

## Subdivided Module Catalogue for the Module studies (Master)

## **Physics**

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

JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record MM|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)
07-Aug-2024 (2024-82)
22-Jan-2025 (2025-1)
```

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		l l		
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-mo1	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-mo1	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXT5-161-m01	Current Topics of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-mo1	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Winter Term 2019	•	· · · · · · · · · · · · · · · · · · ·		
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	1-EXE6A-161-mo1 Current Topics in Experimental Physics		NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXT5-161-m01	Current Topics of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-mo1	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Summer Term 2020			•	
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXT5-161-m01	Current Topics of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22



11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Winter Term 2020			•	•
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXT5-161-m01	Current Topics of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Summer Term 2021	·			
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
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11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Winter Term 2021				
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in Physik	6	NUM	17
11-EXT5-161-m01	Current Topics of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics of Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
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11-CSAM-161-m01	Advanced Topic	s in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topic	s in Solid State Physics	6	NUM	10
Summer Term 2022					
11-EXE5-161-m01	Current Topics in	n Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in	n Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in	n Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in	n Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in	n Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in	n Physik	6	NUM	16
11-EXP6A-161-m01	Current Topics in	n Physik	6	NUM	17
11-EXT5-161-m01	Current Topics o	of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics o	of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics o	of Theoretical Physics	7	NUM	21
11-EXT8-161-mo1	Current Topics o	of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics o	of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topic	s in Astrophysics	6	NUM	9
11-CSFM-161-mo1	Advanced Topic	s in Solid State Physics	6	NUM	10
Winter Term 2022					
11-EXE5-161-m01	Current Topics in	n Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in	n Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in	Current Topics in Experimental Physics			14
11-EXE8-161-m01	Current Topics in	Current Topics in Experimental Physics		NUM	15
11-EXE6A-161-m01	Current Topics in	Current Topics in Experimental Physics		NUM	13
11-EXP6-161-m01	Current Topics in	Current Topics in Physik		NUM	16
11-EXP6A-161-m01	Current Topics in	n Physik	6	NUM	17
11-EXT5-161-m01	Current Topics o	of Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics o	of Theoretical Physics	6	NUM	19
11-EXT7-161-m01	Current Topics o	f Theoretical Physics	7	NUM	21
11-EXT8-161-m01	Current Topics o	f Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics o	of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topic	s in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topic	s in Solid State Physics	6	NUM	10
Summer Term 2023					•
11-CSAM-161-m01	Advanced Topic	s in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topic	s in Solid State Physics	6	NUM	10
11-EXE5-161-m01	Current Topics in	n Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in	n Experimental Physics	6	NUM	12
11-EXE6A-161-m01	Current Topics in	Current Topics in Experimental Physics		NUM	13
11-EXE7-161-m01	Current Topics in	Current Topics in Experimental Physics		NUM	14
11-EXE8-161-m01	Current Topics in	Current Topics in Experimental Physics		NUM	15
11-EXP6-161-m01	Current Topics in	Current Topics in Physik		NUM	16
11-EXP6A-161-m01	Current Topics in	n Physik	6	NUM	17
11-EXT5-161-m01	Current Topics o	f Theoretical Physics	5	NUM	18
11-EXT6-161-m01	Current Topics o	of Theoretical Physics	6	NUM	19
11-EXT6A-161-m01	Current Topics o	f Theoretical Physics	6	NUM	20
11-EXT7-161-m01	Current Topics o	of Theoretical Physics	7	NUM	21
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11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
Winter Term 2023				
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
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11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Summer Term 2024	•	'	•	
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
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11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
Winter Term 2024	•	•	•	•
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
11-EXE8-161-m01	Current Topics in Experimental Physics	8	NUM	15
11-EXE6A-161-m01	Current Topics in Experimental Physics	6	NUM	13
11-EXP6-161-m01	Current Topics in Physik	6	NUM	16
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11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10
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Summer Term 2025	·	'	'	
11-EXE5-161-m01	Current Topics in Experimental Physics	5	NUM	11
11-EXE6-161-m01	Current Topics in Experimental Physics	6	NUM	12
11-EXE7-161-m01	Current Topics in Experimental Physics	7	NUM	14
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11-EXT8-161-m01	Current Topics of Theoretical Physics	8	NUM	22
11-EXT6A-161-m01	Current Topics of Theoretical Physics	6	NUM	20
11-CSAM-161-m01	Advanced Topics in Astrophysics	6	NUM	9
11-CSFM-161-m01	Advanced Topics in Solid State Physics	6	NUM	10



Modul	e title		Abbreviation				
Advanced Topics in Astrophysics					11-CSAM-161-m01		
Module coordinator Module offered by							
_	Nanaging Director of the Institute of Theoretical Physics Faculty of Physics and Astronomy nd Astrophysics				and Astronomy		
ECTS	Meth	od of grading	Only after succ. co	Only after succ. compl. of module(s)			
6	nume	rical grade					
Duratio	on	Module level	Other prerequisites	5			
1 seme	ster	graduate	Approval from examination committee required.				
