

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: 2020

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)):

14-Nov-2019 (2019-57)

09-Jun-2021 (2021-64)

22-Dec-2021 (2021-88)

o6-Sep-2022 (2022-54)

??-???-2024 (2024-??)

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

Compulsory Electiv	es (6o E0	CTS cred	dits)								
Subfield Physics (n	nin. 55 E0	CTS cred	dits)								
Advanced Laborato	ry Cours	e (min.	9 ECTS c	redits)							
11-P-FM1-161-m01	Advance	ed Labo	ratory Co	ourse N	urse Master Part 1						
	ECTS	3	Duratio	on 1 semester		Method of grading	(not) successfully c	ompleted	Modul level	graduate	
	Courses			P (3)	,(3)						
	Method of assessment			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 pr			<u> </u>	ration and safety bri	iefing.					
11-P-FM2-161-m01	Advance	ed Labo	ratory Co	ourse N	Master Part 2						
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully c	ompleted	Modul level	graduate	
	Courses			P (3)							
	Method of assessment			Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publi an experiment to be considered to have successfully completed this experiment. Students must successfully completed periments to be considered to have successfully completed this module. Detailed regulations are laid down in the resmodule description. Language of assessment: German and/or English					nust successfully complete two ex-		
	other pr	erequis	sites	Prepa	ration and safety bri	iefing.					
11-P-FM3-161-m01	Advance	ed Labo	ratory Co	ourse N	Master Part 3						
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully c	ompleted	Modul level	graduate	
	Courses	5		P (3)							
	Method of assessment			Stude an ex perim modu Langu	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 periments 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					nust successfully complete two ex-	
	other pr	rerequisites Preparation and safety briefing.									

ECTS 3 Duration 1 semester Method of grading (not) successfully completed Modul level graduate	11-P-FM4-161-m01	Advance	Advanced Laboratory Course Master Part 4											
Method of assessment practical examination 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 completed two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective nodule description. Language of assessment Serman and/or English Advanced Seminar Typics Seminar Section S		ECTS	3	Duratio	n	1 semester	Method of grading (not) successfully complete	d Modul level	graduate					
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 to have successfully completed this experiment. Students must successfully to have successfully completed this module. Detailed regulations are laid down in the respective module description. Language of assessment. German and/or English Advanced Seminar Physics A ECTS		Courses	5		P (3)	P (3)								
Advanced Seminar (min. 5 ECTS credits) Advanced Seminar Physics A Seminar Physics Seminar Phys					Stude 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.								
Advanced Seminar Physics A		other pr	rerequi	sites	Prepa	ration and safety br	iefing.							
ECTS 5 Duration 1 semester Method of grading numerical grade Modul level graduate	Advanced Seminar	(min. 5 E	CTS cro	edits)										
Method of assessment Talk with discussion (30 to 45 minutes) Language of assessment: German and/or English	11-OSP-A-161-m01		ed Sem	inar Phys	sics A									
Method of assessment: Ital with discussion (30 to 45 minutes) Language of assessment: German and/or English other prerequisites 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 prevaunt 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 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. Advanced Seminar Physics B ECTS 5 Duration 1 semester Method of grading numerical grade Modul level graduate Courses S(2) Module taught in: German or English Method of assessment talk with discussion (30 to 45 minutes) Language of assessment: German and/or English other prerequisites 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 pregular attendance (minimum 85% of sessions). 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 pregular attendance (minimum 85% of sessions). Registration: If a student registers for the seminar and obtains the qualification for admission to admitted to the respective prerequisites can successfully register for an assessment into effect. Only those students that meet the respective prerequisites ca		ECTS	5	Duratio		1 semester	Method of grading numerical grade	Modul level	graduate					
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Language of assessment: German and/or English other prerequisites Admission prerequisite to assessment: regular attendance (minimum 85% of sessions). 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.		Courses	5			ıle taught in: Germar	n or English		_					
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.		Method	l of asso	essment										
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		Additional Information			sider acado lificat that r sessr If a st	ed a declaration of wemic and examination ion for admission to meet the respective prent or whose registatent takes an asse	will to seek admission to assessment pursuant to on regulations). If the module coordinators subsect assessment, they will put the student's registrate prerequisites can successfully register for an assessment for an assessment was not put into effect versement to which he/she has not been admitted,	Section 20 Subsequently find that to the form assessment students will not be admitted the grade achiever.	ection 3 Sentence 4 ASPO (general the student has obtained the qua- nt into effect. Only those students is who did not register for an as- ed to the respective assessment. ed in this assessment will not be					

