

Subdivided Module Catalogue for the Module studies (Bachelor)

Nanostructure Technology

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

JMU Würzburg • generated 19-Apr-2025 • exam. reg. data record MB|224|-|-|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)
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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	1	,	Į.	
11-BXN5-152-m01	Current Topics in Nanostructure Technology	5	NUM	6
11-BXN6-152-m01	11-BXN6-152-mo1 Current Topics in Nanostructure Technology			
11-BXN8-152-m01	Current Topics in Nanostructure Technology	8	NUM	8
11-BXP8-152-m01	Current Topics in Physics	8	NUM	11
11-BXP6-152-m01	Current Topics in Physics	6	NUM	10
11-BXP5-152-m01	Current Topics Physics	5	NUM	9
11-CSEM6-152-m01	Selected Topics in Energy and Material Science	6	NUM	12
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	13
11-CSN6-152-m01	Selected Topics in Nanostructure Technology	6	NUM	14
Winter Term 2019		l	1	
11-BXN5-152-m01	Current Topics in Nanostructure Technology	5	NUM	6
11-BXN6-152-m01	Current Topics in Nanostructure Technology	6	NUM	7
11-BXN8-152-m01	Current Topics in Nanostructure Technology	8	NUM	8
11-BXP8-152-m01	Current Topics in Physics	8	NUM	11
11-BXP6-152-m01	Current Topics in Physics	6	NUM	10
11-BXP5-152-m01	Current Topics Physics	5	NUM	9
11-CSEM6-152-m01	Selected Topics in Energy and Material Science	6	NUM	12
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	13
11-CSN6-152-m01	Selected Topics in Nanostructure Technology	6	NUM	14
Summer Term 2020	, ,	I		<u> </u>
11-BXN5-152-m01	Current Topics in Nanostructure Technology	5	NUM	6
11-BXN6-152-m01	Current Topics in Nanostructure Technology	6	NUM	7
11-BXN8-152-m01	Current Topics in Nanostructure Technology	8	NUM	8
11-BXP8-152-m01	Current Topics in Physics	8	NUM	11
11-BXP6-152-m01	Current Topics in Physics	6	NUM	10
11-BXP5-152-m01	Current Topics Physics	5	NUM	9
11-CSEM6-152-m01	Selected Topics in Energy and Material Science	6	NUM	12
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	13
11-CSN6-152-m01	Selected Topics in Nanostructure Technology	6	NUM	14
Winter Term 2020				
11-BXN5-152-m01	Current Topics in Nanostructure Technology	5	NUM	6
11-BXN6-152-m01	Current Topics in Nanostructure Technology	6	NUM	7
11-BXN8-152-m01	Current Topics in Nanostructure Technology	8	NUM	8
11-BXP8-152-m01	Current Topics in Physics	8	NUM	11
11-BXP6-152-m01	Current Topics in Physics	6	NUM	10
11-BXP5-152-m01	Current Topics Physics	5	NUM	9
11-CSEM6-152-m01	Selected Topics in Energy and Material Science	6	NUM	12
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	13
11-CSN6-152-m01	Selected Topics in Nanostructure Technology	6	NUM	14
Summer Term 2021	1 2000000000000000000000000000000000000			<u>'</u>
11-BXN5-152-m01	Current Topics in Nanostructure Technology	5	NUM	6



11-BXN6-152-m01	Current Topics in Nanostructure Technology	6	NUM	7
11-BXN8-152-m01	Current Topics in Nanostructure Technology	8	NUM	8
11-BXP8-152-m01	Current Topics in Physics	8	NUM	11
11-BXP6-152-m01	Current Topics in Physics	6	NUM	10
11-BXP5-152-m01	Current Topics Physics	5	NUM	9
11-CSEM6-152-m01	Selected Topics in Energy and Material Science	6	NUM	12
11-CSF6-152-m01	Selected Topics in Solid State Physics	6	NUM	13
11-CSN6-152-m01	Selected Topics in Nanostructure Technology	6	NUM	14



