment offered: In	the semester in which the course is offered an	d in the subsequent se	emester					
11-TOPO-161-mo1	Topolog												
		6	Duration		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 assessment			a) writ	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-TFP-161-m01			olid State I		S								
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	S		V (3) +	- R (1)	- P.							
					le taught in: Germ								
	Method	or ass				(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or							
						roups (groups of 2, approx. 30 minutes) or	ndidate) or						
				d) pro	ject report (appro	x. 8 to 10 pages) or	,						
						oprox. 30 minutes).	ay ba abangad and acc	accompant may included take the					
						was chosen as method of assessment, this mation of one candidate each or an oral examination.							
						n students about this by four weeks prior to the							
						nt: German and/or English		<u>.</u>					
				Asses	sment offered: In	the semester in which the course is offered an	d in the subsequent se	emester					

11-TSL-161-m01	Theory of Superconductivity											
	ECTS	6	Duration	ı	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				V (3) + R (1)							
					Module taught in: German or English							
	Method	of ass	essment	a) wr	tten 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) pre	esentation/talk (ap	oprox. 30 minutes).	he changed and acc	sacement may instead take the				
						was chosen as method of assessment, this may ation of one candidate each or an oral examination						
				the le	cturer must inforn	n students about this by four weeks prior to the or						
						nt: German and/or English						
CMC	Community	-4:				the semester in which the course is offered and in	n the subsequent se	emester				
11-CMS-161-m01		ationa 8	Material			Mothod of avadina humavical avada	Madullaval	Torre durate				
			Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				/ (4) + R (2) Module taught in: German or English							
	Method of 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) 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							
				Langi								
				Assessment offered: In the semester in which the course is offered and in the subsequent semester								
11-KFT-161-m01			d Theory									
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses			V (3) + R (1)								
	NA - 411	- C		Module taught in: German or English								
	Method	or ass	essment			(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or						
						groups (groups of 2, approx. 30 minutes per candi	date) or					
				d) pro	oject report (appro	x. 8 to 10 pages) or	•					
				e) pre	esentation/talk (ap	oprox. 30 minutes).	ha shangad and as	sassment may instead take the				
						was chosen as method of assessment, this may ation of one candidate each or an oral examination						
						n students about this by four weeks prior to the or						
						nt: German and/or English		_				
				Asses	ssment offered: In	the semester in which the course is offered and in	n the subsequent se	emester				

11-KFT2-161-m01	Conformal Field Theory 2											
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) ·									
				Module taught in: German or English								
	Method of a	ssessment	a) wri	tten 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	sentation/talk (a	oprox. 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							
			Langu	lage of assessme	nt: German and/or English							
				ssment offered: In	the semester in which the course is offered and i	n the subsequent se	emester					
11-MSF-161-mo1	Magnetism			i								
	ECTS 6	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses			/ (3) + R (1) Module taught in: German or English								
	Method of a	ssessment	a) wri	a) written examination (approx. 90 to 120 minutes) or								
			b) ora	b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
			d) 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. Language of assessment: German and/or English								
			Assessment offered: In the semester in which the course is offered and in the subsequent semester									
11-TQP-161-mo1	Topological	Quantum P	hysics									
	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 of a	ssessment			(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or							
					groups (groups of 2, approx. 30 minutes) or	idate) or						
					ox. 8 to 10 pages) or	idate) of						
			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,								
					ation of one candidate each or an oral examination students about this by four weeks prior to the o							
					nt: German and/or English	rigiliai examination	date at the latest.					
					the semester in which the course is offered and i	n the subsequent se	emester					

