

## **Annex SFB**

## Studienfachbeschreibung (subject description, SFB) for the subject Physics as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 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)):

22-Jan-2020 (2020-10)

12-Jun-2024 (2024-73)

12-Nov-2025 (2025-138)

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		Duratio	n	(in semesters)	Method of grading		Module level				
	Courses		1	To be spe	cified in the form )	X (y) with course type 2	Cabbreviated as specified abo	ve and number of we	ekly contact hours y			
	Method of assessment			_								
	Only after successful completion of			if applicable								
	Other prerequisites			if applicable								
	Participants and allocation of places		ocati- i	if applicable								
	Additional information		on i	if applicable								
	Referred to in LPO I			if applicable (examination regulations for teaching-degree programmes)								

Compulsory Cours	ses (129 E	CTS cr	edits)										
Module Group Exp	lodule Group Experimental Physics												
Classical Physics	(16 ECTS	credits	<b>5)</b>										
11-E-M-152-m01	Classic	Classical Physics 1 (Mechanics)											
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade		Modul level	undergraduate			
	Course	Courses			/ (4) + Ü (2) Nodule taught in: Ü: German or English								
	Method	Method of assessment			written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other p	other prerequisites			Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additio	Additional Information			dered a declaration academic and exam ualification for admi nts that meet the re assessment or who	of will to seek admis ination regulations). ssion to assessment spective prerequisite se registration for an	sion to assessment If the module coord , they will put the st es can successfully a assessment was n	pursuant to dinators sub tudent's regi register for a ot put into e	Section 20 Su sequently find stration for ass an assessment. affect will not be	on to assessment, this will be bsection 3 Sentence 4 ASPO (gethat the student has obtained sessment into effect. Only those Students who did not register admitted to the respective asde achieved in this assessment			
	Referred to in LPO I				Nr. 1 a) Nr. 1 a)								

11-E-E-152-m01	Classic	cal Phy	sics 2 (Hea	at and	- Electromagnetism)					'		
	ECTS	8	Duratio	n	1 semester	Method of grading	numerical grade		Modul level	undergraduate		
	Course	!S		V (4) + Ü (2) Module taught in: Ü: German or English								
	Metho	d of ass	sessment	written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other prerequisites			succe	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.							
	Addition	onal Info	ormation	consi neral the q stude for ar sessr	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.							
	Referred to in LPO I			§ 53   Nr. 1 a) § 77   Nr. 1 a)								
<b>Optics and Quantu</b>	m Physi	cs I (6 I	ECTS credi	ts)	s)							
11-E-OAV-152-m01	Optics	and Qu	ıantum Ph	ntum Physics								
	ECTS	6	Duratio	n	2 semester	Method of grading	numerical grade		Modul level	undergraduate		
	Course	25		V (4)	+ V (4)	`						
	Metho	d of ass	sessment	oral examination of one candidate each (approx. 30 minutes) Language of assessment: German and/or English								
<b>Optics and Quantu</b>	m Physi	cs II (10	ECTS cre	dits)								
11-E-OA-152-m01	Optics	and Wa	aves - Exe	rcises								
	ECTS 5 Duratio			1	1 semester	Method of grading	numerical grade		Modul level	undergraduate		
	Courses			Ü (2) Module taught in: Ü: German or English								
	Method of assessment				written examination (approx. 120 minutes) Language of assessment: German and/or English							
				§ 53   Nr. 1 a) § 77   Nr. 1 a)								

11-E-AA-202-m01	Atoms	Atoms and Molecules - Exercises											
	ECTS	5	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Course	es	·	Ü (2)	·	•							
				Module taught in: German or English									
	Metho	d of ass	sessment	written examination (approx. 120 minutes)									
				Language of assessm	Language of assessment: German and/or English								
Structure of Matte													
11-E-F-152-m01	Introduction to Solid State Physics												
	ECTS	8	Duration		Method of grading numerical grade	Modul level	undergraduate						
	Course	es		V (4) + Ü (2)									
				Module taught in: Ü: (	_	,							
	Metho	d of ass	sessment	written examination (a									
					ent: German and/or English								
11-E-T-152-m01				Particle Physics									
		6	Duration		Method of grading numerical grade	Modul level	undergraduate						
	Course	es		V (3) + Ü (1) Module taught in: Ü: German or English									
	Metho	d of ass	sessment	written examination (a									
	Language of assessment: German and/or English												
Module Group The	oretical	Physics	5										
Mechanics and Qu	antum A	<b>Nechan</b>	ics (16 ECT	'S credits)									
11-T-M-152-m01	Theore	etical Mechanics											
	ECTS	8	Duration	1 semester	Method of grading   numerical grade	Modul level	undergraduate						
	Course	25	_	V (4) + Ü (2)	<u>'</u>	'							
				Module taught in: Ü: German or English									
	Metho	d of ass	sessment	written examination (approx. 120 minutes)									
				Language of assessment: German and/or English									
	other p	orerequ	isites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who									
					ed approx. 50% of exercises will qualify for admissible tails at the beginning of the semester.	sion to assessment. I	he lecturer will inform students						
	۸ ما ما ند: د		ormation			- lifi +i f	an to consequent this will be						
	Additio	onat ini	ormation		ent registers for the exercises and obtains the qua ion of will to seek admission to assessment purst								
				neral 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									
					e respective prerequisites can successfully regist								
					whose registration for an assessment was not put								
				sessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.									
				With Hot be considered		-							

