

# Module Catalogue for the Subject

# FOKUS Physics - Nanostructuring Technology

as a Master's with 1 major with the degree "Master of Science" (120 ECTS credits)

Examination regulations version: 2006 Responsible: Faculty of Physics and Astronomy

JMU Würzburg • generated 11-Jan-2023 • exam. reg. data record 88|eo6|-|-|H|2006

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## The subject is divided into

section / sub-section	ECTS credits	starting page
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### **Content and Objectives of the Programme**

No translation available.

#### Abbreviations used

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

Term: **SS** = summer semester, **WS** = winter semester

Methods of grading: **NUM** = numerical grade, **B**/**NB** = (not) successfully completed

Regulations: **(L)ASPO** = general academic and examination regulations (for teaching-degree programmes), **FSB** = subject-specific provisions, **SFB** = list of modules

Other: **A** = thesis, **LV** = course(s), **PL** = assessment(s), **TN** = participants, **VL** = prerequisite(s)

### Conventions

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:

frei

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

#### 15-May-2008 (2008-16)

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.



Module Catalogue for the Subject FOKUS Physics - Nanostructuring Technology Master's with 1 major, 120 ECTS credits

## **Compulsory Courses**

(46 ECTS credits)

Module title			Abbreviation			
Advanc	ed Pra	ctical Course Master			11-PFM-072-m01	
Module coordinator			Module offered by			
Manag	ing Dire	ector of the Institute of Ap	plied Physics	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. com	npl. of module(s)		
6	(not) s	successfully completed	11-E1, 11-E2			
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate	11-A3			
Conten	Its					
stems, tic reso	proper mance	luclear, Atomic and Mole ties of solids, surfaces ar (NMR) - quantum Hall eff ivity - laser - solid-state o	nd interfaces. Experir ect - optical pumping	nents on the followir	ng topics: X-rays - nuclea	r magne-
Intende	ed lear	ning outcomes				
suing s	cientifi	conducting experiments, c publications, application ring practical experiment	on of modern evaluat			
	-	number of weekly contact hours, la				
man or	Englis Schritte	nen-Praktikum Master (A		·		
Metho	d of ass	s <b>essment</b> (type, scope, langua; le for bonus)	ge — if other than German, o	examination offered — if no	t every semester, information on	ı whether
1. Lab o ring prior ted i 2. Lab o ring prior	<ul> <li>This module has the following assessment components</li> <li>1. Lab course in part 1 (Fortgeschrittenen-Praktikum Master/Advanced Practical Course Master Part 1): a) Preparing the experiment will be considered successfully completed if an oral test (approx. 30 minutes) is passed prior to the experiment. b) Performing and evaluating the experiment will be considered successfully completed if a test is passed. Students must prepare an experiment log (approx. 8 pages).</li> <li>2. Lab course in part 2 (Fortgeschrittenen-Praktikum Master/Advanced Practical Course Master Part 2): a) Preparing the experiment will be considered successfully completed if an oral test (approx. 30 minutes) is passed prior to the experiment. b) Performing and evaluating the experiment will be considered successfully completed if an oral test (approx. 30 minutes) is passed prior to the experiment. b) Performing and evaluating the experiment will be considered successfully completed if a test is passed. Students must prepare an experiment will be considered successfully completed if a test is passed. Students must prepare an experiment will be considered successfully completed if a test is passed. Students must prepare an experiment log (approx. 8 pages).</li> </ul>				assed comple- ) Prepa- assed	
Studen Studen pass ar	Language of assessment: German or English Students must register for assessment components 1 and 2 online (details to be announced). Students will be offered one opportunity to retake element a) and/or element b) in the respective semester. To pass an assessment component, they must pass both elements (a and b) in the same semester. To pass this module, students must pass both assessment component 1 and assessment component 2.					
Allocat		· · ·				
Additio	onal inf	ormation				
Worklo	Workload					
Referre	ed to in	LPO I (examination regulations	s for teaching-degree progra	mmes)		
 Module	e appea	urs in				
			(part 1470 - 1		d-t 1	
Master's w ring Techno		r FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. ro FOKUS Physik - Nanostrukturt	-	ige 8 / 114

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Module Catalogue for the Subject FOKUS Physics - Nanostructuring Technology Master's with 1 major, 120 ECTS credits

Master's degree (1 major) Physics (2010) Master's degree (1 major) Nanostructure Technology (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010) Master's degree (1 major) FOKUS Physics (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)

Module title Abbreviation						
FOKUS Project Practical Course Nanostructuring Technology11-FPN-072-m01						
Module coordinator Module of					1	
chairpe	erson o	f examination commit	tee	Faculty of Physics a	and Astronomy	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Duration Module level Other prerequisites						
1 semester graduate						
Conten	ts					
			arch topic of nanostruct ocumentation of the res		implementation of scientific ex-	
Intende	ed lear	ning outcomes				
			ntly work on a current re and to document the res		structure technology, to conduct	
Course	<b>S</b> (type, I	number of weekly contact hou	ırs, language — if other than Ge	rman)		
P (no ir	forma	tion on SWS (weekly c	ontact hours) and cours	e language available	2)	
		<b>sessment</b> (type, scope, lar ble for bonus)	nguage — if other than German,	examination offered — if no	ot every semester, information on whether	
a) proje ject	ect rep	ort (approx. 20 pages)	and b) talk (approx. 30	minutes) with discu	ssion on topic researched in pro-	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regula	tions for teaching-degree progra	immes)		
Module	e appea	ars in				
	-	ree (1 major) FOKUS Ph ree (1 major) FOKUS Ph	ysics - Nanostructuring	•, ·		

Module title Abbreviation					Abbreviation	
Profes	Professional Specialization FOKUS Nanostructuring Technology 1 11-FS-NF-072-mo1					
Module	Module coordinator Module offe				by	
chairpe	erson o	f examination committe	e	Faculty of Physic	s and Astronomy	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
15	nume	rical grade				
Duratio	on	Module level	Other prerequisites	;		
1 seme	ster	graduate				
Conten	Its					
techno	logy wi		the planned topic of th		om a subdiscipline of nanostructure Summary of the required funda-	
Intend	ed lear	ning outcomes				
topic o	f the M	scipline of the current r aster's thesis and are a number of weekly contact hours	ble to summarise thei	r knowledge in an	ith special relevance to the intendec oral presentation.	
S (no ii	nforma	tion on SWS (weekly co	ntact hours) and cours	e language availa	ble)	
		s <b>essment</b> (type, scope, lang ole for bonus)	uage — if other than German,	examination offered —	if not every semester, information on whether	
talk (ap	oprox.	30 to 45 minutes) with c	liscussion			
Allocat	ion of	places				
Additio	onal inf	ormation				
	ad					
Worklo						
Worklo						
		LPO I (examination regulation	ons for teaching-degree progra	ammes)		
		LPOI (examination regulation	ons for teaching-degree progra	ammes)		
	ed to in		ons for teaching-degree progra	ammes)		

Module	e title				Abbreviation
Scienti logy 1	ific Met	hods and Project Manag	ement FOKUS Nanos	tructuring Techno-	11-MP-NF-072-m01
Module	e coord	inator		Module offered by	
chairpe	erson o	f examination committee		Faculty of Physics a	and Astronomy
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
15	nume	rical grade			
Duration Module level Other prerequisites					
1 seme	ster	graduate			
Conten	Its				
theore	tical, ex				project planning. Application to . Writing of a scientific project
Intend	ed lear	ning outcomes			
<b>Course</b> R (no in	e <b>s</b> (type, r nforma	to plan the required work number of weekly contact hours, l tion on SWS (weekly cont sessment (type, scope, langua	anguage — if other than Ger act hours) and cours	<sup>man)</sup> e language available	
		ole for bonus)			, .
talk (ap	oprox.	30 to 45 minutes) with dis	scussion		
Allocat	ion of	places			
	-				
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPO I (examination regulation	s for teaching-degree progra	mmes)	
Modul					
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	-		



Module Catalogue for the Subject FOKUS Physics - Nanostructuring Technology Master's with 1 major, 120 ECTS credits

## **Compulsory Electives**

(44 ECTS credits)



## **Compulsory Electives Nanomatrix**

(12 ECTS credits)

Module title Abbreviation					Abbreviation
Nanom	atrix lı	norganic Materials Chemi	istry (Master)		08-NM-AW-MA-072-m01
Module	Module coordinator			Module offered by	
Dean o Pharma		es Chemie and Pharmazi	e (Chemistry and	Chair of Chemical 1	Fechnology of Material Synthesis
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duratio	on	Module level	Other prerequisites	;	
1 seme	ster	graduate			
Conten	ts	•			
science organic	e, nanc c mater	o-structuring technologies rials chemistry.			chnology fields of materials ent, in particular in the area of in-
Intend	ed lear	ning outcomes			
		e developed advanced kn neering work, in particula			ation directions or technology stry.
Course	<b>S</b> (type, 1	number of weekly contact hours, l	anguage — if other than Ge	rman)	
V + R (r	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		<b>sessment</b> (type, scope, langua ble for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 10 pages)
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPO I (examination regulations	s for teaching-degree progra	ammes)	
Module	e appea	ars in			
Master Master	's degr 's degr	ree (1 major) Nanostructur ree (1 major) FOKUS Physi	cs - Nanostructuring	Technology (2010)	
Master	's degr	ree (1 major) FOKUS Physi	cs - Nanostructuring	Technology (2006)	

Module title					Abbreviation
Nanopa	article	Synthesis and Structurin	g Technologies (Mas	ster)	08-NM-NS-MA-072-m01
Module	e coord	linator		Module offered by	
Dean o Pharma		es Chemie and Pharmazi	e (Chemistry and	Chair of Chemical	Technology of Material Synthesis
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	graduate			
Conten	ts				
science nopart	e, nanc icle syr	o-structuring technologies othesis and structuring te	and components an		chnology fields of materials ent, in particular in the area of na
		ning outcomes			
					cation directions or technology ad structuring technologies.
Course	<b>S</b> (type,	number of weekly contact hours, l	anguage — if other than Ge	rman)	
V + R (r	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avai	lable)
		<b>sessment</b> (type, scope, langua ble for bonus)	ge — if other than German,	examination offered — if n	ot every semester, information on whether
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 10 pages)
Allocat					
Additio	onal inf	ormation			
Worklo	ad				
			-		
Referre	ed to in	<b>LPO I</b> (examination regulations	s for teaching-degree progra	ummes)	
Module	e appe	ars in			
		ee (1 major) Nanostructu	re Technology (2010)		
	-	ee (1 major) FOKUS Physi	-		
Master	's degr	ee (1 major) FOKUS Physi	cs - Nanostructuring	Technology (2006)	