Experimental Phys	ics (min	. 10 EC	TS credits)								
11-BSV-161-m01	Image	and Sig	gnal Proce	ssing	in Physics						
	ECTS	6	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S	•		+ Ü (2)	•		•			
					le taught in: Germa						
	Method	d of ass	sessment	amina on/ta If a w form the le Asses	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						
11-OHL-161-m01	Organi	c Semi	conductor	S							
	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	sessment	oral e prese If a w form the le	xamination in grou ntation/talk (appro ritten examination v of an oral examinat cturer must inform ssment offered: In t	ps (groups of 2, approx. 30 minutes). was chosen as metho ion of one candidate students about this b	ox. 30 minutes per candidate) d of assessment, this may be each or an oral examination in y four weeks prior to the origir the course is offered and in th	or d) project reports or d) project reports or dispersion of the monal examination of the monal			
11-PMM-161-mo1	Physic	s of Ad	vanced Ma	terial	5			,			
	ECTS	6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (3) · Modu	+ R (1) lle taught in: Germa	ın or English					
	Method	d of ass	sessment	amina on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentate on/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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						

11-SPI-161-m01	Spintron	ics			,						
	ECTS 6	Duration	n 1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1) Module taught in: Ger	man or English							
	Method o	of assessment	amination in groups (on/talk (approx. 30 m If a written examination form of an oral examination the lecturer must info Assessment offered: I	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-BMT-161-mo1	Biophysi	cal Measureme	ent Technology in Medi	ical Science	<u> </u>						
	ECTS 6	Duration	n 1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses		V (3) + R (1) Module taught in: Ger	rman or English							
	Method	or assessment	presentation/talk (ap If a written examination form of an oral examination the lecturer must info Assessment offered: I	oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may form of an oral examination of one candidate each or an oral examination in groups. If the method of assess the lecturer must inform students about this by four weeks prior to the original examination date at the later Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-FK2-201-m01		te Physics 2									
	ECTS 8	B Duration		Method of grading numerical grade	Modul level	graduate					
	Courses		V (4) + R (2) Module taught in: German or English								
	Method o	of assessment	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/ta (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								
	other pre	requisites	Approval from examination committee required.								

11-FKS-161-m01	Solid S	tate Spectrocop	y	1						
	ECTS	6 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		+ R (1) ule taught in: German	n or English					
	Method	l of assessment	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral exmination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). To written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English						
11-MAG-161-mo1	Magne	tism								
	ECTS	6 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		('(3) + R (1) Module taught in: German or English						
	Method	d of assessment	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or amination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or pre on/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead t form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						
11-HNS-161-m01	Optical	Properties of Se	emicor	ductor Nanostructui	res					
	ECTS	6 Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: German or English						
	Method	l of assessment	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						

11-HPH-201-m01	Semico	nductor Phys	ics							
	ECTS	6 Dura	tion	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S) + R (1) Iule taught in: Germa	n or English		,			
	Method	d of assessmo	nati (app If a v form the Lang	on in groups (groups orox. 30 minutes). written examination won of an oral examinati lecturer must inform guage of assessment	of 2, approx. 30 minuwas chosen as metho ion of one candidate of students about this b c: German and/or Engi	utes per candidate) or projud d of assessment, this may each or an oral examinatio by four weeks prior to the o	ect report (approx. 8 be changed and ass n in groups. If the mriginal examination			
11-QTR-201-m01	Quantu	ım Transport	,				,			
	ECTS	6 Dura	tion	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		(3) + R (1) Module taught in: German or English						
	method	d of assessmo	nati (app If a v form the Lang	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes nation in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or p (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may ins form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment 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-201-m01	Advanc	ed Theory of	Quantun	n Computing and Qua	antum Information		,			
	ECTS	6 Dura	tion	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 assessmo	nati (app If a v form the Lang	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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-NOP-161-mo1	Nano-Optics											
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		V (3) +	R (1) le taught in: Germa	n or Fnølish						
	Method	d of ass	essment	a) writer oral expression oral expression of the learn of the learn of the learn of the learn orange.	tten examination (a xamination in group ntation/talk (approxitten examination w of an oral examinati cturer must inform s	pprox. 90 to 120 minutes) or b) oral examination of os (groups of 2, approx. 30 minutes per candidate)	or d) project reports and assignoups. If the meal examination of	sessment may instead take the ethod of assessment is changed, date at the latest.				
11-PTS-201-m01	Phenor	nenolos	ev and Th		Superconductivity	. definant and/or English						
		6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses				V (3) + R (1) Module taught in: German or English							
	Method of assessment			nation (appro If a wr form o the le Langu	n in groups (groups ox. 30 minutes). ritten examination w of an oral examinati cturer must inform s lage of assessment:	rox. 90-120 minutes) or oral examination of one car of 2, approx. 30 minutes per candidate) or project rows chosen as method of assessment, this may be con of one candidate each or an oral examination in students about this by four weeks prior to the origing German and/or English the semester in which the course is offered and in the	changed and ass groups. If the mal examination	to 10 pages) or presentation/talk sessment may instead take the ethod of assessment is changed, date at the latest.				
08-PCM4-161-m01	Ultrafa	st spec	troscopy	and qu	antum-control							
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate				
	Courses			S (2) + Ü (1) Module taught in: German or English								
	Method of assessment			prox.	30 minutes)	pprox. 90 minutes) or b) oral examination of one ca : German and/or English	indidate each (a	pprox. 20 minutes) or c) talk (ap-				
	other prerequisites		Prior completion of modules o8-PCM1a and o8-PCM1b recommended.									

