

# Subdivided Module Catalogue for the Module studies (Bachelor)

## **Physics**

Examination regulations version: 2019 Responsible: Faculty of Physics and Astronomy

JMU Würzburg • generated 24-Feb-2024 • exam. reg. data record MB|128|-|-|H|2019



## **Abbreviations used**

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

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**

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

## **Notes**

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 the 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:

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

15-May-2019 (2019-36)

27-Jun-2019 (2019-41)

14-Nov-2019 (2019-52)

22-Jan-2020 (2020-13)

o6-May-2020 (2020-39)

22-Jul-2020 (2020-57)

17-Dec-2020 (2020-110)

10-Mar-2021 (2021-17)



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o9-Jun-2021 (2021-58)
22-Dec-2021 (2021-85)
05-Jul-2022 (2022-52)
31-Jan-2023 (2022-86)
15-Jun-2023 (2023-58)
13-Dec-2023 (2023-107)
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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.



## The subject is divided into

Abbreviation	Module title		Method of grading	page
Summer Term 2019	·	I	1	Į
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16
Winter Term 2019		•	•	Ų
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16
Summer Term 2020		,		-
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16
Winter Term 2020				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14



11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15			
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16			
Summer Term 2021							
11-BXE5-152-mo1	Current Topics in Experimental Physics	5	NUM	7			
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8			
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9			
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10			
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11			
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12			
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13			
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14			
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15			
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16			
Winter Term 2021		'					
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7			
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8			
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9			
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10			
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11			
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12			
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13			
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14			
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15			
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16			
Summer Term 2022			l .				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7			
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8			
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9			
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10			
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11			
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12			
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13			
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14			
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15			
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16			
Winter Term 2022	·			•			
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7			
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8			
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9			
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10			
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11			
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12			
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13			
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	14			
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15			
11-CSTh6-152-m01	Selected Topics in Theoretical Physics	6	NUM	16			
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Summer Term 2023				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	6	NUM	8	
11-BXE8-152-m01	11-BXE8-152-mo1 Current Topics in Experimental Physics			
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXP7-161-m01	Current Topics in Physik	7	NUM	18
Winter Term 2023				
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXP7-161-m01	Current Topics in Physik	7	NUM	18
11-BXT5-152-m01	Current Topics in Theoretical Physics	5	NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-m01	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	Selected Topics in Astrophysics	6	NUM	13
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15
Summer Term 2024		,		
11-BXE5-152-m01	Current Topics in Experimental Physics	5	NUM	7
11-BXE6-152-m01	Current Topics in Experimental Physics	6	NUM	8
11-BXE8-152-m01	Current Topics in Experimental Physics	8	NUM	9
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXP7-161-m01	Current Topics in Physik	7	NUM	18
11-BXT5-152-m01	11-BXT5-152-mo1 Current Topics in Theoretical Physics		NUM	10
11-BXT6-152-m01	Current Topics in Theoretical Physics	6	NUM	11
11-BXT8-152-mo1	Current Topics in Theoretical Physics	8	NUM	12
11-CSA6-152-m01	11-CSA6-152-mo1 Selected Topics in Astrophysics		NUM	13
11-CST6-152-m01	Selected Topics in Particle Physics	6	NUM	15



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Module title							
Current Topi	cs in Experimental Physic	S		11-BXE5-152-m01			
Module coor	dinator		Module offered by				
chairperson	of examination committee	1	Faculty of Physics a	and Astronomy			
	nod of grading	Only after succ. con	npl. of module(s)				
5 num	erical grade						
Duration	Module level	Other prerequisites					
1 semester	undergraduate	Approval from exam	ination committee r	required.			
Contents							
Current topic or study abro		. Accredited academi	c achievements, e.g	in case of change of university			
Intended lea	rning outcomes						
sics of the Ba understand t classify the s	achelor's programme. The the measuring and/or eva subject-specific contexts a	y have knowledge of luation methods nece and know the applicat	a current subdisciplessary to acquire this cion areas.	of a module of Experimental Phy- ine of Experimental Physics and s knowledge. They are able to			
	e, number of weekly conta	act hours, language –	- if other than Germa	an)			
V (2) + R (2)							
				ation offered — if not every seme-			
ster, information on whether module can be chosen to earn a bonus)  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.  Language of assessment: German and/or English							
Allocation of	Allocation of places						
Additional information							
Workload	Workload						
150 h							
Teaching cyc	:le						