Conter	nts						
		•		•	ophysics which will be discussed dynamics, heating and cooling		

### **Intended learning outcomes**

The students have advanced knowledge of the subdisciplines of Astrophysics and are able to work on current scientific questions.

processes of the interstellar medium, astrochemistry, accretion and jets, galaxy formation or similar topics.

**Courses** (type, number of weekly contact hours, language — if other than German)

V(3) + R(1)

**Method of assessment** (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 examination 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)



Module	e title				Abbreviation
Advanced Topics in Solid State Physics			S	=	11-CSFM-161-m01
Module coordinator				Module offered by	
Managing Director of the Institute of Theoretical Physics and Astrophysics			neoretical Physics	Faculty of Physics and Astronomy	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
6	nume	rical grade			
Duration Module level Other prerequisites					
1 seme	ster	graduate	Approval from exan	nination committee r	equired.
Conten	ts				
vered i	n any o		se topics may relate	•	anced courses on topics not co- arch developments or to subjects
Intende	ed lear	ning outcomes			
		advance their knowledgensights into the connection			of Condensed Matter Physics
Course	<b>s</b> (type	, number of weekly conta	act hours, language -	– if other than Germa	nn)
V (3) +	R (1)	_			
Method	d of ass	sessment (type scope la	nguage — if other th	ian German, examina	ition offered — if not every seme-

a) written examination (approx. 90 to 120 minutes) or

b) oral examination of one candidate each (approx. 30 minutes) or

ster, information on whether module can be chosen to earn a bonus)

- c) oral examination in groups (groups of 2, approx. 30 minutes per candidate) or
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Language of assessment: German and/or English

# Allocation of places -Additional information --

### Workload

180 h

### **Teaching cycle**

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



Module	e title				Abbreviation		
Current	t Topic	s in Experimental Physi		11-EXE5-161-m01			
Module coordinator				Module offered by			
	_	f examination committe	e	Faculty of Physics a	and Astronomy		
ECTS		od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	,		
5	nume	rical grade					
Duratio	n	Module level	Other prerequisites	1			
1 seme	ster	graduate	Approval from exam	nination committee r	required.		
Conten	ts						
Current study a			s. Credited academic	achievements, e.g. i	n case of change of university or		
Intende	ed lear	ning outcomes					
sics of derstar fy the s	The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.						
Course	<b>s</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	an)		
V (2) +	R (2)						
		sessment (type, scope, ion on whether module			ation offered — if not every seme-		
b) oral c) oral d) proje e) pres If a writ stead t of asse nation Langua	examinexaminect repo entationeten exa ake the essmen date at	e form of an oral examin t is changed, the lecture the latest. ssessment: German an	each (approx. 30 minus) of 2, approx. 30 minus) or utes) as method of assessmation of one candidate or must inform student	ites per candidate) o ent, this may be cha e each or an oral exa	or anged and assessment may in- amination in groups. If the method weeks prior to the original exami-		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						

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

150 h

**Teaching cycle** 



odule offered by aculty of Physics and Astronomy . of module(s) ation committee required.