11-T-Q-152-m01	Quantum Mechanics											
	ECTS 8	Duratio	n 1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English									
	Method of as	sessment	written examination (approx. 120 minutes) Language of assessment: German and/or English									
	other prerequ	uisites	successfully completed	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.  Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained he 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.								
	Additional Inf	formation	considered a declaration neral academic and exathe qualification for adrestudents that meet the for an assessment or who have the statement of									
Statistical Physics	and Electrody	namics I (6	ECTS credits)									
11-T-SE-152-m01	Statistical Ph	ysics and	Electrodynamics									
	ECTS 6	Duratio	n 2 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses	,	V (4) + V (4)									
	Method of as	sessment	oral examination of one Language of assessmer	oral examination of one candidate each (approx. 30 minutes) Language of assessment: German and/or English								
Statistical Physics	and Electrody	namics II (:	10 ECTS credits)									
11-T-SA-152-m01	Statistical Ph	ysics - Exe	ercises									
	ECTS 5	Duratio		Method of grading   numerical grade	Modul level	undergraduate						
	Courses		Ü (2) Module taught in: Ü: Ge	rman or English								
	Method of as	sessment	written examination (ap Language of assessmer	prox. 120 minutes) nt: German and/or English								
11-T-EA-152-m01	Electrodynam	nics - Exerc	ises									
	ECTS 5	Duratio		Method of grading   numerical grade	Modul level	undergraduate						
	Courses		Ü (2) Module taught in: Ü: Ge	rman or English								
	Method of as	sessment	written examination (approx. 120 minutes) Language of assessment: German and/or English									

Module Group Mat	hematics									
Mathematics 1 and	l 2 (16 ECTS cred	dits)								
10-M-PHY1-152-	Mathematics 1	for Stud	ents of	Physics and Nanos	tructure Technology					
mo1	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (5) + Ü (2) Module taught in: Ü: German or English						
	Method of ass	essment	b) ora c) ora Langu	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus						
10-M-PHY2-152-	Mathematics 2	for Stud	ents o	f Physics and Nanos	structure Technology	,				
mo1	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (5) + Ü (2) Module taught in: Ü: German or English						
	Method of ass	essment	a) written examination (approx. 90 to 120 minutes, usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus							
Mathematics 3 and	d 4 (16 ECTS cred	dits)								
11-M-D-152-m01	Mathematics 3	for Stud	ents of	f Physics and relate	d Disciplines (Differe	ential Equations)				
	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			+ Ü (2) ıle taught in: Ü: Geri	man or English		^			
	Method of ass	essment		en examination (appuage of assessment	rox. 120 minutes) : German and/or Eng	lish				
11-M-F-152-m01	Mathematics 2	4 for Stud	ents of	Physics and relate	d Disciplines (Compl	ex Analysis)	'			
	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English							
	Method of ass	essment	written examination (approx. 120 minutes) Language of assessment: German and/or English							

Module Group Lab	Course I	Physics									
<b>Laboratory Course</b>	Physics	(19 ECT	S credits	)							
11-P-PA-152-m01	Labora	tory Co	urse Phys	ics A (	cs A (Mechanics, Heat, Electromagnetism)						
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate		
	Course	:S		P (2)	P (2)						
	Method	Method of assessment			practical assignment with talk (approx. 30 minutes)  Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.						
11-P-PB-152-m01	Labora	tory Co	urse Phys	ics B (	Classical Physics, E	lectricity, Circuits)					
	ECTS	8	Duratio	n	2 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate		
	Courses			P (2) -	P(2) + P(2)						
	Method of assessment			Prepa pleted comp sics-r	practical assignment with talk (approx. 30 minutes)  Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.						
	other p	rerequi	sites	Students are highly recommended to complete modules 11-P-PA and 11-P-FR1 prior to completing module 11-P-PB.							
11-P-PC-202-m01	Advanc	ed Lab	oratory Co	ourse F	hysics C (Modern P	hysics, Computer Ai	ded Experiments)				
	ECTS	8	Duratio		2 semester	Method of grading	(not) successfully completed	d Modul level	undergraduate		
	Course	S			P (2) + P (2)  Module taught in: German or English						
	Method	d of ass	essment	practical assignment with talk (approx. 30 minutes) Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.  Language of assessment: German and/or English							
	other prerequisites			Stude	ents are highly recon	nmended to complet	e module 11-P-PB prior to com	pleting module 1	11-P-PC.		