Module title Abbreviation					
Nanom	atrix H	eat Insulating System	ns and Photovoltaics		11-NM-WP-MA-072-m01
Modul	e coord	linator		Module offere	d by
Managing Director of the Institute of Applied Physics			of Applied Physics	Faculty of Phys	sics and Astronomy
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s	5)
6	nume	rical grade			
Durati	on	Module level	Other prerequisites	6	
1 seme	ster	graduate			
Conter	nts	*	·		
structu tovolta	iring, co lics.	omponents and syste			ials sciences, technologies of nano- f thermal insulation systems and pho
Intend	ed lear	ning outcomes			
			ledge of one or more app sulation systems and ph		nology areas of engineering work,
Course	<b>S</b> (type, 1	number of weekly contact ho	ours, language — if other than Ge	rman)	
V + R (I	no infoi	rmation on SWS (wee	kly contact hours) and co	ourse language	available)
		<b>sessment</b> (type, scope, la ble for bonus)	anguage — if other than German,	examination offered	— if not every semester, information on whether
					or c) oral examination of one candi- report (approx. 10 pages)
Allocat	tion of	places		· · ·	
Additio	onal inf	ormation			
	_				
Worklo	ad				
Referre	ed to in	LPOI (examination regul	ations for teaching-degree progra	ammes)	
Modul	e appea	ars in			
	-		ucture Technology (2010)		
	-		hysics - Nanostructuring		
Master	's degr	ee (1 major) FOKUS P	hysics - Nanostructuring	Technology (20	06)

Module title					Abbreviation	
Nanomatrix Semiconductor Materials (Master)					11-NM-HM-MA-072-m01	
Module coordinator Module offere			Module offered by	l		
Manag	ing Dire	ector of the Institute of	Applied Physics	Faculty of Physics a	ind Astronomy	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites	;		
1 seme	ster	graduate				
Conter	its					
nics, p structu	hotonio ring, co	es and biophysics as we components and system	ell as in the technology	-oriented materials	of energy engineering, electro- sciences, technologies of nano- niconductor materials.	
Intend	ed lear	ning outcomes				
				olication or technolog	gy areas of engineering work,	
		he field of semiconduc				
	_	number of weekly contact hours				
		mation on SWS (weekly				
		<b>Sessment</b> (type, scope, lang Ile for bonus)	uage — if other than German,	examination offered — if no	ot every semester, information on whether	
a) writt	en exa	,			) oral examination of one candi- rt (approx. 10 pages)	
	ion of					
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPO I (examination regulation	ons for teaching-degree progra	ammes)		
Modul	e appea	ars in				
		ee (1 major) Nanostruct	ure Technology (2010)			
Master	's degr	ee (1 major) FOKUS Phy	sics - Nanostructuring	Technology (2010)		
Master	's degr	ee (1 major) FOKUS Phy	sics - Nanostructuring	Technology (2006)		

Module title Abbreviation						
Nanomatrix Semiconductor Processing (Master)11-NM-HP-MA-072-m01						
Module coordinator				Module offered by	1	
Manag	ing Dire	ector of the Institute of Ap	oplied Physics	Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conter	Its					
nics, p	hotonic		as in the technology	-oriented materials	of energy engineering, electro- sciences, technologies of nano- niconductor processes.	
Intend	ed lear	ning outcomes				
		have advanced knowledg he field of semiconducto		lication or technolog	gy areas of engineering work,	
Course	<b>S</b> (type, r	number of weekly contact hours, I	anguage — if other than Gei	rman)		
V + R (1	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		<b>sessment</b> (type, scope, langua le for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether	
		mination (approx. 90 mir oral examination in group			) oral examination of one candi- rt (approx. 10 pages)	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPO I (examination regulation	s for teaching-degree progra	immes)		
Modul	e appea	ars in				
	-	ee (1 major) Nanostructu				
	-	ee (1 major) FOKUS Physi	•	•, · ·		
Master	's degr	ee (1 major) FOKUS Physi	cs - Nanostructuring	Technology (2006)		

Modul	e title	Abbreviation			
Nanomatrix Micro/Nano- and Optoelectronic Devices (Master) 11-NM-MB-MA-072-mo1					
Modul	e coord	linator		Module offer	ed by
Manag	ging Dir	ector of the Institute	of Applied Physics	Faculty of Phy	ysics and Astronomy
ECTS	Meth	od of grading	Only after succ. co	mpl. of module	(s)
6	nume	rical grade		-	
Durati	on	Module level	Other prerequisites	5	
1 seme	ester	graduate			
Conte	nts				
structi compo	uring, co onents.	omponents and syst			erials sciences, technologies of nano of micro-/nano- and opto-electronic
Intend	ed lear	ning outcomes			
			wledge of one or more app ano- and optoelectronic c		hnology areas of engineering work,
Course	es (type, i	number of weekly contact h	nours, language — if other than Ge	erman)	
V + R (	no info	rmation on SWS (we	ekly contact hours) and c	ourse language	e available)
		<b>sessment</b> (type, scope, ble for bonus)	language — if other than German,	examination offere	d — if not every semester, information on whethe
					s) or c) oral examination of one cand t report (approx. 10 pages)
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPO I (examination regu	lations for teaching-degree progr	ammes)	
Modul	e appea	ars in			
	-		ructure Technology (2010)		
	-	-	Physics - Nanostructuring		
Maste	r's degr	ee (1 major) FOKUS I	Physics - Nanostructuring	Technology (2	006)

Module title					Abbreviation	
Nanomatrix Biomedical Materials (Master)					03-NM-BW-MA-072-m01	
Module coordinator Module offered by						
•		f examination committee me Human-Computer Inte		Faculty of Medicine	2	
ECTS	1	od of grading	Only after succ. con	npl. of module(s)		
6	nume	rical grade				
Duratio	on .	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
nics an	id phot	onics and biophysical ap	plications as well as	the technology focu	reas power engineering, electro- ses materials science, nanostruc e area of biomedical materials.	
Intend	ed lear	ning outcomes				
		e developed an advanced with a particular focus or			rea or technology focus of engi-	
Course	<b>S</b> (type, 1	number of weekly contact hours, l	anguage — if other than Gei	rman)		
V + R (r	no infoi	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		s <b>essment</b> (type, scope, langua ole for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether	
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 10 pages)	
Allocat	ion of	places				
Additio	onal inf	ormation				
Worklo	ad					
Referre	ed to in	LPOI (examination regulations	s for teaching-degree progra	immes)		
Module	e appea	ars in				
	-	ee (1 major) Nanostructur	•, · ·			
	-	ee (1 major) FOKUS Physi	-			
Master	's degr	ee (1 major) FOKUS Physi	cs - Nanostructuring	Technology (2006)		

Modul	e title	Abbreviation				
Nanomatrix Biocompatible Structuring Technologies (Master)         07-NM-BS-MA-072-m01						
Modul	by					
Dean o	of Studies Biologie (Biolo	ogy)	Faculty of Biolo	gy		
ECTS	Method of grading	Only after succ. cor	npl. of module(s)	)		
6	numerical grade					
Durati	on Module level	Other prerequisites	5			
1 seme	ester graduate					
Conte	nts					
scienc biocor	e, nano-structuring tech npatible structuring tech	nologies and components ar		ne technology fields of materials pment, in particular in the area of		
	ed learning outcomes					
		ced knowledge and skills in articular in the area of bioco		lication directions or technology ring technologies.		
Course	es (type, number of weekly cont	act hours, language — if other than Ge	rman)			
V + R (	no information on SWS (	weekly contact hours) and co	ourse language a	vailable)		
	<b>d of assessment</b> (type, sco is creditable for bonus)	pe, language — if other than German,	examination offered –	- if not every semester, information on whethe		
		. 90 minutes) or b) talk (app in groups (approx. 30 minute		or c) oral examination of one candi eport (approx. 10 pages)		
Alloca	tion of places					
Additi	onal information					
Workle	bad					
Referr	ed to in LPO I (examination	regulations for teaching-degree progra	ammes)			
Modul	e appears in					
	• • • •	ostructure Technology (2010)				
		JS Physics - Nanostructuring				
Maste	r's degree (1 major) FOKl	JS Physics - Nanostructuring	Technology (200	06)		

Modul	e title		Abbreviation		
Nanon	natrix B	11-NM-BV-MA-072-m01			
Modul	e coord	linator		Module offere	d by
Manag	ging Dir	ector of the Institute	of Applied Physics	Faculty of Phy	sics and Astronomy
ECTS	Meth	od of grading	Only after succ. co	ompl. of module(	s)
6	nume	rical grade			
Durati	on	Module level	Other prerequisite	es	
1 seme	ester	graduate			
Conte	nts		•		
structi proced	uring, co dures.	omponents and syst			rials sciences, technologies of nano of biophysical analysis systems and
Intend	ed lear	ning outcomes			
			wledge of one or more ap cal analysis systems and		nology areas of engineering work,
Course	<b>es</b> (type,	number of weekly contact h	ours, language — if other than (	German)	
V + R (	no info	rmation on SWS (we	ekly contact hours) and	course language	available)
		<b>sessment</b> (type, scope, ble for bonus)	language — if other than Germa	n, examination offered	- if not every semester, information on whethe
					) or c) oral examination of one cand report (approx. 10 pages)
Alloca	tion of	places			
Additi	onal inf	ormation			
Workle	oad				
Referr	ed to in	LPO I (examination reg	ulations for teaching-degree prog	grammes)	
Modul	e appe	ars in			
Maste	r's degr	ree (1 major) Nanosti	ructure Technology (2010	o)	
	-		Physics - Nanostructurin		
Maste	r's degr	ee (1 major) FOKUS	Physics - Nanostructurin	g Technology (20	006)



## **Compulsory Electives Specialisation Nanostructure Technology**

(10 ECTS credits)

Module title Abbreviation							
Module Type 4E Special Training Experimental Physics11-SF-4E-072-m01					11-SF-4E-072-m01		
Module	e coord	inator		Module offered by	~		
Manag	ing Dire	ector of the Institute of Ap	oplied Physics	Faculty of Physics a	and Astronomy		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
4	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	Its						
Specifi Physics		nced knowledge of one c	or more of the Faculty	's current research a	reas in the field of Experimental		
Intend	ed lear	ning outcomes					
		have specific and advanc mental Physics.	ed knowledge of one	e or more current reso	earch areas of the faculty in the		
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ge	rman)			
V + R (r	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		s <b>essment</b> (type, scope, langua ile for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether		
		mination (approx. 90 mir oral examination in group			) oral examination of one candi- t (approx. 8 pages)		
Allocat	ion of <sub>l</sub>	olaces					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination regulation	s for teaching-degree progra	immes)			
Module	e appea	ars in					
Master	Master's degree (1 major) Physics (2010)						
	Master's degree (1 major) Nanostructure Technology (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi		Tachnology (2006)			
	-		•	recimology (2006)			
musici	Master's degree (1 major) FOKUS Physics (2006)						