11-CRP-161-m01	Renorn	Renormalization Group and Critical Phenomena												
	ECTS	6	Duration	1 :	1 semester	Method of grading numerical grade	Modul level	graduate						
	Course	S			V (3) + R (1)									
				Module taught in: German or English										
	Method	d of ass	essment	a) writt	en examination (a	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) pres	entation/talk (ap	prox. 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								
						t: German and/or English								
D)404/	<u> </u>					he semester in which the course is offered and in th	ie subsequent se	emester						
11-BWW-161-mo1					n One Dimension			·						
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate						
	Course				(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 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-EIT-161-m01	Gauge						_							
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate						
	Course	S		V (3) + R (1)										
	Matha	J - 6		Module taught in: German or English a) written examination (approx. 90 to 120 minutes) or										
	Method	or ass				approx. 90 to 120 minutes) or ne candidate each (approx. 30 minutes) or								
						oups (groups of 2, approx. 30 minutes per candidat	e) or							
						. 8 to 10 pages) or								
						prox. 30 minutes).	changed and ac	socement 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,									
				the lect	turer must inform	students about this by four weeks prior to the origin								
						t: German and/or English								
				ASSESS	ment orrerea: In t	he semester in which the course is offered and in th	ie subsequent se	emester						

11-GGD-161-m01	Introduct	ion to Gauge/	Gravity Duality								
	ECTS 8	Duratio	n 1 semester	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	n (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). on was chosen as method of assessment, this may	the changed and as	sassment may instead take the					
				nation of one candidate each or an oral examination							
			the lecturer must info	rm students about this by four weeks prior to the o							
				ent: German and/or English In the semester in which the course is offered and i	in the subsequent s	master					
11-EFQ-161-m01	Introduct	ion to Fraction	al Quantisation	in the semester in which the course is offered and	iii tiie subsequeiit se	eniestei					
11-Li Q-101-iii01	ECTS 6			Method of grading numerical grade	Modul level	graduate					
	Courses	Duratio	V (3) + R (1)	Method of grading humeneat grade	Modulitevel	graduate					
	Courses			V (3) + R (1) 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-TEF-161-m01			lectronic Systems								
	ECTS 6	Duratio		Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1)								
	Matha al a	£		Module taught in: German or English							
	Method	or assessment		n (approx. 90 to 120 minutes) or f one candidate each (approx. 30 minutes) or							
			c) oral examination in	groups (groups of 2, approx. 30 minutes per cand	idate) or						
			d) project report (app								
			e) presentation/talk (the changed and as	sassment 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,								
			the lecturer must info	rm students about this by four weeks prior to the o							
				ent: German and/or English	:						
			Assessment offered:	In the semester in which the course is offered and	iii trie subsequent so	emester					

11-FTAS-161-m01	Field The	eoretic	al Aspect	s of Solid Sta	te Physics							
	ECTS	6	Duration	1 seme	ester	Method of grading numerical grade	Modul level	graduate				
	Courses			V (3) + R (1)								
				Module taught in: German or English								
	Method	of asse		a) written exa	amination (a	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	on/talk (app	orox. 30 minutes).						
						was chosen as method of assessment, this may b ion of one candidate each or an oral examination						
						students about this by four weeks prior to the ori						
						t: German and/or English						
A1/A4 <			,	Assessment	offered: In t	he semester in which the course is offered and in	the subsequent se	emester				
11-AKM-161-mo1	Cosmolo		I 5					·				
		6	Duration		ester	Method of grading numerical grade	Modul level	graduate				
	Courses				/ (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 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			trophysics									
	ECTS	6	Duration		ester	Method of grading numerical grade	Modul level	graduate				
	Courses			V (2) + R (2) Module taught in: German or English								
	Method	of asse				approx. 90 to 120 minutes) or						
						ne candidate each (approx. 30 minutes) or						
						oups (groups of 2, approx. 30 minutes per candid . 8 to 10 pages) or	ate) or					
						orox. 30 minutes).						
				If a written ex	If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the							
						ion of one candidate each or an oral examination						
						students about this by four weeks prior to the origon to the origon. t: German and/or English	ginal examination	date at the latest.				
						he semester in which the course is offered and in	the subsequent se	emester				
						•	· · · · · · · · · · · · · · · · · · ·					