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ievements, e.g. in case of change of university or
he requirements of a module of Experimental Phyrent subdiscipline of Experimental Physics and un to acquire this knowledge. They are able to class s.
other than German)
German, examination offered — if not every seme- conus)
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- 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

## Allocation of places -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)



Module	e title				Abbreviation	
Current Topics in Experimental Physics			sics		11-EXE6A-161-m01	
Module coordinator Modul			Module offered by			
chairpe	erson o	f examination commit	ittee Faculty of Physics and Astronomy			
ECTS	Meth	od of grading	Only after succ. co	Only after succ. compl. of module(s)		
6	nume	rical grade				
Duration Module level Other prerequisite			Other prerequisites	;		
1 seme	ster	graduate	Approval from exar	nination committee r	equired.	
Conten	its					
Curren	•		ics. Credited academic	achievements, e.g. i	n case of change of university or	
Intend	ed lear	ning outcomes				
Tla a a4.					of a madula of Evansimontal Dhy	

The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation 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)

**Method of assessment** (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
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- 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

### 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)



Module title						Abbreviation
Curren	t Topic	s in Experimental Ph	ysics			11-EXE7-161-mo1
Module coordinator					Module offered	by
chairpe	erson c	of examination comm	ittee		Faculty of Physi	cs and Astronomy
ECTS	Meth	od of grading	Only after suc	c. con	npl. of module(s)	
7	nume	erical grade				
Duratio	on	Module level	Other prerequ	uisites	•	
1 seme	ster	graduate	Approval from	ı exam	nination committe	ee required.
Conter	ıts					
Curren study a	•		sics. Credited acad	lemic a	achievements, e.	g. in case of change of university or
Intend	ed lear	ning outcomes				
sics of derstar fy the s	the Mand the	aster's programme. The measuring and/or eve- s-specific contexts and	ney have knowledg aluation methods r d know the applica	e of a necess tion a	current subdiscip sary to acquire th reas.	nts of a module of Experimental Phy oline of Experimental Physics and un is knowledge. They are able to class
Course	s (type	e, number of weekly c	ontact hours, langu	ıage –	- if other than Ge	rman)
V(3) + R(1)						
		sessment (type, scop ion on whether modu				nination offered — if not every seme
b) oral	exami	imination (approx. 90 nation of one candida nation in groups (grou	ite each (approx. 3	o minı		e) or

- d) project report (approx. 8 to 10 pages) or
- e) presentation/talk (approx. 30 minutes)

If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the 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

### Teaching cycle

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



Faculty of Physics and Astronomy	Module	title				Abbreviation
ECTS Method of grading Only after succ. compl. of module(s)  8     numerical grade  Duration Module level Grading G	Current	Topic	11-EXE8-161-m01			
Method of grading   Only after succ. compl. of module(s)	Module coordinator Module offered by					
Duration       Module level       Other prerequisites         1 semester       graduate       Approval from examination committee required.         Contents         Current topics in experimental physics. Credited academic achievements, e.g. in case of change of university or study abroad.         Intended learning outcomes         The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.         Courses (type, number of weekly contact hours, language — if other than German)	chairpe	erson o	f examination committe	e	Faculty of Physics a	and Astronomy
Duration Module level Approval from examination committee required.  Contents  Current topics in experimental physics. Credited academic achievements, e.g. in case of change of university or study abroad.  Intended learning outcomes  The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
Approval from examination committee required.  Contents  Current topics in experimental physics. Credited academic achievements, e.g. in case of change of university or study abroad.  Intended learning outcomes  The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	8	nume	rical grade			
Current topics in experimental physics. Credited academic achievements, e.g. in case of change of university or study abroad.  Intended learning outcomes  The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	Duratio	n	Module level	Other prerequisites		
Current topics in experimental physics. Credited academic achievements, e.g. in case of change of university or study abroad.  Intended learning outcomes  The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	1 semester graduate Approval from examination committee required.					equired.