Module	Module title Abbreviation						
Module	Module Type 4I Special Training Interdisciplinary Research Fields       11-SF-4I-072-m01						
Module coordinator Module offered by							
-	-	ectors of the Institute of A f Theoretical Physics and		Faculty of Physics a	and Astronomy		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
4	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
Specifi	c, adva	nced knowledge of one c	or more of the Faculty	's current research a	ireas.		
Intende	ed lear	ning outcomes					
The stu terdisc		•	ed knowledge of one	or more current res	earch areas of the faculty in an in-		
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ger	rman)			
V + R (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		s <b>essment</b> (type, scope, langua ile for bonus)	ge — if other than German, o	examination offered — if no	ot every semester, information on whether		
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 8 pages)		
Allocat	ion of <sub>l</sub>	olaces					
Additio	onal inf	ormation					
	-						
Worklo	ad						
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)			
Module	e appea	ars in					
Master	's degr	ee (1 major) Physics (201	0)				
	Master's degree (1 major) Nanostructure Technology (2010)						
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)							
	-	ee (1 major) FOKUS Physi		Tachnalagy (aast)			
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi		rechnology (2006)			
master	Master's degree (1 major) FOKUS Physics (2006)						

Module title Abbreviation							
Module	е Туре Л	4T Special Training Theo	retical Physics		11-SF-4T-072-m01		
Module	e coord	inator		Module offered by	<u> </u>		
Manag and As	-	ector of the Institute of Th sics	neoretical Physics	Faculty of Physics a	nd Astronomy		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)			
4	nume	rical grade					
Duratio	n	Module level	Other prerequisites	5			
1 seme	ster	graduate					
Conten	ts						
Specifi Physics		nced knowledge of one of	or more of the Faculty	's current research a	reas in the field of Theoretical		
Intende	ed lear	ning outcomes					
		have specific and advance tical Physics.	ced knowledge of one	e or more current res	earch areas of the faculty in the		
Course	<b>S</b> (type, r	number of weekly contact hours,	language — if other than Ge	rman)			
V + R (r	infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		<b>sessment</b> (type, scope, langua le for bonus)	age — if other than German,	examination offered — if no	t every semester, information on whether		
		mination (approx. 90 min oral examination in group			oral examination of one candi- t (approx. 8 pages)		
Allocat	ion of J	olaces					
			_				
Additio	nal inf	ormation					
Worklo	ad						
Referre	d to in	LPO I (examination regulation	s for teaching-degree progra	ammes)			
Module	e appea	ars in					
Master	Master's degree (1 major) Physics (2010)						
	Master's degree (1 major) Nanostructure Technology (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
	-	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys		Tachnology (2006)			
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	•	rechnology (2006)			
muster	Jucgi						

Module title Abbreviation							
Module	Module Type 5E Special Training Experimental Physics11-SF-5E-072-m01						
Module	e coord	inator		Module offered by			
Manag	ing Dire	ector of the Institute of A	pplied Physics	Faculty of Physics a	ind Astronomy		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	Its	<u>.</u>	•				
Specifi Physics		nced knowledge of one	or more of the Faculty	's current research a	reas in the field of Experimental		
Intende	ed lear	ning outcomes					
		have specific and advan mental Physics.	ced knowledge of one	e or more current res	earch areas of the faculty in the		
Course	<b>S</b> (type, r	number of weekly contact hours,	language — if other than Ge	rman)			
V + R (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		<b>sessment</b> (type, scope, langu ole for bonus)	age — if other than German,	examination offered — if no	ot every semester, information on whether		
		mination (approx. 90 mi oral examination in grou			) oral examination of one candi- rt (approx. 10 pages)		
Allocat	ion of <sub>l</sub>	places					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPO I (examination regulatio	ns for teaching-degree progra	ammes)			
Module	e appea	ars in					
	Master's degree (1 major) Physics (2010)						
	Master's degree (1 major) Nanostructure Technology (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
	-	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys		Technology (2006)			
	-	ee (1 major) FOKUS Phys	-	(2000)			
	5 4051						

Module title Abbreviation						
Module	Module Type 5I Special Training Interdisciplinary Research Fields       11-SF-5I-072-m01					
Module coordinator Module offered by						
•	-	ectors of the Institute of A f Theoretical Physics and		Faculty of Physics a	and Astronomy	
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specifi	c,adva	inced knowledge of one c	or more of the Faculty	's current research a	ireas.	
Intende	ed lear	ning outcomes				
The stu terdisci			ed knowledge of one	or more current res	earch areas of the faculty in an in-	
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ger	man)		
V + R (n	no infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)	
		<b>Sessment</b> (type, scope, langua ole for bonus)	ge — if other than German, o	examination offered — if no	ot every semester, information on whether	
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 10 pages)	
Allocat	ion of <sub>l</sub>	places				
Additio	onal inf	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)		
Module	e appea	ars in				
Master	's degr	ee (1 major) Physics (201	0)			
	Master's degree (1 major) Nanostructure Technology (2010)					
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)					
	-	ee (1 major) FOKUS Physi				
	-	ee (1 major) FOKUS Physi		Technology (2006)		
Master	's degr	ee (1 major) FOKUS Physi	CS (2006)			

Module title					Abbreviation
Module Type 5T Special Training Theoretical Physics					11-SF-5T-072-m01
Module	e coord	inator		Module offered by	<u>I</u>
Manag and As	-	ector of the Institute of T sics	heoretical Physics	Faculty of Physics a	and Astronomy
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	5	
1 seme	ster	graduate			
Conten	ts				
Specifi Physics		inced knowledge of one	or more of the Faculty	's current research a	areas in the field of Theoretical
Intend	ed lear	ning outcomes			
		have specific and advan etical Physics.	ced knowledge of on	e or more current res	earch areas of the faculty in the
Course	<b>S</b> (type, r	number of weekly contact hours,	language — if other than Ge	rman)	
V + R (r	no infoi	rmation on SWS (weekly	contact hours) and c	ourse language avail	able)
		s <b>essment</b> (type, scope, langu ole for bonus)	age — if other than German,	examination offered — if no	ot every semester, information on whether
		mination (approx. 90 mi oral examination in grou			) oral examination of one candi- rt (approx. 10 pages)
Allocat	ion of <sub>l</sub>	places			
	-				
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPO I (examination regulation	ns for teaching-degree progr	ammes)	
Module	e appea	ars in			
Master	's degr	ee (1 major) Physics (20:	10)		
Master's degree (1 major) Nanostructure Technology (2010)					
	-	ee (1 major) FOKUS Phys		Technology (2010)	
	-	ee (1 major) FOKUS Phys		Tachnology (acc)	
	-	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys	-	rechnology (2006)	
mastel	s uegi	ee (1 major) FUNUS PHYS			

Module	Module title Abbreviation						
Module	Module Type 6E Special Training Experimental Physics11-SF-6E-072-m01						
Module coordinator Module offered by							
Manag	ing Dire	ector of the Institute of A	pplied Physics	Faculty of Physics a	and Astronomy		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)			
6	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts		-				
Specifi Physics		nced knowledge of one	or more of the Faculty	's current research a	reas in the field of Experimental		
Intende	ed lear	ning outcomes					
		have specific and advane mental Physics.	ced knowledge of one	e or more current res	earch areas of the faculty in the		
Course	<b>S</b> (type, r	number of weekly contact hours,	language — if other than Ge	rman)			
V + R (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		<b>eessment</b> (type, scope, langua le for bonus)	age — if other than German,	examination offered — if no	ot every semester, information on whether		
		mination (approx. 90 min ral examination in group			) oral examination of one candi- rt (approx. 12 pages)		
Allocat	ion of <sub>l</sub>	olaces					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination regulation	is for teaching-degree progra	mmes)			
Module	e appea	ars in					
Master	's degr	ee (1 major) Physics (201	.0)				
	Master's degree (1 major) Nanostructure Technology (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
	-	ee (1 major) FOKUS Phys		Taskaslasa (a.a. 2)			
	-	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys	_	rechnology (2006)			
master	s uegr	ee (1 major) FORUS Phys	105 (2000)				

Module title Abbreviation					Abbreviation		
Module	Module Type 6I Special Training Interdisciplinary Research Fields       11-SF-6I-072-m01						
Module coordinator				Module offered by			
Managing Directors of the Institute of Applied Physics and the Institute of Theoretical Physics and Astrophysics				Faculty of Physics a	and Astronomy		
ECTS	Meth	od of grading	Only after succ. compl. of module(s)				
6	nume	rical grade					
			Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
Specifi	c, adva	nced knowledge of one c	or more of the Faculty	's current research a	areas.		
Intende	ed lear	ning outcomes					
The stu terdisci		•	ed knowledge of one	or more current res	earch areas of the faculty in an in-		
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ger	man)			
V + R (n	io infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		S <b>essment</b> (type, scope, langua ole for bonus)	ge — if other than German, o	examination offered — if no	ot every semester, information on whether		
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 12 pages)		
Allocat	ion of <sub>l</sub>	places					
Additio	nal inf	ormation					
Worklo	ad						
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)			
Module	e appea	ars in					
Master's degree (1 major) Physics (2010)							
Master's degree (1 major) Nanostructure Technology (2010)							
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)							
	Master's degree (1 major) FOKUS Physics (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)						
waster	s aegr	ee (1 major) FUKUS Physi	cs (2006)				

Module title				Abbreviation	
Module Type 6T Special Training Theoretical Physics				11-SF-6T-072-m01	
Module coordinator				Module offered by	<u> </u>
Managing Director of the Institute of Theoretical Physics and Astrophysics			neoretical Physics	Faculty of Physics and Astronomy	
ECTS	Method of grading Only after succ. compl. of module(s)				
6	nume	rical grade			
Duration Module level Other prerequisites			;		
1 semester graduate					
Conten	ts				
Specifi Physics		nced knowledge of one of	or more of the Faculty	's current research a	reas in the field of Theoretical
		ning outcomes	-		
The stu	dents		ced knowledge of one	e or more current res	earch areas of the faculty in the
Course	<b>S</b> (type, r	number of weekly contact hours,	language — if other than Ge	rman)	
V + R (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		<b>Sessment</b> (type, scope, langua le for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether
		mination (approx. 90 mir oral examination in group			) oral examination of one candi- rt (approx. 12 pages)
Allocat	ion of <sub>l</sub>	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regulation	s for teaching-degree progra	ammes)	
Module	e appea	urs in			
Master's degree (1 major) Physics (2010)					
Master's degree (1 major) Nanostructure Technology (2010)					
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)					
Master's degree (1 major) FOKUS Physics (2010)					
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006)					
Master	's degr	ee (1 major) FOKUS Physi	cs (2006)		