11-CSFM-161-mo1	Advanc	ed Topi	cs in Solid	State	Physics						
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	,	V (3) -	+ R (1)						
	Method	d of asse	1	oral e prese 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) oresentation/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						
		rerequis		<u> </u>		on committee required.					
11-ASM-161-m01		ds of Ob	servationa	al Astı	ronomy						
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			(3) + R (1) odule taught in: German or English						
		Method of assessment			written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or amination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or proportialk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English						
11-TPE-161-m01	Experin	nental P	article Ph	ysics							
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	Courses			V (3) + R (1) Module taught in: German or English						
	Method of assessment			amina on/ta If a wi form o the le Asses	ation in groups (gro lk (approx. 30 minu ritten examination v of an oral examinat cturer must inform ssment offered: In tl	orox. 90 to 120 minutes) or oral examination ups of 2, approx. 30 minutes per candidate utes). was chosen as method of assessment, this ion of one candidate each or an oral examinated each or eac	e) or project report (appi may be changed and as nation in groups. If the i the original examinatior	ssessment may instead take the method of assessment is changed, date at the latest.			

11-ASP-161-m01	Introdu	ction to	Space Pl	hysics								
	ECTS	6	Duration	1	1 semester	Method of grading nu	ımerical grade	Modul level	graduate			
	Course	S		V (3) - Modu	+ R (1) lle taught in: Germ	an or English						
	Method	d of asso	essment	amina on/ta If a wiform of the le Asses	ritten examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral exmination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentatin/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, ne lecturer must inform students about this by four weeks prior to the original examination date at the latest. ssessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English							
11-MAS-161-m01			gth Astro	nomy								
	ECTS	6	Duration		1 semester	Method of grading nu	ımerical grade	Modul level	graduate			
	Course	S		V (3) - Modu	+ R (1) Ile taught in: Germ	an or English						
	Method	d of asse	essment	amina on/ta If a wiform of the le Asses	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or amination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or pre on/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-CSAM-161-m01	Advanc	ed Topi	cs in Astr	ophys	ics							
	ECTS Course:	6	Duration	N (3) -	1 semester	Method of grading nu	ımerical grade	Modul level	graduate			
		_		a) wri oral e prese If a wr form of the le	tten examination xamination in gro ntation/talk (apprinten examination of an oral examination of an oral examination of the canal examination in ground examination examinati	ups (groups of 2, approx. ox. 30 minutes). was chosen as method o	30 minutes per candi f assessment, this ma h or an oral examinat our weeks prior to the	date) or d) project repo ay be changed and ass tion in groups. If the m	each (approx. 30 minutes) or c) ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed, date at the latest.			
	other p	rerequis	sites	Appro	oval from examina	tion committee required.						

11-MRI-171-mo1	Advanc	ed Mag	netic Res	onanc	e Imaging							
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) - Modu	+ R (1) le taught in: English	1		•				
	Method	Method of assessment) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) ral 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). The written examination was chosen as method of assessment, this may be changed and assessment may instead take the porm 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English							
11-SSC-172-m01	Surface	Science	:e									
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) - Modu	+ R (1) le taught in: Engliso	:h		•				
	Method				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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-FPA-161-m01	Visiting	g Resea	rch									
	ECTS	10	Duration	1		Method of grading	numerical grade	Modul level	graduate			
	Course	S		R (o)								
	Method	d of ass	essment	project report (10 to 20 pages) Language of assessment: German and/or English								
	other p	rerequi	sites	Appro	oval from examination	on committee requir	ed.					
11-EXE5-161-m01	Current	t Topics	in Experi	menta	l Physics							
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) -	+ R (2)							
	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 expresentation/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 examination	on committee requir	ed.					
					·	·	1					