Modul	Module title Abbreviation				
	Current Topics in Nanostructure Technology				11-BXN5-152-m01
AA a deel		!		Mandala affarad bar	3 3
Module coordinator				Module offered by	
		f examination committee	T .	Faculty of Physics a	and Astronomy
ECTS		od of grading rical grade	Only after succ. con	ipi. or module(s)	
5 Durati		Module level	Other prerequisites		
1 seme		undergraduate	Approval from exam		equired
Contents					equirea.
Curren			. Accredited academi	c achievements, e.g	. in case of change of university
Intend	ed lear	ning outcomes			
The students have advanced competencies corresponding to the requirements of a module of Nanostructure Technology of the Bachelor's programme. They have knowledge of a current subdiscipline of nanostructure technology or nano sciences and understand the measuring and evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.					
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V (2) +	R (2)				
		sessment (type, scope, la ion on whether module c			ation 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					
Alloca	tion of	places			
Additional information					
Workload					
150 h					
Teaching cycle					
Referre	ed to in	LPO I (examination regi		degree programmes	
	Referred to in LPO I (examination regulations for teaching-degree programmes)				



Modul	Module title Abbreviation					
Curren	nt Topic	s in Nanostructure Techn	ology		11-BXN6-152-m01	
Modul	e coord	linator		Module offered by	<u>, </u>	
chairperson of examination committee		Faculty of Physics a	and Astronomy			
ECTS	ECTS Method of grading Only after succ. compl. of module(s)					
6	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	Approval from exam	ination committee r	equired.	
Conte	nts					
	it topics dy abro		. Accredited academi	c achievements, e.g	. in case of change of university	
Intend	led lear	ning outcomes				
The students have advanced competencies corresponding to the requirements of a module of Nanostructure Technology of the Bachelor's programme. They have knowledge of a current subdiscipline of nanostructure technology or nano sciences and understand the measuring and evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.						
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	nn)	
V (3) +	R (1)					
		sessment (type, scope, la ion on whether module c			ition 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						
Alloca	tion of	places				
Additio	onal inf	ormation				
Workload						
180 h						
	Teaching cycle					
Referr	ed to in	IPOI (examination regu	lations for teaching.	legree nrogrammes)		
Kelell	Referred to in LPO I (examination regulations for teaching-degree programmes)					



Modul	Module title Abbreviation				
	Current Topics in Nanostructure Technology				11-BXN8-152-m01
		• •		1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
Module coordinator				Module offered by	
		f examination committee	T .	Faculty of Physics a	and Astronomy
ECTS		od of grading	Only after succ. con	ipl. of module(s)	
8		rical grade			
Duration		Module level undergraduate	Other prerequisites		raquirad
			. Accredited academi	c achievements, e.g	. in case of change of university
Intend	led lear	ning outcomes			
Techno nology	The students have advanced competencies corresponding to the requirements of a module of Nanostructure Technology of the Bachelor's programme. They have knowledge of a current subdiscipline of nanostructure technology or nano sciences and understand the measuring and evaluation methods necessary to acquire this knowledge. They are able to classify the subject-specific contexts and know the application areas.				
Course	es (type	, number of weekly conta	act 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-
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					
Alloca	tion of _I	places			
Additional information					
Workload					
240 h					
Teaching cycle					
Referre	ed to in	LPO I (examination regi		degree programmes	
	Referred to in LPO I (examination regulations for teaching-degree programmes)				



Modul	Module title Abbreviation					
		s Physics			11-BXP5-152-m01	
Modul	e coord	inator		Module offered by		
		f examination committee		Faculty of Physics a	and Astronomy	
ECTS		od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·		
5		rical grade		•		
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	Approval from exam	ination committee r	equired.	
Contents						
		of Experimental and The versity or study abroad.	oretical Physics. Acc	redited academic ac	hievements, e.g. in case of	
Intend	ed lear	ning outcomes				
The students have advanced competencies corresponding to the requirements of a module of Experimental or Theoretical Physics of the Bachelor'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.						
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
V (2) +	R (2)		•			
		sessment (type, scope, la ion on whether module ca			ation 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						
Alloca	tion of p	olaces				
Additional information						
Workload						
150 h						
Teachi	ing cycl	e				
_						