11-EPP-161-m01	Introduct	Introduction to Plasma Physics											
	ECTS 6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate							
	Courses		V (2) + R (2)										
	AA .1 1		Module taught in: German or English										
	Method o	of assessment	a) written examination of	n (approx. 90 to 120 minutes) or Tone 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 (a	approx. 30 minutes) on was chosen as method of assessment, this may	he changed and as	sessment may instead take the							
			form of an oral examir	nation of one candidate each or an oral examinatio	on in groups. If the m	ethod of assessment is changed,							
				rm students about this by four weeks prior to the c	original examination	date at the latest.							
				ent: German and/or English n the semester in which the course is offered and	in the subsequent se	emester							
11-APL-161-mo1	High Ene	rgy Astrophysi											
	ECTS 6			Method of grading numerical grade	Modul level	graduate							
	Courses		V (3) + R (1) Module taught in: Ger	man 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-NMA-161-m01		tional Astrophy		Mathad of avadiana musanian arada	Mandulland	Laws durate							
				Method of grading numerical grade	Modul level	graduate							
	Courses		V (3) + R (1) Module taught in: German or English										
	Method o	of assessment		n (approx. 90 to 120 minutes) or									
				one candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per cand	lidate) or								
			d) project report (appr	ox. 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 infor	he lecturer must inform students about this by four weeks prior to the original examination date at the latest.									
				ent: German and/or English									
			Assessment offered: If	n the semester in which the course is offered and	in the subsequent se	emester							

11-RQFT-161-mo1	Relativistic Quantum Field Theory											
	ECTS	8	Duration	1 se	mester	Method of grading numerical grade	Modul level	graduate				
	Courses	5		V (4) + R (2			,					
	00 a 4 la a al	l - 6		Module taught in: German or English								
	Method	i or asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes).								
				If a written	examination	pprox. 30 minutes). I was chosen as method of assessment, this	may be changed and as	sessment may instead take the				
				form of an	oral examina	ation of one candidate each or an oral exami	nation in groups. If the m	nethod of assessment is changed,				
						n students about this by four weeks prior to t nt: German and/or English	the original examination	date at the latest.				
						the semester in which the course is offered	and in the subsequent s	emester				
11-QFT2-161-m01	Quantu	m Field	Theory II									
	ECTS	8	Duration	1 se	mester	Method of grading numerical grade	Modul level	graduate				
	Courses	5		V (4) + R (2 Module tau								
	Method	l of asse		a) written examination (approx. 90 to 120 minutes) or								
				o) 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				Particle Phy		Markhard of and discount and an area	NA - de 1 a ca 1	Lauradurata				
		8	Duration		mester	Method of grading numerical grade	Modul level	graduate				
	Courses			V (4) + R (2) Module taught in: German or English								
	Method	l of asse				(approx. 90 to 120 minutes) or						
						one candidate each (approx. 30 minutes) or	candidate) or					
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is change the lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
				Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
				Assessmer	it offered: In	the semester in which the course is offered	and in the subsequent s	emester				

11-ATTP-161-m01	Selected Topics of Theoretical Elementary Particle Physics												
	ECTS	6	Duration	1 semester	Method of grading numerical gra	ade Modul	level	graduate					
	Course	S		V (3) + R (1)		,							
				Module taught in: German or English									
	Method	d of asso	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
				d) project report (approx. 8 to 10 pages) or									
				e) presentation/talk	presentation/talk (approx. 30 minutes). f a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
					nination of one candidate each or an oral								
				the lecturer must inf	form students about this by four weeks p								
					ment: German and/or English I: In the semester in which the course is o	offered and in the subseq	uont c	omostor					
11-BSM-161-m01	Models	Revon			entary Particle Physics	nieled alld ill tile subseq	uent s	emester					
11 B3W 101 11101	ECTS	6	Duration		Method of grading numerical gra	ade Modul	level	graduate					
	Course		1	V (3) + R (1)	method of grading hamonout gra			g. a a a a c					
		_		Module taught in: German or English									
	Method	d of asso	essment	a) written examination (approx. 90 to 120 minutes) or									
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
				d) project report (approx. 8 to 10 pages) or									
				e) presentation/talk (approx. 30 minutes).									
				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-STRG1-171-m01		Theory :											
	ECTS	8	Duration		Method of grading numerical gra	ade Modul	level	graduate					
	Course	S		V (4) + R (2) Module taught in: German or English									
	Method	d of ass			ion (approx. 90 to 120 minutes) or								
					of one candidate each (approx. 30 minutin groups (groups of 2, approx. 30 minute								
						es per candidate) of							
				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	Assessment offered: In the semester in which the course is offered and in the subsequent semester								