Compulsory Electives (21 ECTS credits)
In the area of mandatory electives, students must achieve no less than 12 ECTS credits in graded modules. In the area of mandatory electives, students must complete modules worth a total of no less than 34 ECTS credits.

dules worth a total of no less than 21 ECTS credits.												
Module Group Che	mistry,	Compute	r Science	e, Math	iematics							
o8-AC-Ex-	Experi	mental C	hemistry	7								
Chem-152-m01	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	es		V (4)								
	Metho	d of asse	essment		n examination (appr							
					Language of assessment: German and/or English							
0.460.45	Additional Information   Qualification goal: scientific competences   General and Analytical Chemistry for students of natural sciences (lab)											
08-ACP-NF-152- m01		_			, ,							
	ECTS	2	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	_		P (4)	/							
	metno	d of asse	essment				ent examination talks approx. (a) 4 random examinations	15 minutes eacr	1, log approx. 5 to 10 pages each)			
				Langu	age of assessment:	German and/or Engl	lish					
				Asses	ssessment offered: Once a year, summer semester							
	Modules successfully			o8-AC	3-AC-ExChem							
0.00.015	comple					1		-				
08-OC-NF-152-m01					· · · · · · · · · · · · · · · · · · ·	-	cine and natural sciences	AA - ded lacel	Lundanina di ista			
	ECTS	3	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2)		(: )						
	Method of assessment			written examination (approx. 60 minutes) Language of assessment: German and/or English								
	Additio	onal Info	rmation		Qualification goal: scientific competences							
10-I-GdP-172-m01			of Progra									
,	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	25	J.	V (2) +	+ Ü (2)		<u>-</u>					
	Metho	d of asse	essment		n examination (appr							
									replaced by an oral examination			
				of one		prox. 20 minutes) of	r an oral examination in groups	of 2 candidates	s (approx. 15 minutes per candi-			
					able for bonus							
	Referre	ed to in L	PO I	§ 49 l	Nr. 1 b)							
				§ 69 I	Nr. 1 b)							
10-I-NPP-182-m01	Progra	mming (	Course fo	r natural sciences								
	ECTS	5	Duration			Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course			P (3)								
	Method of assessment											
Bachelor's with 1 major P	hysics (2020) JMU Würzburg • generated 25-Nov-2025 • exam. reg. data record 82 128 - - H 2020 page 9 / 28											

10-M-COM-152-	Compu	tationa	l Mathem	atics								
mo1	ECTS	4	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		V (1)	V (1) + Ü (2)							
	Method	d of ass	essment	project in the form of programming exercises (approx. 20 to 25 hours)								
					Language of assessment: German and/or English Assessment offered: Once a year, winter semester							
	Referred to in LPO I				S 22 II Nr. 3 f)							
10 M NIIM12f 152					1 for students of other subjects							
10-M-NUM1af-152- mo1	ECTS	10	Duration		1 semester Method of grading numerical grade Modul level undergraduate							
	Course		Duration		+ Ü (2)	Method of grading	ilullielical glade	Modul level	undergraduate			
			essment	` ' '		nnroy oo to 180 min	utes, usually chosen) or					
	Method	u UI ass	essillelli	b) ora	al examination of one	e candidate each (15	to 30 minutes) or					
				c) ora	o) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)							
					anguage of assessment: German and/or English editable for bonus							
10-M-NUM2af-152-	Numori	creditable for bonus  erical Mathematics 2 for students of other subjects										
mo1			Duration					Modul level	undergraduate			
		10			1 semester + Ü (2)	Method of grading	numencai grade	Modul level	undergraduate			
	Course						utas varially also and an					
	Method of assessment			a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or								
				c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)								
				Langi	Language of assessment: German and/or English							
	_			creditable for bonus								
10-M-PRG-152-mo1		gramming course for students of Mathematics and other subjects										
	ECTS	3	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course		_	P (2)	-							
	Method	d of ass	essment				(approx. 20 to 25 hours)					
						German and/or Eng						
	Referre	d to in I	PO I	Assessment offered: Once a year, summer semester  § 22 II Nr. 3 f)								
10-M-MWR-152-				ational Science								
mo1		8	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course				+ Ü (2)							
				Module taught in: German and/or English								
	Method	d of ass	essment	a) wr	tten examination (ap	pprox. 90 to 180 min	utes, usually chosen) or					
			b) oral examination of one candidate each (15 to 30 minutes) or									
				c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate)								
			Language of assessment: German and/or English creditable for bonus									
				creditable for bollus								

11-GRT-152-m01	Group Theory											
	ECTS 6	5 Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate				
	Courses			) + R (2)								
				Module taught in: German or English								
	Method o	of assessment	a) wri	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								
			d) pro									
				esentation/talk (app		l . <b>f</b>						
								sessment may instead take the ethod of assessment is changed,				
			the le	cturer must inform	students about this b	, four weeks prior to the $\mathfrak c$						
			Langu	uage of assessment	: German and/or Engl	ish						
Module Group App	lied Physi	cs										
11-CP-152-m01	Computa	tional Physics										
	ECTS 6	5 Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			/ (3) + R (1) Module taught in: German or English								
	Method o	of assessment	a) wri	a) written examination (approx. 90 to 120 minutes) or								
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) project report (approx. 8 to 10 pages) or								
			e) pre	e) presentation/talk (approx. 30 minutes)  If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
				Language of assessment: German and/or English Assessment offered: Once a year, winter semester								
			Asses									
11-EL-152-m01		c Circuits										
	ECTS 6	5 Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			+ R (1)	F 1: 1							
	0.0 (1)			Module taught in: German or English a) written examination (approx. 90 to 120 minutes) or								
	Method	of assessment	a) wri	tten examination (a	ipprox. 90 to 120 mini ie candidate each (ap	ites) or prox 20 minutes) or						
							didate) 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: Once a year, summer semester									
		,	Asses	ssment offered: Onc	te a year, summer sen	iester		···				