Module title Abbreviation						
Module Type 8E Special Training Experimental Physics       11-SF-8E-072-m01					11-SF-8E-072-m01	
Module coordinator				Module offered by	·	
Managing Director of the Institute of Applied Physics			oplied Physics	Faculty of Physics a	ind Astronomy	
ECTS				npl. of module(s)		
8	nume	rical grade				
Duration Module level Other prerequisites						
1 semester graduate			-			
Conten	ts		<u>.</u>			
Specifi Physics		nced knowledge of one c	or more of the Faculty	's current research a	reas in the field of Experimental	
Intende	ed lear	ning outcomes	·			
		have specific and advanc mental Physics.	ed knowledge of one	e or more current res	earch areas of the faculty in the	
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ge	rman)		
V + R (n	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		<b>Sessment</b> (type, scope, langua le for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether	
a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candi- date each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 16 pages)						
Allocat	ion of <sub>l</sub>	olaces				
Additio	nal inf	ormation				
Worklo	ad		·			
Referre	d to in	LPO I (examination regulation	s for teaching-degree progra	ammes)		
Module appears in						
Master's degree (1 major) Physics (2010)						
Master's degree (1 major) Nanostructure Technology (2010)						
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
Master's degree (1 major) FOKUS Physics (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)					
master's degree (1 major) fukus physics (2006)						

Module title Abbreviation					Abbreviation	
Module	Module Type 8I Special Training Interdisciplinary Research Fields       11-SF-8I-072-m01					
Module coordinator				Module offered by	·	
Managing Directors of the Institute of Applied Physics and the Institute of Theoretical Physics and Astrophysics				Faculty of Physics and Astronomy		
ECTS	Meth	od of grading	Only after succ. compl. of module(s)			
8	nume	rical grade				
			Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specifi	c,adva	nced knowledge of one c	or more of the Faculty	's current research a	ireas.	
Intende	ed lear	ning outcomes				
The stu terdisc		•	ed knowledge of one	or more current res	earch areas of the faculty in an in-	
Course	<b>S</b> (type, r	number of weekly contact hours, l	anguage — if other than Ger	rman)		
V + R (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)						
a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candi- date each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 16 pages)						
Allocat	ion of <sub>l</sub>	olaces				
Additio	onal inf	ormation				
	-					
Worklo	ad					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Physics (2010)						
Master's degree (1 major) Nanostructure Technology (2010)						
Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)						
Master's degree (1 major) FOKUS Physics (2010)						
	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006)					
Master's degree (1 major) FOKUS Physics (2006)						

Module title Abbreviation						
Module Type 8T Special Training Theoretical Physics       11-SF-8T-072-m01					11-SF-8T-072-m01	
Module coordinator				Module offered by		
Managing Director of the Institute of Theoretical Physics and Astrophysics			eoretical Physics	Faculty of Physics and Astronomy		
ECTS	Meth	od of grading	Only after succ. compl. of module(s)			
8	nume	rical grade				
			Other prerequisites			
1 semester graduate						
Conten	ts					
Specifi Physics		anced knowledge of one o	or more of the Faculty	's current research a	reas in the field of Theoretical	
Intend	ed lear	ning outcomes				
		have specific and advanc etical Physics.	ed knowledge of one	e or more current res	earch areas of the faculty in the	
Course	<b>S</b> (type, I	number of weekly contact hours, l	anguage — if other than Ge	rman)		
V + R (r	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		s <b>essment</b> (type, scope, langua ole for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether	
		mination (approx. 90 min oral examination in group			) oral examination of one candi- rt (approx. 16 pages)	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Master Master	's degr 's degr	ee (1 major) Physics (201 ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	cs - Nanostructuring cs (2010)			
	Master's degree (1 major) FOKUS Physics (2006)					

Modul	e title				Abbreviation
Modul	е Туре	4N Special Training	Nanostructure Technolog	ſy	11-SF-4N-072-m01
Modul	e coord	linator		Module offered b	y
Manag	ing Dir	ector of the Institute	of Applied Physics	Faculty of Physics	and Astronomy
ECTS	1	od of grading			
4	1	erical grade			
Duration Module level Other prerequisites					
1 semester graduate					
Conter	ts	10			
Specifi techno		anced knowledge of c	one or more of the Faculty	r's current research	areas in the field of nanostructure
Intend	ed lear	ning outcomes			
The stu	Idents		vanced knowledge of one	e or more current re	esearch areas of the faculty in the
Course	<b>S</b> (type,	number of weekly contact h	ours, language — if other than Ge	rman)	
V + R (I	10 info	rmation on SWS (wee	ekly contact hours) and co	ourse language ava	iilable)
		<b>sessment</b> (type, scope, l ole for bonus)	anguage — if other than German,	examination offered — if	not every semester, information on whether
			o minutes) or b) talk (appr roups (approx. 30 minute		c) oral examination of one candi- ort (approx. 8 pages)
Allocat	ion of	places			
		-			
Additio	onal inf	formation			
Worklo	ad				
Referre	ed to in	LPO I (examination regu	lations for teaching-degree progra	ammes)	
Modul	e appe	ars in			
			ucture Technology (2010)		
Master	's degi	ree (1 major) FOKUS F	Physics - Nanostructuring	Technology (2010)	
Master	's degi	ree (1 major) FOKUS F	Physics - Nanostructuring	Technology (2006)	

Modul	e title				Abbreviation
Modul	е Туре	5N Special Training Na	nostructure Technolog	у	11-SF-5N-072-m01
Modul	e coord	linator		Module offered I	by
Manag	ing Dir	ector of the Institute of	Applied Physics	Faculty of Physic	s and Astronomy
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	on .	Module level	Other prerequisites	i	
1 seme	ster	graduate			
Conter	ts				
Specifi Techno		anced knowledge of on	e or more of the Faculty	's current researc	h areas in the field of Nanostructure
Intend	ed lear	ning outcomes			
		have specific and adva tructure technology.	anced knowledge of one	e or more current r	research areas of the faculty in the
Course	<b>S</b> (type,	number of weekly contact hou	rs, language — if other than Ge	rman)	
V + R (I	no info	rmation on SWS (week	ly contact hours) and co	ourse language av	ailable)
		<b>sessment</b> (type, scope, lan ble for bonus)	guage — if other than German,	examination offered — i	if not every semester, information on whether
			ninutes) or b) talk (appi ups (approx. 30 minute		r c) oral examination of one candi- port (approx. 10 pages)
Allocat					
		<u>.</u>			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPO I (examination regulat	ions for teaching-degree progra	ammes)	
Modul	e appe	ars in			
			ture Technology (2010)		
	-		ysics - Nanostructuring		)
Master	's degi	ree (1 major) FOKUS Ph	ysics - Nanostructuring	Technology (2006	5)

Module	e title				Abbreviation
Modul	е Туре	6N Special Training Na	nostructure Technolog	У	11-SF-6N-072-m01
Modul	e coord	linator		Module offered b	y
Manag	ing Dir	ector of the Institute of	Applied Physics	Faculty of Physics	s and Astronomy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duration Module level Other prerequisites					
1 seme	ster	graduate			
Conten	ts	10	1		
Specifi techno		anced knowledge of one	e or more of the Faculty	's current research	n areas in the field of nanostructure
Intend	ed lear	ning outcomes			
		have specific and adva tructure technology.	nced knowledge of one	e or more current re	esearch areas of the faculty in the
Course	<b>S</b> (type,	number of weekly contact hour	5, language — if other than Gei	rman)	
V + R (r	10 info	rmation on SWS (weekl	y contact hours) and co	ourse language ava	ailable)
		<b>sessment</b> (type, scope, lang ble for bonus)	uage — if other than German,	examination offered — if	not every semester, information on whether
		mination (approx. 90 m oral examination in grou			r c) oral examination of one candi- port (approx. 12 pages)
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Referre	ed to in	LPO I (examination regulation	ons for teaching-degree progra	ammes)	
				,	
Module	e appe	ars in			
		ree (1 major) Nanostruct	ure Technology (2010)		
	-	ree (1 major) FOKUS Phy	•,		•
Master	's degr	ree (1 major) FOKUS Phy	sics - Nanostructuring	Technology (2006)	)

Module	e title				Abbreviation
Module	еТуре	8N Special Training N	lanostructure Technolog	ÿ	11-SF-8N-072-m01
Module	e coord	linator		Module offered b	y y
Manag	ing Dir	ector of the Institute of	of Applied Physics	Faculty of Physics	and Astronomy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
8	nume	rical grade			
Duratio	n	Module level	Other prerequisites	i	
1 seme	ster	graduate			
Conten	ts	10	•		
Specifi techno		anced knowledge of o	ne or more of the Faculty	's current research	areas in the field of nanostructure
Intend	ed lear	ning outcomes			
		have specific and adv tructure technology.	anced knowledge of one	e or more current re	esearch areas of the faculty in the
Course	<b>S</b> (type, 1	number of weekly contact ho	urs, language — if other than Ge	rman)	
V + R (r	no info	rmation on SWS (wee	kly contact hours) and co	ourse language ava	ailable)
		<b>sessment</b> (type, scope, la ble for bonus)	nguage — if other than German,	examination offered — if	not every semester, information on whether
			minutes) or b) talk (appi oups (approx. 30 minute		c) oral examination of one candi- ort (approx. 16 pages)
Allocat	ion of	places			
Additio	nal inf	ormation			
Worklo	ad				
Referre	d to in	LPO I (examination regula	ations for teaching-degree progra	ammes)	
Module	e appea	ars in			
			cture Technology (2010)		
	-		nysics - Nanostructuring		
Master	's degr	ree (1 major) FOKUS P	nysics - Nanostructuring	Technology (2006)	)



## **Research Modules Nanostructure Technology**

(16 ECTS credits)

Module title Abbreviation						
FOKUS	Resear	ch Module Type VK8E	Experimental Physics		11-FM-VK8E-072-mc	)1
Module	coordi	nator		Module offered by		
chairpe	rson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
8	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	graduate				
Conten	ts		_			
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
Intende	ed learr	ing outcomes				
especia apply tł	ally in tl ne acqu	nave special and advan ne specialist field of Ex nired methods, to summ nplement the acquired	perimental Physics, an narise a sub-area of th	d are able to reprodu e current research ar	uce the acquired kno ea in an oral presen	wledge, to
Courses	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	rman)		
contact FOKUS contact	: hours) Kompa : hours)	ungsmodul Experimen + Ü/P (1 weekly contac ktseminar Experimente , German or English, de semester break)	t hour), details on ava lle Physik (FOKUS Bloc	ilability to be annou k Taught Seminar Ex	nced (perimental Physics)	: S (2 weekly
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German, o	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repor	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 mir	rcises: written examina didate each or oral exa			
Studen Details	ts musi on whe	omponents 1 and 2 will register for assessmer en assessment compon odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocati	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	appea	rs in				
Master'	s degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi		page 42 / 114