11-STRG2-171-m01	String	Theory :	2					,				
	ECTS	6	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) -								
				Module taught in: German or English a) written examination (approx. 90 to 120 minutes) or								
	Method of assessment				o) 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) f 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, he 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-FPA-161-m01	Visiting	Resea	rch	713303	- In the street of the street	- Semester in winer	the course is offered and in the	- Jubsequent se	inester			
		10	Duration	1		Method of grading	numerical grade	Modul level	graduate			
	Course	S	•	R (o)								
	Method	d of asse	essment	project report (10 to 20 pages) Language of assessment: German and/or English								
	other p	rerequis	sites	Approval from examination committee required.								
11-EXT5-161-m01	Current	Topics	of Theore	etical Physics								
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course		,	V (2) -	• •							
	Method	or 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								
	other p	rerequis	sites	Approval from examination committee required.								

11-EXT6-161-m01	Current Topics of Theoretical Physics												
	ECTS	6	Duration)	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (3)	+ R (1)	·	•						
	Method	d of ass	essment	a) wr	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes)								
				c) ora									
						was chosen as method of assessment, this may be	changed and as	sessment may instead take the					
						tion of one candidate each or an oral examination i							
				the l	ecturer must inform	students about this by four weeks prior to the orig	inal examination	date at the latest.					
						t: German and/or English							
	other p	· · · · · · ·		<u> </u>		ion committee required.							
11-EXT7-161-m01		t Topics	of Theore		Physics								
	ECTS	7	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (3)	+ R (1)								
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or									
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
				c) ora	al examination in gi oject report (approx	oups (groups of 2, approx. 30 minutes per candida	ite) or						
				e) pr	esentation/talk (ap	prox. 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.									
	- 41			Language of assessment: German and/or English Approval from examination committee required.									
FYTO (other p					ion committee required.							
11-EXT8-161-m01			of Theore		1		1						
		8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course				+ R (2)		,						
	Method	d of ass				approx. 90 to 120 minutes) or							
						ne candidate each (approx. 30 minutes) or	ta) av						
						roups (groups of 2, approx. 30 minutes per candida	ite) 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 c 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 Approval from examination committee required.								
	other p	rerequi	sites	Appr	oval from examinat	ion committee required.							

11-EXT6A-161-m01	Current Topics of Theoretical Physics													
	ECTS	6	Duration)	1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses	5		V (3) +	+ R (1)		,							
	Method	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									
							ate) or							
				d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes)										
				If a wr	e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the									
						tion of one candidate each or an oral examination								
						ı students about this by four weeks prior to the oriş ıt: German and/or English	ginal examination	date at the latest.						
	other ni	rereaui				· · ·		_						
11-EXP6A-161-m01		ther prerequisites Approval from examination committee required. Current Topics in Physik												
	ECTS		Duration		1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses	5		V (3) +	- R (1)		'	-						
	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.										
	ath ar n	*		Language of assessment: German and/or English										
(10	other p	•	sites	Approval from examination committee required.										
11-SLQ-232-m01	Black H ECTS	6	Duration		L compostor	Mathad of avading humavical avada	Modul level	are due to						
					1 semester	Method of grading numerical grade	Modul level	graduate						
	Courses	5		Modn (3) 4		an or English								
	Method	l of acc		Module taught in: German or English a) written examination (approx. 90 to 120 minutes) or										
	Wicthou	101 433				ne candidate each (approx. 30 minutes) or								
				c) ora	l examination in g	roups (groups of 2, approx. 30 minutes per candid	ate) 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.										
					anguage of assessment: German and/or English. Assessment offered: In the semester in which the course is offered and in the subsequent semester.									
				Asses	sment offered: In f	the semester in which the course is offered and in	the subsequent s	emester						