11-LMT-152-m01	Laboratory and Measurement Technology												
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate						
	Courses			V (3) + R (1)		,							
				Module taught in: German or English									
	Method	of 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.									
					nent: German and/or English								
11-LVW-152-m01	Introduc	Assessment offered: Once a year, winter semester  Introduction to Labview											
11 2 7 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Duration	1 semester	Method of grading   numerical grade	Modul level	graduate						
	Courses			V (1) + R (3)			, ,						
				Module taught in: German or English									
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or									
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or									
				d) project report (approx. 8 to 10 pages) or									
				e) presentation/talk (approx. 30 minutes).									
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,									
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest.									
				Language of assessment: German and/or English									
IMD	1 - 6 6 -			Assessment offered: Once a year, winter semester									
11-LMB-152-m01			<b>Measure</b> Duration	ment Technology in E		Modul level	graduate						
	Courses				Method of grading   numerical grade	Modul level	graduate						
	Courses			V (3) + R (1) Module taught in: German or English									
	Method	of asses			n (approx. 90 to 120 minutes) or								
					of one candidate each (approx. 30 minutes) or a groups (groups of 2, approx. 30 minutes per car	ndidata) or							
					prox. 8 to 10 pages) or	narate) 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: Once a year, summer semester									

11-ZDR-152-m01	Principles of Two- and Three-Dimensional Röntgen Imaging											
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	graduate					
	Courses	i		V (3) + R (1)		Υ						
				Module taught in: German or English								
	Method	of asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (	e) presentation/talk (approx. 30 minutes).							
				f a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.								
					ent: German and/or English							
11-BMS-152-m01	Assessment offered: Once a year, summer semester  Imaging Methods at the Synchroton											
11 DWIS 152 IIIO1		6	Duration		Method of grading   numerical grade	Modul level	undergraduate					
	Courses		J	V (3) + R (1)	method of Stading   numerical Stade	moduliteret						
				Module taught in: German or English								
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or								
				b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or								
				d) project report (approx. 8 to 10 pages) or								
				e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,								
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English								
				Assessment offered: Once a year, summer semester								
11-ZMB-152-m01			1	tive Material Testing								
		4	Duration		Method of grading   numerical grade	Modul level	undergraduate					
	Courses			V (2) + R (1) Module taught in: German or English								
	Method	of asse			n (approx. 90 to 120 minutes) or							
					f one candidate each (approx. 30 minutes) or groups (groups of 2, approx. 30 minutes per ca	andidate) or						
				d) project report (app		andidate) of						
				e) presentation/talk (approx. 30 minutes).								
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the								
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is 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:	Once a year, winter semester							

11-ASI-152-m01	Imaging Sens	sors in Infr	ared			•					
	ECTS 3	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		V (2)	*		•					
				ıle taught in: Germ							
	Method of as	sessment			(approx. 90 to 120 minutes) or						
				o) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
			d) pro	d) project report (approx. 8 to 10 pages) or							
			e) pre	esentation/talk (ap	pprox. 30 minutes).						
			form	ritten examination of an oral examina	was chosen as method of assessment, this nation of one candidate each or an oral examination.	nay be changed and ass	sessment may instead take the nethod of assessment is changed.				
			the le	cturer must inform	n students about this by four weeks prior to th						
					nt: German and/or English						
- FDV	D: : 1 6				ice a year, summer semester	'					
11-EBV-152-m01	Principles of			i							
	ECTS 3	Duratio		1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses			le taught in: Germ							
	Method of as	sessment			(approx. 90 to 120 minutes) or						
				o) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
			d) pro	d) project report (approx. 8 to 10 pages) or							
			e) pre	e) presentation/talk (approx. 30 minutes).							
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,							
				the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English							
			Langu								
					ice a year, winter semester	,					
11-SDC-152-m01				Computer Physics							
	ECTS 4	Duratio		1 semester	Method of grading   numerical grade	Modul level	graduate				
	Courses		V (2)		an an Euraliah						
	10 - 411 - C			lle taught in: Germ							
	Method of as	sessment	a) wri	tten examination (	(approx. 90 to 120 minutes) or one candidate each (approx. 30 minutes) or						
			c) ora	ll examination in g	roups (groups of 2, approx. 30 minutes per ca	andidate) or					
			d) pro	ject report (appro	x. 8 to 10 pages) or	•					
					pprox. 30 minutes).	may be changed and acc	sassment may instead take the				
					was chosen as method of assessment, this nation of one candidate each or an oral examination						
					students about this by four weeks prior to th						
			Language of assessment: German and/or English								
			Asses	ssment offered: Or	nce a year, winter semester						