11-EXE6-161-mo1	Current	t Topics	in Experi	menta	l Physics					
	ECTS	6	Duration	<u> </u>	1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	S	,	V (3)	+ R (1)		•	•		
	Method	d of ass	essment	oral e prese If a w form the le	examination in group entation/talk (approxitten examination word an oral examination secturer must inform secturer	pprox. 90 to 120 minutes) or b) oral examination of se (groups of 2, approx. 30 minutes per candidate) of 30 minutes). It is may be on of one candidate each or an oral examination in Students about this by four weeks prior to the original German and/or English	or d) project repo changed and ass groups. If the m	ort (approx. 8 to 10 pages) or e) sessment may instead take the ethod of assessment is changed,		
	other p	rerequi	sites	Appro	oval from examination	on committee required.				
11-EXE7-161-mo1	Current	t Topics	in Experi	menta	l Physics					
	ECTS	7	Duratio	1	1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	S		V (3)	+ R (1)					
				prese If a w form the le	oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may inst form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment 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.						
11-EXE8-161-mo1	Current	t Topics	in Experi	menta	l Physics					
	ECTS	8	Duratio	1	1 semester	Method of grading numerical grade	Modul level	graduate		
	Course	S		V(4) + R(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	oval from examination	on committee required.				

11-EXE6A-161-mo1	Current	t Topics	in Experi	menta	l Physics							
	ECTS	6	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3)	+ R (1)			•				
				oral e prese 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 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							
		rerequi			oval from examinatio	on committee require	d.					
11-EXP6-161-m01			in Physil									
	ECTS 6 Duration		Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S	_	V (3)	V (3) + R (1)							
				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			Approval from examination committee required.								
11-EIM-211-m01			n Micros	<u> </u>								
	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (3) + R (1) Module taught in: German or English								
	Method	d of ass	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 Prüfungsturnus: im Semester der LV und im Folgesemester								

11-AAI-212-m01	Advanc	ced Astı	ro Imaging	 g	-							
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade		Modul level	graduate			
	Course	:S			V (3) + R (1) Module taught in: German or English							
	Method	d of ass	essment	oral e prese If a w form 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							
11-CTA-212-m01	Advanc	ced Con	nputer Tor	nogra	phy							
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade		Modul level	graduate			
	Course	S			V (3) + R (1) Module taught in: German or English							
				a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English								
11-SPT-211-m01		ng Prot	e Techno	logies	-							
	ECTS	6	Duration	n	1 semester	Method of grading numerical grade		Modul level	graduate			
	Course	Courses			V (3) + R (1) Module taught in: German or English							
	Method	d of ass	essment	oral oral oral oral oral oral oral oral	examination in group entation/talk (appro ritten examination v of an oral examinati ecturer must inform uage of assessment	approx. 90 to 120 minutes) or b) oral exalors (groups of 2, approx. 30 minutes per exalox. 30 minutes). Was chosen as method of assessment, the ion of one candidate each or an oral exalors about this by four weeks prior the course is ofference to the semester in which the course is ofference.	candidate) o his may be cl mination in § to the origina	r d) project repo hanged and ass groups. If the m al examination	sessment may instead take the ethod of assessment is changed, date at the latest.			

Theory of Physics	(min. 10	ECTS c	redits)									
11-QM2-161-m01	Quanti	ım Med	hanics II									
	ECTS	8	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	!S			V (4) + R (2)							
					Module taught in: German or English							
	Method	d of ass	sessment	amination/tallf a w form the leads	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-TQO-221-m01	Theore	tical Q	uantum O _l									
	ECTS 8 Duration			n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	!S			V (4) + R (2) Module taught in: German or English							
				amina on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral mination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or present on/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed to the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-RTT-161-m01	Theory	of Rela	ativity									
	ECTS	6	Duratio	า	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	sessment	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								