Module title Abbreviation					
Current To	opics in Experimental Physics	5		11-BXE6-152-mo1	
Module co	oordinator		Module offered by	J	
chairpers	on of examination committee		Faculty of Physics a	and Astronomy	
	lethod of grading	Only after succ. con	pl. of module(s)		
6 ni	umerical grade				
Duration	Module level	Other prerequisites			
1 semeste	er undergraduate	Approval from exam	ination committee r	equired.	
Contents					
Current to or study a		. Accredited academi	c achievements, e.g	g. in case of change of university	
Intended	learning outcomes				
understar classify th		uation methods necendering methods necendering methods in the applications.	essary to acquire this ion areas.	ine of Experimental Physics and s knowledge. They are able to	
V (3) + R (	· · · · · · · · · · · · · · · · · · ·	et nours, tanguage	ii otilei tilali delilit	111)	
Method o	f assessment (type, scope, la			ation offered — if not every seme-	
ster, information on whether module can be chosen to earn a bonus)  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.  Language of assessment: German and/or English					
Allocation	n of places				
Additional information					
Workload					
180 h					
Teaching	cycle				



	Module title Abbreviation					
Curren	t Topic	s in Experimental Physic	S		11-BXE8-152-m01	
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committee		Faculty of Physics a	and Astronomy	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
8	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate	Approval from exam	ination committee r	equired.	
Conten	ts					
Current or stud			. Accredited academi	c achievements, e.g	g. in case of change of university	
Intend	ed lear	ning outcomes				
sics of unders	the Bad tand th	chelor's programme. The	y have knowledge of uation methods nece	a current subdiscipl essary to acquire this	of a module of Experimental Phyline of Experimental Physics and s knowledge. They are able to	
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
V (4) +	R (2)					
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
or oral pages) If a writ stead t of asse nation	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.  Language of assessment: German and/or English					
Allocation of places						
Additio	Additional information					
Worklo	ad					
240 h						
1 " "	240 11					

 $\textbf{Referred to in LPO I } \ (\text{examination regulations for teaching-degree programmes})$ 



Modul	a titla				Abbreviation
	Current Topics in Theoretical Physics				11-BXT5-152-m01
44 - 4111	e coord	It 4		as adult afford by	11 5/ 5 = 5 = = =
				Module offered by	
		f examination committee		Faculty of Physics a	and Astronomy
ECTS	$\overline{}$	od of grading	Only after succ. con	ipl. of module(s)	
5		rical grade	<del></del>		
Durati		Module level	Other prerequisites	• .• • • • • • • • • • • • • • • • • •	
1 seme		undergraduate	Approval from exam	ination committee r	equired.
Conte	nts				
	it topics abroad		accredited academic a	achievements, e.g. i	n case of change of university or
Intend	led lear	ning outcomes			
	<b>es</b> (type	oretical Physics.  , number of weekly conta	ct hours, language –	· if other than Germa	an)
Metho	d of as	sessment (type, scope, la			ntion offered — if not every seme-
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.  Language of assessment: German and/or English					
Allocation of places					
Additio	onal inf	ormation			

Workload 150 h

## Teaching cycle

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Referred to in LPO I (examination regulations for teaching-degree programmes)

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		17/2/41	J WEYOVE SIN C			
Module	Module title Abbreviation					
Current	Current Topics in Theoretical Physics				11-BXT6-152-m01	
Module	coord	inator		Module offered by		
chairpe	rson o	f examination committee	!	Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate	Approval from exam	ination committee r	equired.	
Conten	ts					
Current study a		of Theoretical Physics. A	accredited academic	achievements, e.g. ii	n case of change of university or	
Intende	ed lear	ning outcomes				
sics of Physics blems	the Bac and h of Theo	chelor's programme. The ave mastered the require retical Physics.	y have advanced speed methods. They are	cialist knowledge of able to apply the ac	of a module of Theoretical Phy- a subdiscipline of Theoretical quired methods to current pro-	
		, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
V (3) +	R (1)					
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-	
or oral pages) If a writ stead t of asse nation	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.  Language of assessment: German and/or English					
Allocation of places						
Additio	Additional information					
Worklo	Workload					
180 h						
<del></del>						