<b>Module Group Ast</b>	rophysics										
11-AP-152-m01	Astrophy	ysics									
	ECTS	6	Duration	1	1 semester	Method of gradin	g numerical grade		Modul level	undergraduate	
	Courses			V (2) + R (2) Module taught in: German or English							
			essment	a) wr b) ora c) ora d) pro e) pro If a w form the lo	written examination (approx. 90 to 120 minutes) or o) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) f 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. anguage of assessment: German and/or English						
11-APP-152-m01	Referred to in LPO I  Laboratory Course Asti			§ 22 § 22	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)						
11-APP-152-m01				<u> </u>	,						
	ECTS 6 Duratio				1 semester	Method of gradin	g (not) successfully c	ompleted	Modul level	graduate	
	Courses			P (4) Modu	ıle taught in: Gern	nan or English					
	Method of assessment			a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. Experiments that were not successfully completed can be repeated once or b) discussion to test the candidate's understanding of the physics-related contents and results of the experiment (approx. minutes).  Language of assessment: German and/or English							
Module Group Par	ticle Phys	ics									
11-TPS-152-m01		Physic	s (Standa	rd Mo	odel)						
	ECTS		Duration		1 semester	Method of gradin	g numerical grade		Modul level	undergraduate	
	Courses				+ R (2) ule taught in: Gern	nan or English					
	Method	of ass		b) ora c) ora d) pro e) pro If a w form the le	al examination of all examination in a piect report (approperation/talk (a ritten examination of an oral examination exturer must information of an oral examination exturer must information of an oral examination of an oral examination of an oral examination of an oral examination or an oral examination of an oral examination or an oral examination or an oral examination or an oral examination of an oral examination of an oral examination or an oral examination or an oral examination of an oral examination or an oral examination o	groups (groups of 2, a ox. 8 to 10 pages) or pprox. 30 minutes). 1 was chosen as meth ation of one candidat	approx. 30 minutes) or pprox. 30 minutes per nod of assessment, thi e each or an oral exam by four weeks prior to	candidate) s may be clination in §	hanged and ass groups. If the m	sessment may instead take the lethod of assessment is changed, date at the latest.	

11-QFT1B-202-m01	Quantu	ım Field	Theory I								
	ECTS	8	Duration	1	1 semester	Method of grading numerical grade	Modul level	graduate			
	Courses	S			V (4) + R (2) Module taught in: German or English						
	AA - 411	l - C									
	Method	or asse		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or							
				d) pro	ject report (approx.	. 8 to 10 pages) or					
					sentation/talk (app						
						was chosen as method of assessment, this may be o					
						ion of one candidate each or an oral examination in students about this by four weeks prior to the origin					
					anguage of assessment: German and/or English						
				Asses	Assessment offered: In the semester in which the course is offered and in the subsequent semester						
11-DTS-152-m01	Particle	e Radiati	on Detec								
	ECTS	4	Duration	1	1 semester	Method of grading   numerical grade	Modul level	graduate			
	Courses	S		V (2) +							
					le taught in: Germa						
	Method	d of asse	essment	a) writ	ten examination (a	approx. 90 to 120 minutes) or					
						ne candidate each (approx. 30 minutes) or oups (groups of 2, approx. 30 minutes per candidate	e) or				
					ject report (approx.		2) 01				
				e) pre	sentation/talk (app	prox. 30 minutes).					
				If a wr	itten examination v	was chosen as method of assessment, this may be o	changed and ass	sessment 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 che 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								
						te a year, summer semester					

11-RTTB-232-m01	Theory	of Rela	tivity								
	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S			V (3) + R (1) Module taught in: German or English						
	Method	d of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester							
	Additio	nal Info	rmation			on committee require		•			
Module Group Sem	iconduc	tor Phy	sics								
11-HLF-152-m01	Semiconductor Lasers and Photonics										
	ECTS	6	Duratio	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	S		V (3) +	R (1) le taught in: Germa	n or English					
	Method of assessment			a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: Once a year, summer semester							

11-HLP-152-m01	Fundan	nentals	of Semico	nductor Physics		,					
	ECTS	6	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (3) + R (1)							
			-	Module taught in: German or English							
	Method	d of ass	essment	a) written examination	n (approx. 90 to 120 minutes) or f one candidate each (approx. 30 minutes) or						
				c) oral examination in groups (groups of 2, approx. 30 minutes) or							
				d) project report (approx. 8 to 10 pages) or							
				e) presentation/talk (	approx. 30 minutes). on was chosen as method of assessment, this ma	y he changed and ac	sassment may instead take the				
					nation of one candidate each or an oral examinati						
				the lecturer must info	rm students about this by four weeks prior to the						
					ent: German and/or English Once a year, summer semester						
11-SPD-152-m01	Physics	s of Sen		or Devices	once a year, summer semester		-				
11-3FD-152-11101		6	Duration		Method of grading   numerical grade	Modul level	undergraduate				
	Course		J	V (3) + R (1)	method of glading hameheat glade	Modulitevel	undergraduate				
	Course	•		Module taught in: Ger	man or English						
	Method	of ass			n (approx. 90 to 120 minutes) or						
				b) oral examination of	f one candidate each (approx. 30 minutes) or	didata) ar					
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or							
				e) 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: Once a year, summer semester							
11-KDS-152-m01				ers and Lithography							
	ECTS	6	Duration		Method of grading   numerical grade	Modul level	undergraduate				
	Course	S		V (3) + R (1)	man av Fuelish						
	Mothod	l of acc		Module taught in: German or English  a) written examination (approx. 90 to 120 minutes) or							
	Method	ı 01 ass			f one candidate each (approx. 30 minutes) or						
				c) oral examination in	groups (groups of 2, approx. 30 minutes per cand	didate) or					
				d) project report (app							
				e) presentation/talk (	approx. 30 minutes). on was chosen as method of assessment, this ma	v he changed and as	sessment may instead take the				
					nation of one candidate each or an oral examinati						
				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: Once a year, winter semester							
				Maacaaillelit Olleleu: (	once a year, willer semester						