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



Modul	Module title Abbreviation					
		s in Physics			11-BXP6-152-mo1	
Madul	le coord	instar		Module offered by		
				·		
ECTS		f examination committee		Faculty of Physics a	and Astronomy	
6		od of grading rical grade	Only after succ. con	ipi. oi illodute(s)		
Durati		Module level	Other prerequisites	:		
1 seme		undergraduate		nination committee r	equired.	
Conte			1 ' '			
Current topics of Experimental and Theoretical Physics. Accredited academic achievements, e.g. in case of change of university or study abroad.						
Intend	led lear	ning outcomes				
The students have advanced competencies corresponding to the requirements of a module of Experimental or Theoretical Physics of the Bachelor'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.						
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)	
V (3) +	R (1)		-			
		sessment (type, scope, la ion on whether module c			ation 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						
Alloca	tion of	places				
			-			
Additional information						
Workload						
180 h						
Teachi	Teaching cycle					
Referr	ed to in	LPO I (examination regu	llations for teaching-	degree programmes)		
	(



Modul	Module title Abbreviation					
	Current Topics in Physics				11-BXP8-152-mo1	
					11-0/1 0-152-11101	
Modul	e coord	inator		Module offered by		
		f examination committee		Faculty of Physics a	and Astronomy	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
8		rical grade				
Duration		Module level	Other prerequisites			
1 seme		undergraduate	Approval from exam	ination committee r	equired.	
Conter	ıts					
		of Experimental and The versity or study abroad.	eoretical Physics. Acc	redited academic ac	hievements, e.g. in case of	
Intend	ed lear	ning outcomes				
Theore subdis	etical Ph scipline	ysics of the Bachelor's p	rogramme of Nanosti nd the measuring and	ructure Technology. I/or calculation met	of a module of Experimental or They have knowledge of a current hods necessary to acquire this application areas.	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
V (4) +	R (2)					
		sessment (type, scope, la on on whether module c			ation 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						
Alloca	tion of p	olaces				
Additional information						
Workload						
240 h						
-	Teaching cycle					
		-				

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



Modul	e title		Abbreviation			
Selecto	ed Topi	cs in Energy and Materia	l Science		11-CSEM6-152-m01	
Modul	e coord	inator		Module offered by		
chairperson of examination committee		Faculty of Physics a	and Astronomy			
ECTS		od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	Approval from exam	ination committee r	equired.	
Conten	Contents					
Selecte	Selected topics of energy and materials research.					
Intend	ed lear	ning outcomes				
tion me	ethods				stand the measuring and evalua- subject-specific contexts and	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
V (3) +	R (1)					
					ition offered — if not every seme-	
or oral pages) If a wri stead t of asse nation	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					
	tion of					
Additio	Additional information					
Worklo	Workload					
180 h						
Teachi	Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					



Modul	Module title				Abbreviation	
Selecto	ed Topi	cs in Solid State Physics			11-CSF6-152-m01	
Modul	e coord	inator		Module offered by		
chairperson of examination committee		Faculty of Physics a	and Astronomy			
ECTS		od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate	Approval from exam	ination committee r	equired.	
Contents						
Selecte	Selected topics of Solid-State Physics.					
Intend	ed lear	ning outcomes				
and ev	aluatio				nd understand the measuring classify the subject-specific con-	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
V (3) +	R (1)					
					tion offered — if not every seme-	
or oral pages) If a wri stead t of asse nation	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					
Allocat	tion of	places				
Additio	onal inf	ormation				
Workload						
180 h						
Teachi	Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					



Module title Abbreviation					
Selected Topics in Nanostructure Tech	nology		11-CSN6-152-m01		
Module coordinator		Module offered by			
chairperson of examination committee		Faculty of Physics a	and Astronomy		
ECTS Method of grading	Only after succ. con		and ristromormy		
6 numerical grade		, , ,			
Duration Module level	Other prerequisites				
1 semester undergraduate	Approval from exam	ination committee r	equired.		
Contents					
Selected topics of nanostructure techn	ology.				
Intended learning outcomes					
The students have basic knowledge of technical methods necessary to acquir and know the application areas.					
Courses (type, number of weekly conta	act hours, language –	- if other than Germa	ın)		
V (3) + R (1)					
Method of assessment (type, scope, laster, information on whether module continuous)			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					
Additional information					
Workload					
180 h					
Teaching cycle					
Referred to in LPO I (examination regu	llations for teaching-	degree programmes)			