Module	e title				Abbreviation	
FOKUS	Resear	rch Module Type VK8I I	nterdisciplinary Resea		11-FM-VK8I-072-mo	1
Module	e coord	inator		Module offered by		
chairpe	erson of	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)		
8	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in an in- terdisciplinary subject, reproduction of knowledge, acquisition of social and methodological competencies. App- lication of the acquired professional knowledge and methods to new scientific questions in a mini research pro- ject (e.g. experiments, case studies etc.).						
Intende	ed learn	ning outcomes	-			
especia the acq	ally in a Juired n	nave special and advar n interdisciplinary spe- nethods, to summarise ement the acquired kno	cialist field, and are ab a sub-area of the curre	le to reproduce the a ent research area in a	acquired knowledge, an oral presentation	to apply
Course	<b>S</b> (type, n	umber of weekly contact hours	s, language — if other than Ger	man)		
Fields): FOKUS Fields):	V (2 w Kompa S (2 w	rungsmodul Interdiszip eekly contact hours) + ktseminar Interdiszipli eekly contact hours), G , usually held during so	Ü/P (1 weekly contact h näre Fachgebiete (FOK erman or English, deta	iour), details on avai US Block Taught Sen	lability to be annour ninar Interdisciplinar	nced ry Research
		e <b>ssment</b> (type, scope, lang le for bonus)	uage — if other than German, o	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repo	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can rox. 8 pages) lk (approx. 30 to 45 min	rcises: written examina didate each or oral exa			
Studen Details	ts mus <sup>.</sup> on whe	omponents 1 and 2 will t register for assessme en assessment compor iodule, students must j	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	olaces		·		
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	e appea	in in				
Master	's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
		FOKUS Physics - Nanostructu-	-	ierated 11-Jan-2023 • exam. r	eg. data record	page 44 / 114
ring Techno		-		FOKUS Physik - Nanostrukturi		



Module title Abbreviation						
FOKUS	Resear	ch Module Type VK8T	Theoretical Physics		11-FM-VK8T-072-mc	)1
Module	coordi	nator		Module offered by		
chairpe	rson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
8	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	graduate				
Content	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ing outcomes				
especia ply the a	ally in th acquire	nave special and advar ne specialist field of Th ed methods, to summa nplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduce urrent research area	e the acquired know in an oral presentat	ledge, to ap-
Courses	<b>5</b> (type, n	umber of weekly contact hours	, language — if other than Ger	rman)		
contact FOKUS contact ly held o	hours) Kompa hours) during	ungsmodul Theoretisc + Ü/P (1 weekly conta- ktseminar Theoretisch , German or English, de semester break)	et hour), details on ava Physik (FOKUS Block Pails on availability to	ilability to be annou Taught Seminar Theo be announced (bloc	nced pretical Physics): S ( k taught seminar (3	2 weekly days), usual-
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repor	s cover or oral e t (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 min	rcises: written examina didate each or oral exa			
Student Details	ts must on whe	omponents 1 and 2 will register for assessme en assessment compor odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocati	ion of p	laces				
Additio	nal info	ormation				
Workloa	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
		-				
Module	appea	rs in				
Master' Master'	s degre s degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wit ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. re FOKUS Physik - Nanostrukturt	-	page 46 / 114



Module title Abbreviation						
FOKUS	Resear	ch Module Type VK9E	Experimental Physics		11-FM-VK9E-072-mc	)1
Module	e coordi	nator		Module offered by		
chairpe	erson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	pl. of module(s)		
9	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
Intende	ed learr	ing outcomes				
especia apply tl	ally in tl he acqu	nave special and advan ne specialist field of Ex uired methods, to sumr nplement the acquired	perimental Physics, an narise a sub-area of th	d are able to reprodu current research ar	uce the acquired kno ea in an oral present	owledge, to
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	man)		
contact FOKUS contact	: hours) Kompa : hours)	ungsmodul Experimen + Ü/P (1 weekly contac ktseminar Experimente , German or English, do semester break)	t hour), details on ava lle Physik (FOKUS Bloc	ilability to be annou k Taught Seminar Ex	nced (perimental Physics)	: S (2 weekly
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German, o	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repor	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 mir	rcises: written examina didate each or oral exa			
Studen Details	ts musi on whe	omponents 1 and 2 will register for assessme en assessment compor odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	e appea	rs in				
Master	's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturt		page 48 / 114



Module	title				Abbreviation	
FOKUS	Resear	rch Module Type VK9I I	nterdisciplinary Resea	rch Fields	11-FM-VK9I-072-mo	1
Module	coord	inator		Module offered by		
chairpe	erson o	fexamination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
9	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in an in- terdisciplinary subject, reproduction of knowledge, acquisition of social and methodological competencies. App- lication of the acquired professional knowledge and methods to new scientific questions in a mini research pro- ject (e.g. experiments, case studies etc.).						
Intende	ed leari	ning outcomes				
especia the acq	ally in a juired r	nave special and advan in interdisciplinary spec nethods, to summarise ement the acquired kno	ialist field, and are ab a sub-area of the curre	le to reproduce the a ent research area in a	acquired knowledge, an oral presentation	to apply
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	rman)		
Fields): FOKUS Fields): minar (	V (3 w Kompa S (2 w <u>3 days)</u>	rungsmodul Interdiszip eekly contact hours) + I ktseminar Interdiszipli eekly contact hours), G , usually held during se	J/P (1 weekly contact h näre Fachgebiete (FOK erman or English, deta emester break)	nour), details on avai US Block Taught Sen ils on availability to	lability to be annour ninar Interdisciplinar be announced (blocl	nced y Research k taught se-
		e <b>ssment</b> (type, scope, lang le for bonus)	uage — if other than German, o	examination offered — if no	t every semester, information	on on whether
1. Topic tes) c repor	cs cove or oral o rt (appi	as the following assess red in lectures and exe examination of one can rox. 8 pages) lk (approx. 30 to 45 mir	rcises: written examina didate each or oral exa			
Studen Details	ts mus on whe	omponents 1 and 2 will t register for assessmen en assessment compon odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	olaces				
	<u> </u>					
Additio	nal inf	ormation				
Worklo	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	irs in				
Master' Master'	's degre 's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		erated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 50 / 114



Module title Abbreviation						
FOKUS	Resear	ch Module Type VK9T	Theoretical Physics		11-FM-VK9T-072-mc	)1
Module	coordi	nator		Module offered by		
chairpe	rson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
9	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ing outcomes				
especia ply the	ally in th acquire	ave special and advar ne specialist field of Th ed methods, to summa nplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduce urrent research area	e the acquired know in an oral presentat	ledge, to ap-
Courses	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Gei	rman)		
contact FOKUS contact ly held	hours) Kompa hours) during	ungsmodul Theoretisc + Ü/P (1 weekly conta- ktseminar Theoretisch , German or English, de semester break)	et hour), details on ava Physik (FOKUS Block Pails on availability to	ilability to be annou Taught Seminar Theo be announced (bloc	nced pretical Physics): S ( k taught seminar (3	2 weekly days), usual-
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repor	cs cover or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 min	rcises: written examina didate each or oral exa			
Studen Details	ts must on whe	omponents 1 and 2 will register for assessme en assessment compor odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocati	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	appea	rs in				
Master' Master'	s degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. re FOKUS Physik - Nanostrukturt	-	page 52 / 114



Module title Abbreviation						
FOKUS	Resear	ch Module Type VK10E	Experimental Physics		11-FM-VK10E-072-m	01
Module	e coordi	nator		Module offered by		
chairpe	erson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
10	numer	ical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ing outcomes				
especia apply t	ally in tl he acqu	nave special and advan ne specialist field of Ex uired methods, to sumr nplement the acquired	perimental Physics, an narise a sub-area of th	d are able to reprodu e current research ar	uce the acquired kno ea in an oral present	owledge, to
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Gei	rman)		
contact FOKUS contact	t hours) Kompa t hours)	ungsmodul Experimen + Ü/P (2 weekly conta ktseminar Experimente , German or English, de semester break)	ct hours), details on av lle Physik (FOKUS Bloo	ailability to be anno k Taught Seminar Ex	unced (perimental Physics)	: S (2 weekly
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repo	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 mir	rcises: written examina didate each or oral exa			
Studen Details	ts must on whe	omponents 1 and 2 will register for assessme en assessment compor odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	e appea	rs in				
Master	's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi		page 54 / 114



Module	e title				Abbreviation	
FOKUS	Resear	ch Module Type VK10I	Interdisciplinary Rese		11-FM-VK10I-072-m	01
Module	e coordi	inator		Module offered by		
chairpe	erson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)		
10	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in an in- terdisciplinary subject, reproduction of knowledge, acquisition of social and methodological competencies. App- lication of the acquired professional knowledge and methods to new scientific questions in a mini research pro- ject (e.g. experiments, case studies etc.).						
Intende	ed learr	ning outcomes				
especia the acq	ally in a uired n	nave special and advan n interdisciplinary spec nethods, to summarise ement the acquired kno	ialist field, and are ab a sub-area of the curre	le to reproduce the a ent research area in a	acquired knowledge, an oral presentation	to apply
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	man)		
Fields): FOKUS Fields): minar (	V (3 w Kompa S (2 w 3 days)	rungsmodul Interdiszip eekly contact hours) + Ü ktseminar Interdisziplin eekly contact hours), G , usually held during se	J/P (2 weekly contact H näre Fachgebiete (FOK erman or English, deta emester break)	nours), details on av US Block Taught Sen ils on availability to	ailability to be annot ninar Interdisciplinar be announced (bloc	unced ry Research k taught se-
		essment (type, scope, langule for bonus)	age — if other than German, o	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repoi	cs cove or oral e rt (appr	as the following assess red in lectures and exer examination of one can rox. 8 pages) lk (approx. 30 to 45 mir	cises: written examina didate each or oral exa			
Studen Details	ts must on whe	omponents 1 and 2 will t register for assessmer en assessment compon odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	appea	rs in				
Master' Master'	's degre	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturf		page 56 / 114