Intended learning outcomes  The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	Conten	ts				
The students have advanced competencies corresponding to the requirements of a module of Experimental Physics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and understand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)				s. Credited academic	achievements, e.g. ir	n case of change of university or
sics of the Master's programme. They have knowledge of a current subdiscipline of Experimental Physics and un derstand the measuring and/or evaluation methods necessary to acquire this knowledge. They are able to class fy the subject-specific contexts and know the application areas.  Courses (type, number of weekly contact hours, language — if other than German)	Intende	ed lear	ning outcomes			
	sics of derstar	the Ma nd the i	ster's programme. They measuring and/or evalu	have knowledge of a ation methods necess	current subdiscipline ary to acquire this k	e of Experimental Physics and un
V (4) + R (2)	<b>Courses</b> (type, number of weekly contact hours, language — if other than German)					

ster, 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 examination date at the latest.

Language of assessment: German and/or English

# Allocation of places -Additional information -Workload 240 h

### **Teaching cycle**

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



Module	e title	,			Abbreviation		
Current Topics in Physik				-	11-EXP6-161-m01		
Module	coord	linator		Module offered by			
chairperson of examination committee				Faculty of Physics and Astronomy			
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)			
6	nume	rical grade					
Duration Module level Other pre			Other prerequisites	;			
1 semester graduate		Approval from exam	Approval from examination committee required.				
Conten	Contents						

Current topics in experimental or theoretical physics. Credited academic achievements, e.g. in case of change of university or study abroad.

### **Intended learning 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.

**Courses** (type, number of weekly contact hours, language — if other than German)

V(3) + R(1)

**Method of assessment** (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 examination 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)



Modul	e title	,	Abbreviation			
Current Topics in Physik				•	11-EXP6A-161-m01	
Modul	e coord	inator		Module offered by		
chairperson of examination committee				Faculty of Physics and Astronomy		
ECTS	Meth	od of grading	Only after succ. compl. of module(s)			
6	nume	rical grade				
Duratio	Duration Module level Other pre			prerequisites		
1 seme	ster	graduate	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.						

### **Intended learning 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.

 $\textbf{Courses} \ (\textbf{type}, \textbf{number of weekly contact hours, language} - \textbf{if other than German})$ 

V(3) + R(1)

**Method of assessment** (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 examination 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)



	OKZBU	186	5 (628-33) 8	33 <b>9 ~ [</b> 7]		
Module title Abbreviation						
Current Topics of Theoretical Physics					11-EXT5-161-m01	
Module coordinator Module offered by						
chairp	erson o	f examination committee		Faculty of Physics and Astronomy		
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Durati	on	Module level	Other prerequisites	•		
1 seme	ester	graduate	Approval from exam	ination committee re	equired.	
Conter	nts					
	t topics abroad.	•	Credited academic ac	hievements, e.g. in ca	ase of change of university or	
Intend	ed lear	ning outcomes				
sics of sics ar	the Ma nd have	ster's programme. They	have advanced speci	alist knowledge of a s	of a module of Theoretical Physubdiscipline of Theoretical Phyed methods to current problems	
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	- if other than Germar	n)	
V (2) +	R (2)					
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
b) oral c) oral d) proj e) pres If a wri stead	examinexaminect reposentation examination	e form of an oral examina	each (approx. 30 minu of 2, approx. 30 minu s) or es) s method of assessm ation of one candidate	tes per candidate) or ent, this may be chan e each or an oral exan	nged and assessment may in- nination in groups. If the metho veeks prior to the original exam	

Language of assessment: German and/or English

Allocation of places

nation date at the latest.

**Additional information** 

Workload

150 h

**Teaching cycle** 

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



Module title Abbreviation							
Current Topics of Theoretical Physics					11-EXT6-161-m01		
Module coordinator				Module of	fered by		
chairpe	rson of e	examination comn	nittee	Faculty of	Faculty of Physics and Astronomy		
ECTS	Method	of grading	Only after suc	c. compl. of mod	ule(s)		
6	numerio	cal grade					
Duratio	n A	Module level	Other prerequ	isites			
1 semes	ster g	raduate	Approval from	Approval from examination committee required.			
Content	ts						
Current study a	•	n theoretical physi	cs. Credited academ	nic achievements	, e.g. in case of change of university or		
Intende	ed learni	ng outcomes					
sics of t sics and	the Mast	er's programme. T nastered the requi	hey have advanced	specialist knowle	rements of a module of Theoretical Phyedge of a subdiscipline of Theoretical Phyhe acquired methods to current problem		
<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 examination date at the latest.