11-RMFT-161-m01	Renormaliz	ation Group	Metho	ods in Field Theory			1					
	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			(4) + R (2) odule taught in: German or English								
	Method of a	assessment	oral e prese If a w form the le	written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) all examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) esentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the rm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed e lecturer must inform students about this by four weeks prior to the original examination date at the latest. In the semester in which the course is offered and in the subsequent semester in gruage of assessment: German and/or English								
11-PKS-161-m01		Complex Sys		-								
	ECTS 6	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			V (2) + R (2) Module taught in: German or English								
	Method of a	33633IIIEIII	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								
11-QIC-201-m01	Advanced T	heory of Qu	antum	Computing and Qua	ntum Information							
	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	assessment	natio (appr If a w form the le	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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-TFK-161-m01	Theore	tical Solid State	Physic	ES	-						
	ECTS	8 Duratio	n	1 semester	Method of grading n	umerical grade	Modul level	graduate			
	Course	S		+ R (2) ule taught in: Germar	n or English		,				
			amin on/ta If a w form the le Asse Lang	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English							
11-TFK2-161-m01	Theore	tical Solid State	Physic	.S 2							
	ECTS	8 Duratio	n	1 semester	Method of grading n	umerical grade	Modul level	graduate			
	Course	S		(4) + R (2) Module taught in: German or English							
	Method	d of assessment	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral amination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or prese on/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead tak form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is claused the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-TEFK-201-m01	Topolo	gical Effects in S	olid S	ate Physics							
	ECTS	8 Duratio	n	1 semester	Method of grading n	umerical grade	Modul level	graduate			
	Course	S		V (4) + R (1) Module taught in: German or English							
	Method	d of assessment	natio (appoint of the left than the left tha	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							

11-FFK-201-m01	Field T	heory ii	n Solid Sta	te Phy	ysics	,		,				
	ECTS	8	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (4) + R (2) Module taught in: German or English							
	Method	d of ass	essment	natio (appr If a w form the le Langu	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk approx. 30 minutes). To written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, 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							
11-AKTF-201-m01	Selecte	ed Topic	cs of Theo	retical	Solid State Phys	ics						
	ECTS	6	Duration	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S	•		(3) + R (1) Nodule taught in: German or English							
	Method	1 01 dSS	essment	natio (appr If a w form the le Langu	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take t form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is char 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-CMS-161-mo1	Compu	tationa	l Material	s Scie	nce (DFT)							
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (4) + R (2) Module taught in: German or English								
	Method of assessment			written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								

11-KFT-161-m01	Conformal Fie	eld Theory	,								
	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 as	sessment	amination/tallf a w form the lead	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-KFT2-161-m01	Conformal Fig	eld Theory	2								
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			+ R (1) ile taught in: Germai	n or English						
			on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-GRTM-201-m01		_						,			
	ECTS 6 Courses	Duratio	V (3) + R (1)								
	Method of as	sessment	Module taught in: German or English written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester								
	other prerequ	• • •	Approval from examination committee required.								

11-TPSM-201-m01	Particle	e Physi	cs (Standa	ard Mo	del)	,						
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Mo	dul level	graduate		
	Course	S			+ R (1) ıle taught in: Germ	an or English						
	Method	d of ass	essment	natio (appr If a w form the le Lange	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
	other p					tion committee require	ed.					
11-CRP-161-m01					ritical Phenomena			1				
	ECTS 6 Duration				1 semester	Method of grading	numerical grade	Mo	dul level	graduate		
	Course	S			/ (3) + R (1) Module taught in: German or English							
	Method	d of ass	essment	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presenta on/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 chan the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								
11-BWW-161-m01	Bosoni	sation	and Intera	ctions	in One Dimension	1						
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Mo	dul level	graduate		
	Courses				+ R (1) ıle taught in: Germ	an or English						
	Method	d of ass	essment	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								

11-GGD-161-m01	Introd	uction t	o Gauge/0	Gravity	Duality			,				
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S			V (4) + R (2) Module taught in: German or English							
	Metho	d of ass	sessment	amin on/ta If a w form the le Asse	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-AKM-161-m01	Cosmo	logy						,				
	ECTS 6 Duratio				1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	!S			V (3) + R (1) Module taught in: German or English							
		Method of assessment			written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-AST-161-m01		tical As	strophysic									
	ECTS	6	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	Courses			V (2) + R (2) Module taught in: German or English							
	Method of assessment			amin on/ta If a w form the le Asse	ation in groups (galk (approx. 30 miniten examination of an oral examinecturer must inforssment offered: It	groups of 2, approx. 30 m inutes). on was chosen as method	inutes per candidate) of assessment, this mach or an oral examinat four weeks prior to the course is offered and	or project report (appro ay be changed and ass tion in groups. If the m toriginal examination				

11-EPP-161-m01	Introdu	ction to Plasma	Physic	 :s							
	ECTS	6 Durati	on	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		+ R (2) ule taught in: Germar	n or English						
	Method	d of assessment	oral e prese If a w form 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) oresentation/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. Assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English							
11-APL-161-m01	High Er	nergy Astrophys	ics								
	ECTS	6 Durati	on	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	S		(3) + R (1) Module taught in: German or English							
	Method	d of assessment	amin on/ta If a w form the le	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral amination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presenta on/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take t form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is charthelecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							
11-NMA-161-mo1	Compu	tational Astrop	nysics								
	ECTS	6 Durati	on	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 assessment	oral e prese If a w form 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							