Module title				Abbreviation		
FOKUS	Resear	ch Module Type VK10T	Theoretical Physics		11-FM-VK10T-072-m	01
Module	e coordi	nator		Module offered by		
chairpe	erson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	pl. of module(s)		
10	numer	ical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ing outcomes				
The students have special and advanced knowledge of independent scientific work in a current research area, especially in the specialist field of Theoretical Physics, and are able to reproduce the acquired knowledge, to apply the acquired methods, to summarise a sub-area of the current research area in an oral presentation and to successfully implement the acquired knowledge and methods in a mini research project.						
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	man)		
contact FOKUS contact	t hours) Kompa t hours)	ungsmodul Theoretisc + Ü/P (2 weekly conta ktseminar Theoretisch , German or English, do semester break)	ct hours), details on av e Physik (FOKUS Block	ailability to be anno Taught Seminar The	unced pretical Physics): S (	2 weekly
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German, o	examination offered — if no	t every semester, informati	on on whether
1. Topic tes) c repo	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) k (approx. 30 to 45 mir	rcises: written examina didate each or oral exa			
Studen Details	ts must on whe	omponents 1 and 2 will register for assessmen en assessment compor odule, students must p	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	e appea	rs in				
Master	's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturt		page 58 / 114



Module title				Abbreviation		
FOKUS	Resear	ch Module Type VK12E	Experimental Physics		11-FM-VK12E-072-m	01
Module	coordi	nator		Module offered by		
chairper	rson of	examination committe	e F	Faculty of Physics a	nd Astronomy	
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
12	numer	ical grade				
Duration	n	Module level	Other prerequisites			
1 semes	ster	graduate				
Content	Contents					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ing outcomes				
The students have special and advanced knowledge of independent scientific work in a current research area, especially in the specialist field of Experimental Physics, and are able to reproduce the acquired knowledge, to apply the acquired methods, to summarise a sub-area of the current research area in an oral presentation and to successfully implement the acquired knowledge and methods in a mini research project.						
Courses	(type, n	umber of weekly contact hours	s, language — if other than Ger	rman)		
contact FOKUS k contact	hours) Kompa hours)	+ Ü/P (2 weekly conta ktseminar Experimente	telle Physik (FOKUS Int ct hours), details on av elle Physik (FOKUS Bloc etails on availability to	vailability to be anno ck Taught Seminar Ex	unced (perimental Physics)	: S (2 weekly
		<b>essment</b> (type, scope, lang e for bonus)	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
1. Topics tes) o report	s cover r oral e t (appr		rcises: written examina didate each or oral exa			
Student Details o	s must on whe	register for assessme n assessment compor	be offered in German nt components 1 and 2 ients 1 and 2 will be of bass both assessment	online (details to be fered to be announce	ed.	nt 2.
Allocati	on of p	laces				
Addition	nal info	ormation				
Workloa	ad					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	appea	rs in				
Master's	s degre	e (1 major) FOKUS Phy	sics - Nanostructuring sics (2010) sics - Nanostructuring			
Master's witl ring Technol		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturt		page 60 / 114



Module title					Abbreviation	
FOKUS	FOKUS Research Module Type VK12I Interdisciplinary Research Fields       11-FM-VK12I-072-m01					01
Module	e coord	inator		Module offered by		
chairpe	erson of	examination committe	ee	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 semester graduate						
Conten	Contents					
Specific and advanced knowledge of independent scientific work in a current research area, especially in an in- terdisciplinary subject, reproduction of knowledge, acquisition of social and methodological competencies. App- lication of the acquired professional knowledge and methods to new scientific questions in a mini research pro- ject (e.g. experiments, case studies etc.).						
Intende	ed learr	ning outcomes				
The students have special and advanced knowledge of independent scientific work in a current research area, especially in an interdisciplinary specialist field, and are able to reproduce the acquired knowledge, to apply the acquired methods, to summarise a sub-area of the current research area in an oral presentation and to successfully implement the acquired knowledge and methods in a mini research project.						
Course	<b>S</b> (type, n	umber of weekly contact hour	s, language — if other than Ger	man)		
Fields): FOKUS Fields): minar (	: V (4 w Kompa : S (2 w 3 days)	eekly contact hours) + ktseminar Interdiszipli eekly contact hours), G , usually held during s		nours), details on ava US Block Taught Sem ils on availability to	ailability to be annou ninar Interdisciplinar be announced (blocl	unced y Research k taught se-
		<b>essment</b> (type, scope, lang le for bonus)	uage — if other than German, e	examination offered — if no	t every semester, information	on on whether
1. Topio tes) o repo	cs cove or oral e rt (appr		rcises: written examina didate each or oral exa			
Studen Details	ts mus on whe	t register for assessme en assessment compor	be offered in German nt components 1 and 2 nents 1 and 2 will be off pass both assessment	online (details to be fered to be announce	ed.	nt 2.
Allocat				<u> </u>	p	
Additio	nal info	ormation				
Workload						
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	appea	rs in				
Master Master	's degre 's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics - Nanostructuring ` sics (2010) sics - Nanostructuring `			
Master's wi	ith 1 major	FOKUS Physics - Nanostructu-	JMU Würzburg • gen	ierated 11-Jan-2023 • exam. r		page 62 / 114
ring Techno	ology (200	6)	Master (120 ECTS)	FOKUS Physik - Nanostrukturt	echnik - 2006	



Module title					Abbreviation	
FOKUS	Resear	ch Module Type VK12T	Theoretical Physics		11-FM-VK12T-072-m	01
Module	e coordi	nator		Module offered by		
chairpe	erson of	examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
12	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
		ning outcomes				
The students have special and advanced knowledge of independent scientific work in a current research area, especially in the specialist field of Theoretical Physics, and are able to reproduce the acquired knowledge, to apply the acquired methods, to summarise a sub-area of the current research area in an oral presentation and to successfully implement the acquired knowledge and methods in a mini research project.						
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Ger	rman)		
FOKUS Einführungsmodul Theoretische Physik (FOKUS Introductory Module Theoretical Physics): V (4 weekly contact hours) + Ü/P (2 weekly contact hours), details on availability to be announced FOKUS Kompaktseminar Theoretische Physik (FOKUS Block Taught Seminar Theoretical Physics): S (2 weekly contact hours), German or English, details on availability to be announced (block taught seminar (3 days), usual- ly held during semester break)						
		<b>essment</b> (type, scope, lang le for bonus)	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
1. Topio tes) o repo	cs cove or oral e rt (appr	as the following assess red in lectures and exe examination of one can ox. 8 pages) lk (approx. 30 to 45 min	rcises: written examina didate each or oral exa			
Studen Details	ts must on whe	omponents 1 and 2 will t register for assessme en assessment compor odule, students must j	nt components 1 and 2 ents 1 and 2 will be of	online (details to be fered to be announce	ed.	nt 2.
Allocat	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
		-				
Module appears in						
Master Master	's degre 's degre	ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy ee (1 major) FOKUS Phy	sics (2010)			
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturt	-	page 64 / 114



Module title					Abbreviation	
FOKUS	Resea	rch Module Type VMK1	2E Experimental Physi	cs	11-FM-VMK12E-072-	·m01
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	Dnly after succ. compl. of module(s)		
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
Intende	ed lear	ning outcomes				
especia apply t	ally in t he acqu	nave special and advar he specialist field of Ex uired methods, to sumr nplement the acquired	perimental Physics, ar narise a sub-area of th	d are able to reprodue current research ar	uce the acquired kno rea in an oral presen	owledge, to
Course	<b>S</b> (type, r	umber of weekly contact hours	s, language — if other than Ge	rman)		
contact FOKUS contact ly held FOKUS weekly	t hours) Kompa t hours) during Minifo contac	rungsmodul Experimen ) + Ü/P (1 weekly conta- ktseminar Experimente ), German or English, de semester break) rschungsprojekt Experi t hours), German or En	ct hour), details on ava elle Physik (FOKUS Bloc etails on availability to mentelle Physik (FOKU glish, details on availa	ilability to be annou ck Taught Seminar Ex be announced (bloc S Mini Research Proj bility to be announce	nced «perimental Physics) k taught seminar (3 ect Experimental Ph ed (approx. 3 weeks,	): S (2 weekly days), usual- ysics): P (2 , part time)
		sessment (type, scope, lang	uage — if other than German,	examination offered — if no	t every semester, informati	ion on whether
This mo 1. Topio tes) repo 2. Sem	<ul> <li>module is creditable for bonus)</li> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>					
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocat	ion of p	olaces				
Additional information Workload Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	appea	urs in				
	ith 1 major	FOKUS Physics - Nanostructu-		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 66 / 114

Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010) Master's degree (1 major) FOKUS Physics (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)

Module title					Abbreviation		
FOKUS Research Module Type VMK12I Interdisciplinary Res			Interdisciplinary Res	earch Fields	11-FM-VMK12I-072-m01		
Module	coord	inator		Module offered by			
chairpe	rson o	f examination committee		Faculty of Physics a	ind Astronomy		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)			
12	nume	rical grade					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
discipli lication	nary su of the	bjects, reproduction of k	nowledge, acquisition owledge and method	on of social and meth	search area, especially in inter- nodological competencies. App- questions in a mini research pro-		
Intende	ed learr	ning outcomes					
especia acquire	ally in in d meth	nterdisciplinary specialis	t fields, and are able p-area of the current r	to reproduce the accessed on the accessed of the second of	vork in a current research area, quired knowledge, to apply the ral presentation and to suc- roject.		
Course	<b>S</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)			
FOKUS Fields): minar ( FOKUS	Kompa S (2 w 3 days) Minifoı Fields)	ktseminar Interdisziplina eekly contact hours), Ger , usually held during sen schungsprojekt Interdisz : P (2 weekly contact hou	ire Fachgebiete (FOKI man or English, deta nester break) riplinäre Fachgebiete	JS Block Taught Sen ils on availability to (FOKUS Mini Resear	ilability to be announced ninar Interdisciplinary Research be announced (block taught se- rch Project Interdisciplinary Re- bility to be announced (approx. 3		
		e <b>ssment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	ot every semester, information on whether		
1. Topic tes) c repoi 2. Semi	cs cove or oral o rt (appr nar: ta		ises: written examina idate each or oral exa tes)		nutes) or talk (approx. 30 minu- (approx. 30 minutes) or project		
Studen Details	ts mus <sup>.</sup> on whe	omponents 1 through 3 w t register for assessment en assessment compone iodule, students must pa	components 1 throug nts 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.		
Allocat	Allocation of places						
Additio	Additional information						
Worklo	Workload						
Referre	d to in	LPOI (examination regulations	s for teaching-degree progra	mmes)			

Master's with 1 major FOKUS Physics - Nanostructu-	
ring Technology (2006)	

## Module appears in

Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010) Master's degree (1 major) FOKUS Physics (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)