11-QUI-202-m01	Introductio	n to Quantur	n Computi	ing and Quantur	m Information				
	ECTS 6	Duratio		semester	Method of grading numerical grade	Modul level	undergraduate		
	Courses	'		V (3) + R (1) Module taught in: German or English					
	Method of a	assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest. Language of assessment: German and/or English Assessment offered: In the semester in which the course is offered and in the subsequent semester						
Module Group Soli	d State and I	Nanostructui	e Physics						
11-FK2B-202-m01	Solid State Physics 2								
	ECTS 8	Duratio	1 1 5	semester	Method of grading numerical grade	Modul level	undergraduate		
	Courses		V (4) + R (2) Module taught in: German or English						
	Method of a	assessment	b) oral ex c) oral ex d) project e) presen If a writte form of a the lectur Language	camination of on amination in gro t report (approx station/talk (app en examination v n oral examinati rer must inform e of assessment	approx. 90 to 120 minutes) or ne candidate each (approx. 30 minutes) or oups (groups of 2, approx. 30 minutes per candidate . 8 to 10 pages) or orox. 30 minutes). was chosen as method of assessment, this may be coion of one candidate each or an oral examination in students about this by four weeks prior to the origin to German and/or English the semester in which the course is offered and in the	hanged and ass groups. If the m al examination (	ethod of assessment is changed, date at the latest.		

11-RRF-202-m01	Introductio	on to Relativi	stic Phy	ysics and Classical	Field Theory					
	ECTS 6	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	·		V (3) + R (1) Module taught in: German or English						
	Method of	assessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment 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: Once a year, summer semester							
11-NAN-152-m01	Nanoanaly	tics				,				
	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	assessment	b) ora c) ora d) pro e) pre If a wi form o the le Langu	Il examination of or I examination in gr sject report (approx sentation/talk (appritten examination of an oral examinat cturer must inform		changed and ass	ethod of assessment is changed,			

11-ENT-152-m01	Princip	les of E	nergy Tec	hnologies							
	ECTS	6	Duration	1 semester	Method of grading num	erical grade	Modul level	graduate			
	Course	S		V (3) + R (1)			`				
				Module taught in: German or English							
	Method	d of ass		a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or							
							) 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,							
					n students about this by four						
					nt: German and/or English	weeks prior to the origina	at examination (	date at the latest.			
				Assessment offered: Once a year, winter semester							
	Referred to in LPO I			§ 22    Nr. 1 h)							
				§ 22    Nr. 2 f) § 22    Nr. 3 f)							
11-BVG-202-m01	Coating	Techn		ased on Vapour Deposition							
11 5 4 6 2 6 2 111 6 1	ECTS	5	Duration		Method of grading   num	erical grade	Modul level	undergraduate			
	Course			V (3) + R (1)	method of glading ham	enear grade	Modulitevel	undergradate			
	Course	_		Module taught in: Gern	nan or English						
	Method	d of ass	essment	a) written examination	(approx. 90 to 120 minutes)	or					
					one candidate each (approx.		`				
				d) project report (appro	groups (groups of 2, approx. 3	30 minutes per candidate	) or				
				e) presentation/talk (a							
				If a written examination	was chosen as method of a			sessment 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: Once a year, summer semester							
				Assessment offered: Once a year, summer semester creditable for bonus							

Module Group Curr	ent Topics	in Physics						
11-BXE5-152-mo1	Current To	opics in Experi	mental Physics					
	ECTS 5	Duration	1 semester	Method of grading   numerical grade	Modul level	undergraduate		
	Courses		V (2) + R (2)					
	Method of	fassessment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes). If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.					
	other prer	equisites		ent: German and/or English ation committee required.				
11-BXE6-152-mo1			mental Physics	ation committee required.				
II BALO 132 moi	ECTS 6	Duration		Method of grading   numerical grade	Modul level	undergraduate		
	Courses		V (3) + R (1)	, , , , ,	<u> </u>			
	other prer		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  Approval from examination committee required.					
11-BXE8-152-m01			mental Physics	<u>'</u>				
	ECTS 8	Duration	<u>·</u>	Method of grading   numerical grade	Modul level	undergraduate		
	Courses	ļ	V (4) + R (2)	,				
			b) oral examination of c) oral examination in d) project report (appr e) presentation/talk (a If a written examinatio form of an oral examin the lecturer must infor Language of assessment	approx. 30 minutes).  In was chosen as method of assessment, this may ation of one candidate each or an oral examination is students about this by four weeks prior to the cent: German and/or English	ay be changed and assessment may instead take the tion in groups. If the method of assessment is changed,			
	other prer	equisites	Approval from examin	ation committee required.				