Module	Module title Abbreviation					
Current	t Topic	s in Theoretical Physics			11-BXT8-152-m01	
Module	coord	inator		Module offered by		
chairpe	erson o	f examination committee		Faculty of Physics a	and Astronomy	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
8	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	ster	undergraduate	Approval from exam	ination committee re	equired.	
Conten	ts					
Current study a			accredited academic a	achievements, e.g. ir	n case of change of university or	
Intende	ed lear	ning outcomes				
sics of Physics	the Ba	chelor's programme. The	y have advanced spe	cialist knowledge of	of a module of Theoretical Phy- a subdiscipline of Theoretical quired methods to current pro-	
		, number of weekly conta	ct hours, language –	if other than Germa	nn)	
V (4) +	R (2)					
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
or oral pages) If a writ stead t of asse nation	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.  Language of assessment: German and/or English					
Allocation of places						
Additio	Additional information					
Worklo	ad					
240 h						

 $\textbf{Referred to in LPO I } \ (\text{examination regulations for teaching-degree programmes})$ 



Module title Abbreviation					Abbreviation
Selected Topics in Astrophysics					11-CSA6-152-m01
Module coordinator				Module offered by	
chairpe	erson o	f examination committee		Faculty of Physics a	and Astronomy
ECTS	Metho	od of grading	Only after succ. con		,
6	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	Approval from exam	ination committee re	equired.
Conten	ts				
Selecte	ed topic	s of Astrophysics.			
Intend	ed learı	ning outcomes			
tion me	ethods				stand the measuring and evalua- subject-specific contexts and
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	n)
V (3) +	R (1)				
		sessment (type, scope, la			tion offered — if not every seme-
or oral pages) If a write stead to of asset nation Langua	examin or pres tten exa ake the essmen date at age of a	nation in groups (groups of sentation/talk (approx. 30 amination was chosen as a form of an oral examina t is changed, the lecturer the latest. ssessment: German and	of 2, approx. 30 minu o minutes). method of assessmo tion of one candidate must inform student	tes per candidate) o ent, this may be char e each or an oral exa	didate each (approx. 30 minutes) r project report (approx. 8 to 10 nged and assessment may inmination in groups. If the method weeks prior to the original exami-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
<del></del>					
Workload					
180 h					
Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				



Module title Abbreviation				Abbreviation	
Selected Topics in Solid State Physics					11-CSF6-152-m01
Modu	le coord	inator		Module offered by	
chairp	erson o	f examination committee	!	Faculty of Physics a	and Astronomy
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Durati	ion	Module level	Other prerequisites		
1 sem	ester	undergraduate	Approval from exam	ination committee r	equired.
Conte	nts				
Select	ed topic	s of Solid-State Physics.			
Intend	led lear	ning outcomes			
and ev	valuatio				nd understand the measuring classify the subject-specific con-
Cours	<b>es</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)
V (3) +	- R (1)				
		sessment (type, scope, la			ntion offered — if not every seme-
or oral pages If a wr stead of ass nation	l examir ) or pres itten exa take the essmen ı date at	nation in groups (groups of sentation/talk (approx. 30 amination was chosen as a form of an oral examina	of 2, approx. 30 minu o minutes). s method of assessmo tion of one candidate must inform student	tes per candidate) o ent, this may be cha e each or an oral exa	didate each (approx. 30 minutes) or project report (approx. 8 to 10 mged and assessment may inmination in groups. If the method weeks prior to the original exami-
Alloca	tion of p	olaces			
Additi	onal inf	ormation			
<del></del>					
Workload					
180 h					
Teaching cycle					
Referr	Referred to in LPO I (examination regulations for teaching-degree programmes)				