11-QFT1-201-m01	Quantu	ım Field	Theory I			1		'				
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S			V (4) + R (2) Module taught in: German or English							
	Method	d of ass	essment	nation (appr If a w form of the le	written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
	other p	rerequi	sites	Appro	oval from examinati	on committee require	ed.					
11-QFT2-161-m01			Theory II									
	ECTS 8 Duration				1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (4) + R (2) Module taught in: German or English								
	Method	d of ass	essment	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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 chant the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English								
11-TEP-161-m01	Theore	tical Ele	ementary	Particl	e Physics							
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (4) + R (2) Module taught in: German or English								
	Method of assessment				written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English							

11-ATTP-161-m01	Selecte	ed Topic	s of Theo	retica	l Elementary Particle	Physics	<u>, </u>				
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S			+ R (1) ıle taught in: Germar	n or English					
				amin on/ta If a w form the le Asses Lange	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or 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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						
11-BSM-161-m01	Models	Beyon	d the Stai	ndard	Model of Elementary	y Particle Physics					
	ECTS 6 Duration			1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses				/ (3) + R (1) Module taught in: German or English						
	Method of assessment			amin on/ta If a w form the le Asses	written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or preson/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead to form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						
11-STRG1-171-m01	String	Theory	1								
	ECTS	8	Duration		1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (4) + R (2) Module taught in: German or English							
	Method of assessment			oral e prese If a w form the le Asses	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. Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English						

11-STRG2-171-m01	String	Theory	2				,				
	ECTS	6	Duration	n	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	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c)							
				prese If a w form the le Asse	ral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) resentation/talk (approx. 30 minutes). a written examination was chosen as method of assessment, this may be changed and assessment may instead take the orm of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, he lecturer must inform students about this by four weeks prior to the original examination date at the latest. ssessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German and/or English						
11-FPA-161-m01		g Resea	_		-						
	ECTS	10	Duration	,		Method of grading numerical grade	Modul level	graduate			
	Course			R (o)							
	Method	d of ass	essment		oject report (10 to 20 pages) nguage of assessment: German and/or English						
	other p	rerequi	sites	Appr	oval from examinat	ion committee required.					
11-EXT5-161-m01	Current Topics of Theoretical Physics										
	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses			V (2)	+ R (2)	·					
	Method of assessment			oral oral oral oral oral oral oral oral	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead tak form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is claude 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	Appr	oval from examinat	ion committee required.					
11-EXT6-161-m01	Current	t Topics	of Theore	etical	Physics						
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	:S		V (3)	+ R (1)						
		All						ort (approx. 8 to 10 pages) or e) sessment may instead take the nethod of assessment is changed,			
	other p	rerequi	sites	Approval from examination committee required.							

11-EXT7-161-m01	Current	Topics	of Theore	etical	Physics						
	ECTS	7	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (3)	+ R (1)	·					
	Method	d of ass	essment	oral oral oral oral oral oral oral oral	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	isites	Appr	oval from examination	on committee required.					
11-EXT8-161-m01	Current	Topics	of Theor	etical	Physics						
	ECTS 8 Duratio			1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S	_,	V (4)	+ R (2)		,				
				oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 page presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead ta form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is 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.							
11-EXT6A-161-m01	Current	Topics	of Theor	etical	Physics						
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		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 p	rerequi	sites	Appr	oval from examination	on committee required.					

11-EXP6A-161-m01	Current Topics in Physik												
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		V (3)	+ R (1)								
	Method	l of ass	essment	oral e prese If a w form 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					ition committee requir	ed.						
11-RAI-211-m01	Radio Astronomical Interferometry												
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S			((3) + R (1) Module taught in: German 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 chang the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
11-TPSM-211-m01		<u> </u>	s (Standa		del)								
	ECTS	8	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate				
	Course	S		Modu	+ R (2) ıle taught in: Gern								
				written examination (approx. 90-120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester									
	other p	rerequi	sites	Appro	oval from examina	ition committee requir	ed.						