Module title					Abbreviation	
FOKUS	Resear	rch Module Type VKM1	2T Theoretical Physics		11-FM-VMK12T-072-	m01
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Theoretical Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
Intende	ed leari	ning outcomes				
especia ply the	ally in t acquir	nave special and advan he specialist field of Th ed methods, to summa nplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduc urrent research area	e the acquired know in an oral presentat	ledge, to ap-
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Gei	rman)		
contact FOKUS contact ly held FOKUS kly con	: hours) Kompa : hours) during Minifor tact ho	rungsmodul Theoretisc ) + Ü/P (1 weekly contac ktseminar Theoretisch ), German or English, do semester break) rschungsprojekt Theore urs), German or English	et hour), details on ava e Physik (FOKUS Block etails on availability to tische Physik (FOKUS n, details on availability	ilability to be annou Taught Seminar The be announced (bloc Wini Research Projec y to be announced (a	nced oretical Physics): S ( k taught seminar (3 t Theoretical Physics approx. 3 weeks, par	2 weekly days), usual- s): P (2 wee- t time)
		essment (type, scope, lang	uage — if other than German,	examination offered — if no	t every semester, informati	on on whether
This mo 1. Topic tes) o repor 2. Semi	<ul> <li>module is creditable for bonus)</li> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>					
Studen Details	ts mus on whe	t register for assessmen en assessment compor odule, students must p	nt components 1 throug ents 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
Referre	d to in	LPO I (examination regulation	ons for teaching-degree progra	mmes)		
Module	appea	ars in				
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 70 / 114

Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010) Master's degree (1 major) FOKUS Physics (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006) Master's degree (1 major) FOKUS Physics (2006)

Module title					Abbreviation	
FOKUS	Resear	rch Module Type VMK1	3E Experimental Physic	cs	11-FM-VMK13E-072-	m01
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	ee	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
13	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Specific and advanced knowledge of independent scientific work in a current research area, especially in the dis- cipline of Experimental Physics, reproduction of knowledge, acquisition of social and methodological competen- cies. Application of the acquired professional knowledge and methods to new scientific questions in a mini rese- arch project (e.g. experiments, case studies etc.).						
Intende	ed learı	ning outcomes				
especia apply tl	ally in t he acqu	he specialist field of Ex uired methods, to sumi	iced knowledge of inde perimental Physics, an narise a sub-area of th knowledge and metho	d are able to reprodu e current research ar	uce the acquired kno rea in an oral present	owledge, to
Course	<b>S</b> (type, n	umber of weekly contact hour	s, language — if other than Gei	man)		
FOKUS Einführungsmodul Experimentelle Physik (FOKUS Introductory Module Experimental Physics): V (3 weekly contact hours) + Ü/P (1 weekly contact hour), details on availability to be announced FOKUS Kompaktseminar Experimentelle Physik (FOKUS Block Taught Seminar Experimental Physics): S (2 weekly contact hours), German or English, details on availability to be announced (block taught seminar (3 days), usual- ly held during semester break) FOKUS Miniforschungsprojekt Experimentelle Physik (FOKUS Mini Research Project Experimental Physics): P (2 weekly contact hours), German or English, details on availability to be announced (approx. 3 weeks, part time) <b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether						
		le for bonus)				
1. Topic tes) c repor 2. Semi	cs cove or oral o rt (appi inar: ta		rcises: written examina Ididate each or oral exa nutes)			
Studen Details	ts mus on whe	t register for assessme en assessment compor	will be offered in Gern nt components 1 throug nents 1 through 3 will b pass each of the asses	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additional information						
Workload						
Referre	d to in	LPOI (examination regulation	ons for teaching-degree progra	mmes)		
Module	e appea	in				
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 72 / 114

Module title				Abbreviation	
FOKUS Research Module Type VMK13I Interdisciplinary Research Fields			11-FM-VMK13I-072-m01		
Module	coord	inator		Module offered by	
chairpe	rson o	f examination committee	_	Faculty of Physics a	ind Astronomy
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
13	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	graduate			
Conten	ts				
discipli lication	nary su of the	bjects, reproduction of k	nowledge, acquisition owledge and method	on of social and meth	search area, especially in inter- nodological competencies. App- questions in a mini research pro-
Intende	ed learr	ning outcomes			
especia acquire	ally in in d meth	nterdisciplinary specialis	t fields, and are able p-area of the current r	to reproduce the accessed of the accessed of the second of	vork in a current research area, quired knowledge, to apply the ral presentation and to suc- roject.
Course	<b>S</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)	
FOKUS Fields): minar ( FOKUS	Kompa S (2 w 3 days) Minifor Fields)	ktseminar Interdisziplina eekly contact hours), Ger , usually held during sen schungsprojekt Interdisz : P (2 weekly contact hou	ire Fachgebiete (FOKI man or English, deta nester break) riplinäre Fachgebiete	JS Block Taught Sen ils on availability to (FOKUS Mini Resear	ilability to be announced ninar Interdisciplinary Research be announced (block taught se- rch Project Interdisciplinary Re- pility to be announced (approx. 3
			ge — if other than German, e	examination offered — if no	ot every semester, information on whether
		le for bonus)			
<ul> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>					
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.					
Allocation of places					
Additional information					
Workload					
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)	

Master's with 1 major FOKUS Physics - Nanostructu-	
ring Technology (2006)	

# Module appears in

Module title				Abbreviation		
FOKUS Research Module Type VKM13T Theoretical Physics				11-FM-VMK13T-072-	m01	
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
13	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
cipline cies. Ap	of Theo oplicati	dvanced knowledge of pretical Physics, reprod on of the acquired prof e.g. experiments, case s	uction of knowledge, a essional knowledge ar	equisition of social a	and methodological	competen-
Intende	ed lear	ning outcomes				
especia ply the	ally in t acquir	have special and advan he specialist field of Th ed methods, to summa nplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduc urrent research area	e the acquired know in an oral presentat	ledge, to ap-
Course	<b>S</b> (type, r	number of weekly contact hours	, language — if other than Ge	rman)		
contact FOKUS contact ly held FOKUS	t hours) Kompa t hours) during Minifo	rungsmodul Theoretisch ) + Ü/P (1 weekly contac ktseminar Theoretisch ), German or English, do semester break) rschungsprojekt Theore urs), German or English	t hour), details on ava Physik (FOKUS Block etails on availability to tische Physik (FOKUS	ilability to be annou Taught Seminar The be announced (bloc Mini Research Projec	nced oretical Physics): S ( k taught seminar (3 tt Theoretical Physics	2 weekly days), usual- s): P (2 wee-
Method	d of ass	sessment (type, scope, lang	uage — if other than German,	examination offered — if no	ot every semester, informati	on on whether
module is	creditab	le for bonus)				
1. Topic tes) c repo 2. Semi	cs cove or oral rt (appi inar: ta	as the following assess red in lectures and exe examination of one can rox. 8 pages) lk (approx. 30 to 45 mir roject: project report (ap	rcises: written examina didate each or oral exa nutes)			
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Master's wi ring Techno		r FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostruktur	-	page 76 / 114

Module title				Abbreviation		
FOKUS Research Module Type VMK14E Experimental Physics					11-FM-VMK14E-072-	·mo1
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
14	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
cipline cies. Ap	of Expe oplicati	dvanced knowledge of erimental Physics, repro on of the acquired prof e.g. experiments, case s	duction of knowledge essional knowledge ar	, acquisition of socia	al and methodologic	al competen-
Intende	ed lear	ning outcomes				
especia apply t	ally in t he acqu	nave special and advan he specialist field of Ex uired methods, to sumr nplement the acquired	perimental Physics, an narise a sub-area of th	d are able to reprod e current research ar	uce the acquired kno rea in an oral presen	owledge, to
Course	<b>S</b> (type, r	umber of weekly contact hours	, language — if other than Gei	rman)		
contact FOKUS contact ly held FOKUS	t hours) Kompa t hours) during Minifo	rungsmodul Experimen ) + Ü/P (2 weekly conta ktseminar Experimente ), German or English, de semester break) rschungsprojekt Experin t hours), German or Eng	ct hours), details on av Ille Physik (FOKUS Bloc etails on availability to nentelle Physik (FOKU	vailability to be anno k Taught Seminar Ex be announced (bloc S Mini Research Proj	unced xperimental Physics) k taught seminar (3 ect Experimental Ph	: S (2 weekly days), usual- ysics): P (2
		essment (type, scope, lang		· ·		
		le for bonus)			it every semester, mornati	ion on whether
<ul> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>						
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocat	ion of p	olaces				
 Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ins in				
Master's wi	ith 1 majo	FOKUS Physics - Nanostructu-	JMU Würzburg • ger	ierated 11-Jan-2023 • exam. r	reg. data record	page 78 / 114
ring Techno	ology (200	6)	Master (120 ECTS)	FOKUS Physik - Nanostruktur	technik - 2006	

Module title				Abbreviation		
FOKUS Research Module Type VMK14I Interdisciplinary Research Fields			11-FM-VMK14I-072-m01			
Module	coord	inator		Module offered by		
chairpe	rson o	f examination committee		Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
14	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
discipli lication	nary su of the	bjects, reproduction of k	nowledge, acquisition owledge and method	on of social and meth	search area, especially in inter- nodological competencies. App- questions in a mini research pro-	
Intende	ed learn	ning outcomes				
especia acquire	ally in in d meth	nterdisciplinary specialis	t fields, and are able p-area of the current r	to reproduce the accessed of the accessed of the second of	vork in a current research area, quired knowledge, to apply the ral presentation and to suc- oject.	
Course	<b>S</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)		
FOKUS Fields): minar ( FOKUS	Kompa S (2 w 3 days) Minifor Fields)	ktseminar Interdisziplina eekly contact hours), Ger , usually held during sen schungsprojekt Interdisz : P (2 weekly contact hou	ire Fachgebiete (FOKl man or English, deta nester break) riplinäre Fachgebiete	JS Block Taught Sen ils on availability to (FOKUS Mini Resear	ailability to be announced ninar Interdisciplinary Research be announced (block taught se- rch Project Interdisciplinary Re- pility to be announced (approx. 3	
		e <b>essment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	t every semester, information on whether	
<ul> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>						
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocation of places						
Additional information						
Workload						
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)		

Master's with 1 major FOKUS Physics - Nanostructu-	
ring Technology (2006)	