11-APM-242-m01	Astrophysics												
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			V (2) + R (2) Module taught in: German or English								
	Method	l of ass	essment	b) ora c) ora d) pro e) pre If a wi form o the le Langu	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								
	Additio	nal Info	rmation	Appro	val from examination	on committee require	d.						
11-ATP-242-m01	Atmospheric Physics												
	ECTS 6 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	S		V (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) 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									

11-0QS-242-m01	Open (Quantum	1 Systems	 5	,								
·	ECTS	6	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	Courses			V (3) + R (1) Module taught in: German or English								
	Metho	d of asse	essment	b) ora c) ora d) pro e) pro If a w form the le Langu	a) written examination (approx. 90 to 120 minutes) or c) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or c) project report (approx. 8 to 10 pages) or c) presentation/talk (approx. 30 minutes). f a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral 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								
Subfield Non-phys	ical Min	or											
10-M-OR-	Operations Research for students of other subjects												
Saf-152-m01	ECTS 10 Duration			1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	Courses			+ Ü (2)								
	Method of assessment			a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M-VAN-152-mo1		ced Anal	-										
	ECTS	7	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			. ,.	+ Ü (2)								
	Method of assessment			a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus									

10-M=AAAN-161-	Applied Analysis												
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) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=ADG-	Differe	ntial Ge	ometry										
M-161-m01	ECTS	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	!S			+ Ü (2) le taught in: Germa	an and/or English							
	Metho	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=AFT-	Complex Analysis												
H-161-m01	ECTS	10	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M=ALTH-161-	Lie The	eory											
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									
	Metho	d of ass	essment	b) ora c) ora Langu Asses	rritten examination (approx. 90 to 120 minutes, usually chosen) or a ral examination of one candidate each (approx. 20 minutes) or ral examination in groups (groups of 2, 15 minutes per candidate) guage of assessment: German or English essment offered: In the semester in which the course is offered and in the subsequent semester ditable for bonus								

10-M=A-	Topolo	Topology												
TOP-161-mo1	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 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=AZTH-161-	Numbe	r Theory												
mo1	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 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=VGDS-161-	Groups and their Representations													
mo1	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 asse	essment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus										
10-M=V-	Geome	trical M	echanics											
GEM-161-m01	ECTS	10	Duratio		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 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=VN-	Numeric of Partial Differential Equations												
PE-161-mo1	ECTS	10	Duration	1	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 asse	essment	b) ora c) ora Langu Asses	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus								
10-M=V-		e Mathe	ematics										
DIM-161-m01	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (3) +	+ Ü (1) le taught in: Germaı	n and/or English							
			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=VMPH-161-													
mo1	ECTS 10 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									
10-M=VPD-	Partial	Differen	itial Equa	tions o	of Mathematical Phy	sics		,					
P-161-m01	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (4) + Ü (2) Module taught in: German and/or English									
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German or English Assessment offered: In the semester in which the course is offered and in the subsequent semester creditable for bonus									

10-M=V-	Pseudo Riemannian and Riemannian Geometry												
PRG-161-mo1	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	Courses			V (4) + Ü (2) Module taught in: German and/or English								
	Method	d of ass	essment	b) ora c) ora Lange 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-I-DB-152-m01	Databa	ses											
	ECTS	5	Duration	ı	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			V (2)	(2) + Ü (2)								
				of on date) Langu credi	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								
	Referred to in LPO I				§ 49 Nr. 1 b) § 69 Nr. 1 b)								
10-I=DB-161-m01	Databa	ses											
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	graduate					
	Course	S		V (2) + Ü (2)									
	Method of assessment			written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Separate written examination for Master's students. Language of assessment: German and/or English creditable for bonus									
	Additional Information			Focus	ses available for st	udents of the Master's programme Informatik (C	Computer Science, 12	o ECTS credits): SE, IS, HCI, GE.					