11-SLQ-232-m01	Black H	loles				,		,			
	ECTS	6	Duration	ı	1 semester	Method of grading numeric	cal grade	Modul level	graduate		
	Course	S	,		V (3) + R (1)						
				Module taught in: German or English							
	Method	d of ass	essment	b) or c) or d) pr e) pr If a w form the le 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 following semester						
Subfield Non-phys	ical Min	or (o-5 l	ECTS credi		osinent onered. In	the semester in which the cours	se is offered and in the	e romowing semi			
10-M-OR-	_	, ,			ents of other subje	cts					
Saf-152-mo1	ECTS	10	Duration		1 semester	Method of grading numeric	cal grade	Modul level	undergraduate		
	Course				+ Ü (2)						
	Method	wethou of assessment			a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each nutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus						
10-M-VAN-152-mo1	Advanc	ed Ana	lysis								
	ECTS	7	Duration	า	1 semester	Method of grading numeric	cal grade	Modul level	undergraduate		
	Course	S		V (4)	+ Ü (2)						
	Method	d of ass	essment	a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one cand nutes) 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					f one candidate each (15 to 30 mi-		
10-M=AAAN-161-	Applie	d Analy	sis								
mo1	ECTS	10	Duration	1	1 semester	Method of grading numeric	cal grade	Modul level	graduate		
	Course	S		V (4) + Ü (2) Module taught in: German and/or English							
	Method of assessment			a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus							

10-M=ADG-	Differential Geometry											
M-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses	,		+ Ü (2) lle taught in: Germar	n and/or English						
	Meth	od of ass	essment	minut Asses Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus							
10-M=AFT-	Comp	olex Anal	ysis									
H-161-m01	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses			V (4) + Ü (2) Module taught in: German and/or English							
	Meth	od of ass	essment	minut Asses Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 2 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English Creditable for bonus							
10-M=ALTH-161-	Lie Theory											
mo1	ECTS 10 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Cours	ses		V (4) + Ü (2) Module taught in: German and/or English								
	Meth	od of ass	essment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus								
10-M=A-	Торо	logy										
TOP-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses			V (4) + Ü (2) Module taught in: German and/or English							
	Meth	od of ass	essment	minut Asses Langu	tes) or c) oral examinates; or c) oral examinates; ln th	ation (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 examination in groups (groups of 2, 15 minutes per candidate) ed: In the semester in which the course is offered and in the subsequent semester essment: German or English us						

10-M=AZTH-161-	Number Theory											
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses			+ Ü (2) lle taught in: Germar	n and/or English						
		od of ass		minut Asses Langu credit	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) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus							
10-M=VGDS-161-		ps and th	eir Repre	sentati	ons							
mo1	ECTS	10	Duratio	,	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses			/ (4) + Ü (2) Module taught in: German and/or English							
	Meth	od of ass	essment	minut Asses Langu) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. shinutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) ssessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German or English reditable for bonus							
10-M=V-	Geometrical Mechanics											
GEM-161-m01	ECTS	ECTS 10 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V (4) + Ü (2) Module taught in: German and/or English								
	Meth	od of ass	essment	minut Asses Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus							
10-M=VN-	Nume	eric of Par	tial Diffe	rential	Equations			,				
PE-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cours	ses			V (4) + Ü (2) Module taught in: German and/or English							
	Method of assessment			minut Asses Langu	tes) or c) oral examinates; or c) oral examinates; ln th	on (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 camination in groups (groups of 2, 15 minutes per candidate) In the semester in which the course is offered and in the subsequent semester ment: German or English						

10-M=V-	Disc	rete Math	ematics			,						
DIM-161-m01	ECTS	5 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cour	ses			+ Ü (1) lle taught in: Germar	n and/or English						
	Meth	nod of ass	essment	minut Asses Langu) written examination (approx. 60 to 90 minutes, usually chosen) or b) oral examination of one candidate each (approx. 1 ninutes) or c) oral examination in groups (groups of 2, approx. 10 minutes per candidate) assessment offered: In the semester in which the course is offered and in the subsequent semester anguage of assessment: German or English reditable for bonus							
10-M=VMPH-161-	Sele	cted Topic	cs in Math	nematio	cal Physics							
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cour	ses	-		+ Ü (2) le taught in: Germar	n and/or English						
		nod of ass		minut Asses Langu credit	n) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 2 ninutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Anguage of assessment: German or English Areditable for bonus							
10-M=VPD-	Partial Differential Equations of Mathematical Physics											
P-161-m01	ECTS	10	Duratio		1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cour	rses		V (4) + Ü (2) Module taught in: German and/or English								
	Meth	nod of ass	essment	minut Asses Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German or English creditable for bonus							
10-M=V-	Pseu	ıdo Riema	nnian and	Riema	annian Geometry							
PRG-161-mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Cour	ses			V (4) + Ü (2) Module taught in: German and/or English							
	Meth	nod of ass	essment	minut Asses Langu	en examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 s) or c) oral examination in groups (groups of 2, 15 minutes per candidate) ment offered: In the semester in which the course is offered and in the subsequent semester ge of assessment: German or English ble for bonus							