11-BXT5-152-m01	Current	Topics	in Theore	tical	Physics		,				
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	5		V (2)	+ R (2)	·	•				
	Method	of asso	essment	a) wr	a) written examination (approx. 90 to 120 minutes) or						
						ne candidate each (approx. 30 minutes) or					
				c) ora	al examination in gr	roups (groups of 2, approx. 30 minutes per candi	date) or				
					d) project report (approx. 8 to 10 pages) or e) presentation/talk (approx. 30 minutes) If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the						
				form	of an oral examinat	tion of one candidate each or an oral examination	n in groups. If the m	ethod of assessment is changed,			
				the le	he lecturer must inform students about this by four weeks prior to the original examination date at the latest.						
						t: German and/or English		_			
	other prerequisites Approval from examination committee required.										
11-BXT6-152-mo1			in Theore		Physics						
	ECTS 6 Duratio				1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Courses	5		V (3)	+ R (1)						
	Method	of asso	essment	a) wr	itten examination (	approx. 90 to 120 minutes) or					
				b) or	b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
				c) ora	ai examination in gr oject report (approx	roups (groups of 2, approx. 30 minutes per candi	date) or				
				e) pr	e) presentation/talk (approx. 30 minutes)						
				If a w	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 pr	rereguir	_	Approval from examination committee required.							
11-BXT8-152-m01	other prerequisites										
II BANG IJZ MGI		8	Duration		1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Courses			V (4)	+ R (2)	1 5 51 5		, ,			
	Method	of ass			_	approx. 90 to 120 minutes) or					
				b) or	al examination of o	ne candidate each (approx. 30 minutes) or					
						roups (groups of 2, approx. 30 minutes per candi	date) or				
					oject report (approx						
					esentation/talk (ap	was chosen as method of assessment, this may	he changed and as	sessment may instead take the			
						tion of one candidate each or an oral examination					
				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 pr	roroqui	citoc	۸۰۰۰	oval from ovaminat	ion committee required.					

11-CSA6-152-m01	Selecte	d Topic	s in Astro	physi	cs						
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (3)	+ R (1)		•				
	Method	of ass	essment	a) written examination (approx. 90 to 120 minutes) or b) oral examination of one candidate each (approx. 30 minutes) or							
				c) ora	c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or						
				e) pre	esentation/talk (ap	prox. 30 minutes) was chosen as method of assessment, this may	v he changed and as	sessment may instead take the			
				form	of an oral examination	tion of one candidate each or an oral examination	on in groups. If the m	ethod of assessment is changed,			
				the le	ecturer must inform	students about this by four weeks prior to the o					
						t: German and/or English					
	other p			<u> </u>		ion committee required.					
11-CST6-152-m01		<u> </u>	s in Parti		<u> </u>						
		6	Duration		1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course				+ R (1)						
	Method	d of ass	essment	a) wr	itten examination (	approx. 90 to 120 minutes) or					
					b) oral examination of one candidate each (approx. 30 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or						
					d) project report (approx. 8 to 10 pages) or						
				e) pre	esentation/talk (ap	prox. 30 minutes)					
				If a w	If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed,						
					the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English						
	other prerequisites			Approval from examination committee required.							
11-CSF6-152-m01	Selecte	d Topic	s in Solid	State	Physics	·	,				
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (3)	+ R (1)						
	Method	d of ass	essment	a) wr	itten examination (	approx. 90 to 120 minutes) or					
						ne candidate each (approx. 30 minutes) or	1: -  - + - \ - "				
				d) nr	n examination in gr niect renort (annro)	roups (groups of 2, approx. 30 minutes per cand k. 8 to 10 pages) or	ildate) or				
					esentation/talk (ap						
				If a w	ritten examination	was chosen as method of assessment, this may					
				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.							
						t: German and/or English	original examination	uate at the latest.			
						ion committee required.					
	J other p	. s. equi									