10-l=PA-161-m01	Analysis and Design of Programs													
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate					
	Course	es		V (2)	+ Ü (2)	•		•						
	Metho	d of ass	sessment		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									
					replaced by an oral examination s (approx. 15 minutes per candi-									
	Additio	onal Inf	ormation		ocuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): E,IS,ES,GE									
10-I-RAK-152-m01	Compu	iter Arc	hitecture											
	ECTS	5	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	25		V (2)	+ Ü (2)	•		*						
	Metrio	α οι ασε	sessment	If anr of on date) Lang	ritten examination (approx. 60 to 120 minutes). fannounced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examina f one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per cal late). anguage of assessment: German and/or English reditable for bonus									
	Referre	ed to in	LPO I		§ 22 II Nr. 3 b) § 69 I Nr. 1 c): Rechnerarchitektur									
10-I-00P-152-m01	Object oriented Programming													
	ECTS	5	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	es.		V (2)	+ Ü (2)				_					
	Metho	d of ass	sessment	If anr of on date) Lang	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minut date). Language of assessment: German and/or English creditable for bonus									
	Referre	d to in	LPO I	§ 22 II Nr. 3 b)										
10-l-BS-152-m01	Operat	ing Sys	stems											
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	es es		V (2)	+ Ü (2)									
	Metho	d of ass	sessment	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										
Master's with 1 major Ph	ysics (2016)					JMU Würzburg • generat	ted 19-Apr-2025 • exam. reg. data r	ecord 88 128 - - H 2016 page 37 / 39					

10-I=KI1-161-m01	Artificial Intelligence 1											
	ECTS 5 Duration		1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses			V (2) ·	V (2) + Ü (2)							
	Method	d of ass	sessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus								
	Additio	nal Info	ormation	Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): AT,SE,IS,HCI								
08-FU-SAM-161- mo1	Sensor and Actor Materials - Functional Ceramics and Magnetic Particles											
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (2) -	+ P (2)		*					
	Wethor	I OI ass	sessment	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) Language of assessment: German and/or English Assessment offered: Once a year, summer semester P: creditable for bonus								
08-FU-EEW-152-	Electrochemical Energy Storage and Conversion											
mo1	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		V (2) + P (1) + E (1)									
	Method	d of ass	sessment	a) assessment and b) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical assignments (2 to 4 random examinations), weighted 7:3 Language of assessment: German and/or English Assessment offered: Once a year, summer semester								
08-FU-MW-161- m01	Structı	re and	Propertie	s of Modern Materials: Experiments vs. Simulations								
	ECTS 5 Duratio		1	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses			V (2) + S (1)								
	Method of assessment			a) talk (approx. 30 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes total) Language of assessment: German and/or English Assessment offered: Once a year, winter semester								

11-EXNP6-161-m01	Nonphysical Minor Subject												
	ECTS 6 Duration			1 semester	Method of grading	numerical grade	Modul level	graduate					
	Courses			V (3) + R (1)									
	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									
other prerequisites Approval from examination committee required.													
Thesis (60 ECTS cro													
11-FS-P-161-m01		sional S	<u>. </u>	tion Physics									
	ECTS 15 Duration				1 semester	Method of grading	(not) successfully completed	Modul level	graduate				
	Courses			S (4) Module taught in: German or English									
	Method of assessment			talk with discussion (30 to 45 minutes) Language of assessment: German and/or English									
11-MP-P-161-mo1	Scientific Methods and Project Management Physics												
	ECTS 15 Duration		1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate					
	Courses			R (4) Module taught in: German or English									
	Method	d of ass	essment	talk with discussion (30 to 45 minutes) Language of assessment: German and/or English									
11-MA-P-161-m01	Master	Thesis	Physics										
	ECTS	30	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			No courses assigned to module									
				Master's thesis (750 to 900 hours total) Language of assessment: German and/or English									
	Additional Information			Time to complete: 6 months.									