10-l=DB-161-m01	Databases										
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (2) ·	$V(2) + \ddot{U}(2)$						
	Method	d of ass	essment	If ann of one date). Sepai Langi	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						
	Additio	nal Info	ormation	Focus	es available for stu	dents of the Master's programme Informatik (Co	omputer Science, 120	ECTS credits): SE, IS, HCI, GE.			
10-I=PA-161-m01	Analys	is and [Design of I	Progra	ms						
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Course	S		V (2) ·	(2) + Ü (2)						
			essment	If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per date). Language of assessment: German and/or English creditable for bonus							
	Additio	nal Info	ormation		es available for stu ES,GE	o ECTS credits):					
10-I-RAK-152-m01	Compu	ter Arcl	nitecture								
	ECTS	5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course			` ′	+ Ü (2)						
				written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus							
	Referre	d to in	LPO I	§ 22 II Nr. 3b § 69 I Nr. 1c: Rechnerarchitektur							

10-I-APR-172-m01	Advanced Programming											
	ECTS	5	Duration	n .	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) ·	+ Ü (2)							
	Method	d of asso	essment	If ann of one date). Langu	vritten examination (approx. 60 to 120 minutes). f announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candilate). anguage of assessment: German and/or English reditable for bonus							
10-I-BS-191-m01	Operat	ing Sys	tems									
	ECTS 5 Duration			1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S			+ Ü (2) le taught in: English	1						
			essment	If ann of one date). Langu	vritten examination (approx. 60 to 120 minutes). I announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination fone candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candiate). anguage of assessment: German and/or English reditable for bonus							
10-l=Kl1-161-m01	Artificia	al Intell	igence 1									
	ECTS 5 Duratio			1	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 cardate). Language of assessment: German and/or English creditable for bonus								
	Additional Information				es available for stud ,IS,HCI	dents of the Master's	programme Informatik (Co	omputer Science, 120	ECTS credits):			
08-FU-SAM-161-	Sensor	and Ac	tor Mater	ials - F	unctional Ceramics	and Magnetic Partic	les					
mo1	ECTS	5	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Course	S		V (2) ·	+ P (2)			·				
	Method of assessment			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) Assessment offered: Once a year, summer semester Language of assessment: German and/or English P: creditable for bonus								

08-FU-EEW-152-	Electro	chemic	al Energy	Storage and Conv	rsion							
mo1	ECTS	5	Duration	1 semester		Method of grading	numerical grade		Modul level	undergraduate		
	Course	25		V (2) + P (1) + E (1)					-			
	Method of assessment			prox. 5 to 10 page Assessment offer	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 assessment offered: Once a year, summer semester anguage of assessment: German and/or English							
o8-FU-MW-161-	Structure and Properties of Modern Materials: Experiments vs. Simulations											
mo1	ECTS 5 Duration			1 semester		Method of grading	numerical grade		Modul level	graduate		
	Course	25		V (2) + S (1)								
	Method	d of ass	sessment	groups of 2 (appro Assessment offer	ox. 30 m ed: Onc		ester	e each (ap	prox. 20 minut	es) or c) oral examination in		
11-EXNP6-161-mo1	Nonph	ysical N	Minor Subj	ect								
	ECTS	6	Duration	1 semester		Method of grading	numerical grade		Modul level	graduate		
	Course	25	·	V (3) + R (1)	(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) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is chattelecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English						ort (approx. 8 to 10 pages) or e) sessment may instead take the nethod of assessment is changed,		
	other prerequisites			Approval from examination committee required.								
Thesis (60 ECTS cre	edits)											
11-FS-P-161-m01	Profes	sional S	Specializat	ion Physics								
	ECTS	15	Duration	ı 1 semester		Method of grading	(not) successfully c	ompleted	Modul level	graduate		
	Course	es		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-m01	Scienti	ific Met	hods and	Project Manageme	nt Phys	sics						
	ECTS 15 Duratio			1 semester Method of grading (not) successfully completed Modul level graduate								
	Course			R (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-MA-P-161-mo1	Master	Master Thesis Physics											
	ECTS 30 Duration 1 semester Method of grading numerical grade Modul level graduate												
	Course	Courses No courses assigned to module											
	Method	Method of assessment Master's thesis (750 to 900 hours total)											
		Language of assessment: German and/or English											
	Additio	Additional Information Time to complete: 6 months.											