11-CSTh6-152-m01	Selected Top	ics in Theo	retical	Physics								
	ECTS 6	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		V (3) +	+ R (1)	•							
	Method of as	sessment	a) wri	tten examination (a	approx. 90 to 120 min	utes) or						
					ne candidate each (ap		۵) ۵۳					
				i exammation in gro oject report (approx.		prox. 30 minutes per candidat	e) or					
			e) presentation/talk (approx. 30 minutes)									
			If a wr	ritten examination y	was chosen as metho	d of assessment, this may be	changed and as	sessment may instead	d 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 prerequ	uisites	Approval from examination committee required.									
Key Skills Area (20	ECTS credits)											
General Key Skills In addition to the m			dents n	may also take modu	ıles offered by JMU as	s part of the pool of general tra	nsferable skills	(ASQ).				
General Key Skills	(subject-speci	fic)										
11-P-VKM-202-m01	MINT Prepara	atory Cours	e Math	nematical Methods	of Physics							
	ECTS 3	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Courses			V (1) + Ü (2) Module taught in: German or English								
	Method of as	sessment	a) exercises (successful completion of approx. 50% of approx. 6 exercise sheets) or b) talk (approx. 15 minutes) Assessment offered: Once a year, winter semester									
	Referred to in	LPO I	§ 22    Nr. 1 h) § 22    Nr. 2 f) § 22    Nr. 3 f)									
11-FFI-202-m01	Fit for Indust	ry										
	ECTS 3	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Courses			le taught in: Germa								
	Method of as	sessment	a) wri b) ora	tten examination (a al examination of or	approx. 90 to 120 min ne candidate each (ap	utes) or prox. 30 minutes) or						
			c) ora	l examination in gro	oups (groups of 2, ap	prox. 30 minutes per candidat	e) or					
				oject report (approx esentation/talk (app								
						d of assessment, this may be	changed and as	sessment mav instead	d take the			
			form o	of an oral examinat	ion of one candidate	each or an oral examination in	groups. If the m	nethod of assessment				
						y four weeks prior to the origin	nal examination	date at the latest.				
					:: German and/or Eng ce a year, summer ser							
Bachelor's with 1 major P	hysics (2020)		ļ.			JMU Würzburg • generated 25-Nov-2	2025 • exam. reg. data	record 82 128 - - H 2020	page 25 / 28			

11-PMP-152-m01	Project Management in Practice										
	ECTS 3 Duration			1	1 semester	Method of grading	(not) successfully completed	Modul level	graduate		
	Course	S		V (1) -							
				Module taught in: German or English							
	Method	d of asso		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							
DACO	C = = = = =	1.6		Assessment offered: In the semester in which the course is offered and in the subsequent semester							
11-BASQ5-152-m01	ECTS				İ	Mathadafaradina	numarical and da	Modul level	Lundararaduata		
	Course	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
				V(2) + 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.							
	oth or n			Language of assessment: German and/or English  Approval from examination committee required.							
44 ECD 252 mod		rerequi		· · · · · · · · · · · · · · · · · · ·							
11-EGR-252-m01	Introduction to Intellect ECTS 3 Duratio				1 semester	Mothod of grading	(not) successfully completed	Modul level			
	ECTS 3 Duration			V (2)	1 Semester	Method of glading	(not) successibility completed	Modulitevel			
	Course	3		V (2)   Module taught in: German or English							
	Method	d of asso		a) written examination (approx. 90 to 120 minutes) or							
				b) oral examination of one candidate each (approx. 30 minutes) or							
				c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or d) project report (approx. 8 to 10 pages) or							
				e) presentation/talk (approx. 30 minutes).							
				If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the							
				form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.  Language of assessment: German and/or English							
				Assessment offered: In the semester in which the course is offered and in the subsequent semester							
		-									

Subject-specific Key Skills (15 ECTS credits)													
11-M-MR-202-m01	Mathematical Methods of Physics												
	ECTS	6	Duratio	n	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		$V(2) + \ddot{U}(2) + V(2) + \ddot{U}(2)$ Module taught in: German or English									
	Method	d of asse	essment	a) Exercises (successful completion of approx. 50% of approx. 13 exercise sheets) or b) Talk (approx. 15 minutes)									
	Referre	d to in L	PO I	§ 53   Nr. 1 a) § 77   Nr. 1 a)									
11-HS-152-m01	Semina	Seminar Experimental/Theoretical Physics											
	ECTS 5 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			S (2) Module taught in: German or English									
	Method	of asse	essment	talk with discussion (30 to 45 minutes)									
	other p	rerequis	sites	Admission prerequisite to assessment: regular attendance (minimum 85% of sessions).									
	Additio	nal Info	rmation	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.									

11-P-FR1-152-m01	Data and Error Analysis											
	ECTS 2 Duration		1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S		V (1) + Ü (1) Module taught in: Ü: German or English								
	Method of assessment			written examination (approx. 120 minutes) Language of assessment: German and/or English								
	other p	rerequi	sites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.								
	Additio	nal Info	ormation	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.								
	Referred to in LPO I				§ 53   Nr. 1 c) § 77   Nr. 1 d)							
11-P-FR2-152-m01	Advanced and Computational Data Analysis											
	ECTS 2 Duration		า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Courses			V (1) + Ü (1)								
	Method	d of ass	essment	Exercises (successful completion of approx. 50% of approx. 10 exercise sheets) Assessment offered: Once a year, summer semester								
	other p	rerequi	sites	Students are highly recommended to complete module 11-P-FR1 prior to completing module 11-P-FR2.								
Thesis (10 ECTS cre	edits)											
11-BA-P-152-m01	Bachel	or Thes	is Physics	;								
	ECTS 10 Duration		1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			No courses assigned to module								
	Method	d of ass	essment	Bachelor's thesis (approx. 25 pages) Language of assessment: German or English								
	Additional Information			Time to complete: 12 weeks.								