Module title Abbreviation					Abbreviation	
Selected Topics in Particle Physics					11-CST6-152-m01	
Module	Module coordinator			Module offered by		
	_	examination committee		Faculty of Physics a	nd Astronomy	
	-	od of grading	Only after succ. con			
		rical grade				
Duration	1	Module level	Other prerequisites			
1 semest	ter	undergraduate	Approval from exam	ination committee re	equired.	
Contents	S					
Selected	l topic	s of Particle Physics.				
Intended	d learr	ning outcomes				
theoretic	cal me				sics and of the experimental or sify the subject-specific contexts	
Courses	(type,	number of weekly conta	ct hours, language –	- if other than Germa	n)	
V (3) + R	(1)					
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
or oral expages) of a written of asses nation d	xamin or pres en exa ke the sment ate at	ation in groups (groups of entation/talk (approx. 30 amination was chosen as form of an oral examina	of 2, approx. 30 minutes).  method of assessmetion of one candidate must inform student	tes per candidate) o ent, this may be char e each or an oral exa	didate each (approx. 30 minutes) r project report (approx. 8 to 10 nged and assessment may inmination in groups. If the method weeks prior to the original exami-	
Allocatio	on of p	laces				
Addition	al info	ormation				
Workload						
180 h	180 h					
Teaching cycle						
Referred	Referred to in LPO I (examination regulations for teaching-degree programmes)					



Module	e title	'-	Abbreviation					
		cs in Theoretical Physic		11-CSTh6-152-m01				
		• .		-				
Module				Module offered by				
		f examination committee	T	Faculty of Physics and Astronomy				
ECTS		od of grading	Only after succ. compl. of module(s)					
6		rical grade						
<b>Duration</b> 1 semester		Module level undergraduate	Other prerequisites  Approval from examination committee required.					
		undergraduate	Approvat from exam	mation committee i	equired.			
Conten	-	(T) (' ) D) '						
		s of Theoretical Physics	<u> </u>					
		ning outcomes						
The students have basic knowledge of a special field of Theoretical Physics and have mastered the necessary mathematical methods. They are able to apply the acquired methods to current problems of Theoretical Physics.								
	<b>Courses</b> (type, number of weekly contact hours, language — if other than German)							
V (3) +	R (1)							
Metho	d of ass	sessment (type, scope, l	anguage — if other th	an German, examina	ation offered — if not every seme-			
		ion on whether module o			,			
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.  Language of assessment: German and/or English								
Allocation of places								
Additio	nal inf	ormation						
Workload								
180 h								
Teaching cycle								
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)							



Module	e title			Abbreviation				
Current Topics in Physik						11-EXP6A-161-m01		
Module	e coord	linator			Module offered by			
chairpe	erson c	of examination comm	nittee		Faculty of Physics and Astronomy			
ECTS	Method of grading		Only after s	Only after succ. compl. of module(s)				
6	nume	erical grade						
Duratio	Duration Module level		Other prere	Other prerequisites				
1 semester graduate		Approval fro	Approval from examination committee required.					
Contents								
Current topics in Experimental or Theoretical Physics. Credited academic achievements, e.g. in case of change of university or study abroad.								
Intende	ed lear	ning outcomes	,					
The students have advanced competencies corresponding to the requirements of a module of Experimental or Theoretical Physics of the Master's programme of Nanostructure Technology. They have knowledge of a current subdiscipline of Physics and understand the measuring and/or calculation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.								
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)								
V (3) + R (1)								
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)								
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 exami-

nation date at the latest. Language of assessment: German and/or English

## Allocation of places

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## **Additional information**

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#### Workload

180 h

### **Teaching cycle**

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**Referred to in LPO I** (examination regulations for teaching-degree programmes)

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Module title		Abbreviation					
Current Topics in Physik			11-EXP7-161-m01				
Module coordinator		Module offered by					
chairperson of examination committee	2	Faculty of Physics and Astronomy					
ECTS Method of grading	Only after succ. compl. of module(s)						
7 numerical grade							
Duration Module level	Other prerequisites						
1 semester graduate	Approval from examination committee required.						
Contents							
Current topics of Experimental and Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.							
Intended learning outcomes							
Theoretical Physics of the Master's programme of Nanostructure Technology. They have knowledge of a current subdiscipline of Physics and understand the measuring and/or calculation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)							
V (3) + R (1)							
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)							
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.  Language of assessment: German and/or English							
Allocation of places							
Additional information							
Workload							

210 h