Language of assessment: German and/or English

### Allocation of places

**Additional information** 

Workload

180 h

Teaching cycle

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



Modul	e title					Abbreviation
Current Topics of Theoretical Physics						11-EXT6A-161-m01
Modul	e coor	dinator			Module offered by	
chairpe	erson (	of examination comm	nittee	Faculty of Physics and Astronomy		
ECTS	Meth	od of grading	Only after succ	. com	pl. of module(s)	
6	nume	erical grade				
Duratio	on	Module level	Other prerequi	sites		
1 seme	ester	graduate	Approval from	Approval from examination committee required.		
Conter	nts					
study a	broad	•	ics. Credited academ	ic ach	ievements, e.g. in c	ase of change of university or
Intend	ed lea	rning outcomes				
The students have advanced competencies corresponding to the requirements of a module of Theoretical Physics of the Master's programme. They have advanced specialist knowledge of a subdiscipline of Theoretical Physics and have mastered the required methods. They are able to apply the acquired methods to current problems of Theoretical Physics.						
Course	s (type	e, number of weekly	contact hours, langua	age —	if other than Germa	n)
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 examination date at the latest.

Language of assessment: German and/or English

## Allocation of places -Additional information --

### Workload

180 h

### **Teaching cycle**

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



Modul	e title				Abbreviation			
Current Topics of Theoretical Physics					11-EXT7-161-mo1			
Module coordinator				Module offered by				
chairp	erson c	of examination committee	2	Faculty of Physics a	and Astronomy			
ECTS	Meth	od of grading	Only after succ. con					
7	nume	numerical grade						
Durati	on	Module level	Other prerequisites					
1 seme	ester	graduate	Approval from exam	ination committee r	equired.			
Conte	nts							
	t topics abroad		Credited academic ac	hievements, e.g. in o	case of change of university or			
Intend	ed lear	ning outcomes						
of The	oretical <b>es</b> (type	l Physics.  e, number of weekly conta			red methods to current problems an)			
V (3) +		accoment (tune scene le	enguaga if athorth	on Cormon overning	ation offered — if not every seme-			
		ion on whether module c			ation offered — if flot every seme-			
b) oral c) oral d) proj e) pres If a wri stead t of asse nation Langua	examinexaminect repetition extended for the extended for the extended for the extended for the examine for the examined for t	e form of an oral examina It is changed, the lecture It the latest. Assessment: German and	each (approx. 30 minu of 2, approx. 30 minu s) or es) s method of assessmo tion of one candidate r must inform student	tes per candidate) o ent, this may be cha e each or an oral exa	nged and assessment may in- mination in groups. If the method weeks prior to the original exami-			
Alloca	LION OF	places						
Vqqiti	onal in	 formation						
Auditio	unat ini	ormation						

### Workload

210 h

### **Teaching cycle**

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



			J WEYOUNG (	)			
Module title					Abbreviation		
Current Topics of Theoretical Physics					11-EXT8-161-m01		
Modul	e coord	inator	Module offered by				
chairp	erson o	f examination committee		Faculty of Physics and Astronomy			
ECTS	ECTS Method of grading Only after suc		Only after succ. con	ucc. compl. of module(s)			
8	nume	rical grade					
Duratio	on	Module level	Other prerequisites	prerequisites			
1 seme	ester	graduate	Approval from exam	ination committee r	equired.		
Conter	ıts						
	t topics abroad.	in Theoretical Physics. (	redited academic ac	hievements, e.g. in o	case of change of university or		
Intend	ed lear	ning outcomes					
of The	oretical	mastered the required m Physics. , number of weekly conta			red methods to current problems an)		
V (4) +	R (2)						
					ation offered — if not every seme-		
ster, 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 examination date at the latest. Language of assessment: German and/or English  Allocation of places							
Allucal	Allocation or places						
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### **Additional information**

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### Workload

240 h

### **Teaching cycle**

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