# Module appears in

Module title				Abbreviation		
FOKUS Research Module Type VKM14T Theoretical Physics       11-FM-VMK14T-072-m01					m01	
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
14	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
cipline cies. Ap	of Theo oplicati	dvanced knowledge of pretical Physics, reprod on of the acquired prof e.g. experiments, case s	uction of knowledge, a essional knowledge ar	cquisition of social a	and methodological	competen-
Intende	ed learı	ning outcomes				
especia ply the	ally in t acquir	nave special and advan he specialist field of Th ed methods, to summa nplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduc urrent research area	e the acquired know in an oral presentat	ledge, to ap-
Course	<b>S</b> (type, n	umber of weekly contact hours	, language — if other than Gei	man)		
contact FOKUS contact ly held FOKUS kly con	: hours) Kompa : hours) during Minifor tact ho	rungsmodul Theoretisc ) + Ü/P (2 weekly conta ktseminar Theoretischo ), German or English, do semester break) rschungsprojekt Theore urs), German or English	ct hours), details on av e Physik (FOKUS Block etails on availability to tische Physik (FOKUS 1, details on availability	ailability to be anno Taught Seminar The be announced (bloc Wini Research Projec / to be announced (a	unced oretical Physics): S ( k taught seminar (3 t Theoretical Physics approx. 3 weeks, par	2 weekly days), usual- s): P (2 wee- t time)
		<b>essment</b> (type, scope, lang	uage — if other than German,	examination offered — if no	ot every semester, informati	on on whether
<ul> <li>module is creditable for bonus)</li> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> <li>Assessment components 1 through 3 will be offered in German or English.</li> </ul>						
Details	on whe	t register for assessmen en assessment compor nodule, students must p	ents 1 through 3 will b	e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Master's wi ring Techno		r FOKUS Physics - Nanostructu- 6)		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 82 / 114

Module title				Abbreviation		
FOKUS Research Module Type VMK16E Experimental Physics				11-FM-VMK16E-072-	·mo1	
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
16	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
cipline cies. Ap	of Expe oplicati	dvanced knowledge of erimental Physics, repro on of the acquired prof e.g. experiments, case s	oduction of knowledge essional knowledge ar	, acquisition of socia	al and methodologica	al competen-
Intende	ed lear	ning outcomes				
especia apply tl	ally in t he acqu	nave special and advar he specialist field of Ex uired methods, to sum nplement the acquired	perimental Physics, an narise a sub-area of th	d are able to reproduce current research ar	uce the acquired kno rea in an oral presen	owledge, to
Course	<b>S</b> (type, r	umber of weekly contact hours	s, language — if other than Gei	rman)		
contact FOKUS contact ly held FOKUS	t hours) Kompa t hours) during Minifo	rungsmodul Experimen ) + Ü/P (2 weekly conta ktseminar Experimente ), German or English, d semester break) rschungsprojekt Experi t hours), German or En	ct hours), details on av elle Physik (FOKUS Bloc etails on availability to mentelle Physik (FOKU	vailability to be anno k Taught Seminar Ex be announced (bloc S Mini Research Proj	unced (perimental Physics) k taught seminar (3 ect Experimental Physics)	): S (2 weekly days), usual- ysics): P (2
Method	d of ass	sessment (type, scope, lang	uage — if other than German,	examination offered — if no	t every semester, informati	ion on whether
		le for bonus)				
1. Topic tes) c repor 2. Semi	cs cove or oral rt (appi inar: ta	as the following assess red in lectures and exe examination of one car rox. 8 pages) lk (approx. 30 to 45 min roject: project report (a	rcises: written examina didate each or oral exa nutes)			-
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostrukturi	-	page 84 / 114

Module title				Abbreviation	
FOKUS Research Module Type VMK16I Interdisciplinary Research Fields				11-FM-VMK16I-072-m01	
Module	coord	inator		Module offered by	
chairpe	rson o	f examination committee	_	Faculty of Physics a	nd Astronomy
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
16		rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	graduate			
Conten	ts				
discipli lication	nary su of the	bjects, reproduction of k	nowledge, acquisition owledge and method	on of social and meth	search area, especially in inter- nodological competencies. App- questions in a mini research pro-
Intende	ed learn	ning outcomes			
especia acquire	ally in in d meth	nterdisciplinary specialis	t fields, and are able p-area of the current r	to reproduce the accessed on the accessed of the second of	vork in a current research area, quired knowledge, to apply the ral presentation and to suc- oject.
Course	<b>S</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)	
FOKUS Fields): minar ( FOKUS	Kompa S (2 w 3 days) Minifor Fields)	ktseminar Interdisziplina eekly contact hours), Ger , usually held during sen schungsprojekt Interdisz : P (2 weekly contact hou	ire Fachgebiete (FOKI man or English, deta nester break) riplinäre Fachgebiete	JS Block Taught Sen ils on availability to (FOKUS Mini Resear	ailability to be announced ninar Interdisciplinary Research be announced (block taught se- rch Project Interdisciplinary Re- pility to be announced (approx. 3
		e <b>essment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	t every semester, information on whether
<ul> <li>This module has the following assessment components</li> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Research project: project report (approx. 8 pages)</li> </ul>					
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.					
Allocation of places					
Additional information					
Workload					
Referre	d to in	LPO I (examination regulations	s for teaching-degree progra	mmes)	

Master's with 1 major FOKUS Physics - Nanostructu-	
ring Technology (2006)	

# Module appears in

Module title				Abbreviation		
FOKUS Research Module Type VKM16T Theoretical Physics11-FM-VMK16T-072-m01					·m01	
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	ee	Faculty of Physics a	ind Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
16	nume	rical grade				
Duratio	on	Module level	Other prerequisites	i		
1 seme	ster	graduate				
Conten	ts					
cipline cies. Ap	of Theo oplicati	dvanced knowledge of pretical Physics, reprod on of the acquired prof e.g. experiments, case	uction of knowledge, a essional knowledge ar	equisition of social a	and methodological	competen-
Intende	ed lear	ning outcomes				
especia ply the	ally in t acquir	have special and advar he specialist field of Th ed methods, to summa mplement the acquired	eoretical Physics, and rise a sub-area of the c	are able to reproduc current research area	e the acquired know in an oral presentat	/ledge, to ap-
Course	<b>S</b> (type, r	number of weekly contact hour	s, language — if other than Ge	rman)		
contact FOKUS contact ly held FOKUS	t hours Kompa t hours during Minifo	rungsmodul Theoretisc ) + Ü/P (2 weekly conta Iktseminar Theoretisch ), German or English, d semester break) rschungsprojekt Theore urs), German or Englisł	ct hours), details on av e Physik (FOKUS Block etails on availability to etische Physik (FOKUS	vailability to be anno Taught Seminar The be announced (bloc Mini Research Projec	unced oretical Physics): S ( k taught seminar (3 ct Theoretical Physics	(2 weekly days), usual- s): P (2 wee-
		sessment (type, scope, lang		-		
		le for bonus)			, ,	
1. Topic tes) c repo 2. Semi	cs cove or oral rt (appi inar: ta	as the following assest red in lectures and exe examination of one car rox. 8 pages) lk (approx. 30 to 45 min roject: project report (a	rcises: written examina didate each or oral exa nutes)			
Assessment components 1 through 3 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment components 1 through 3 will be offered to be announced. To pass this module, students must pass each of the assessment components 1 through 3.						
Allocat	ion of <sub>l</sub>	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	urs in				
Master's wi ring Technc		r FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. r FOKUS Physik - Nanostruktur	-	page 88 / 114

Module title				Abbreviation		
FOKUS Research Module Type VK8N					11-FM-VK8N-072-m01	
Module coordinator				Module offered by		
chairpe	rson of	f examination committee		Faculty of Physics a	nd Astronomy	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
8	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme		graduate				
Conten						
field of tencies	nanost . Applic	tructure technology, repr	oduction of knowledge ofessional knowledge	ge, acquisition of soc	search area, especially in the cial and methodological compe- w scientific questions in a mini	
Intende	ed learr	ning outcomes				
especia the acq	ally in tl uired n	he field of nanostructure	technology, and are sub-area of the curre	able to reproduce th ent research area in a	ork in a current research area, e acquired knowledge, to apply an oral presentation and to suc- oject.	
Course	<b>S</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)		
weekly FOKUS weekly	contac Kompa contac	t hours) + Ü/P (1 weekly ( ktseminar Nanostrukturt	contact hour), details echnik (FOKUS Block sh, details on availal	on availability to be Taught Seminar Nar	nostructure Technology): V (2 e announced nostructure Technology): S (2 ed (block taught seminar (3	
		e <b>ssment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	t every semester, information on whether	
1. Topic tes) c repoi	cs cove or oral e rt (appr		ises: written examina date each or oral exa		nutes) or talk (approx. 30 minu- (approx. 30 minutes) or project	
Studen Details	ts mus on whe	omponents 1 and 2 will b t register for assessment en assessment compone odule, students must pa	components 1 and 2 nts 1 and 2 will be off	online (details to be fered to be announce	ed.	
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
 Module appears in						
			oo Non-start	Technology (correl)		
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	-			

Master's with 1 major FOKUS Physics - Nanostructu-	JMU Würzburg • g
ring Technology (2006)	Master (120 ECTS

Module title			Abbreviation		
FOKUS Research Module Type VK9N			11-FM-VK9N-072-m01		
Module coordinator				Module offered by	
chairpe	rson of	f examination committee		Faculty of Physics a	nd Astronomy
ECTS Method of grading Only after succ. compl. of module(s)					
9	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	graduate			
Conten	ts				
field of tencies	nanost . Applic	tructure technology, repr	oduction of knowledge ofessional knowledge	ge, acquisition of soc	search area, especially in the cial and methodological compe- w scientific questions in a mini
Intende	ed learr	ning outcomes			
especia the acq	ally in tl uired n	he field of nanostructure	technology, and are sub-area of the curre	able to reproduce th ent research area in a	ork in a current research area, e acquired knowledge, to apply an oral presentation and to suc- oject.
Courses	<b>5</b> (type, n	umber of weekly contact hours, l	anguage — if other than Ger	man)	
weekly FOKUS weekly	contac Kompa contac	t hours) + Ü/P (1 weekly ( ktseminar Nanostrukturt	contact hour), details echnik (FOKUS Block sh, details on availal	on availability to be Taught Seminar Nar	nostructure Technology): V (3 e announced nostructure Technology): S (2 ed (block taught seminar (3
		s <b>essment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	t every semester, information on whether
1. Topic tes) c repor	s cove or oral e t (appr		ises: written examina date each or oral exa		nutes) or talk (approx. 30 minu- (approx. 30 minutes) or project
Studen Details	ts musi on whe	omponents 1 and 2 will b t register for assessment en assessment compone odule, students must pa	components 1 and 2 nts 1 and 2 will be off	online (details to be fered to be announce	ed.
Allocati		· · ·			·
Additio	nal info	ormation			
Workload					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	appea	irs in			
	-	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	-		

Master's with 1 major FOKUS Physics - Nanostructu-	JMU Würzb
ring Technology (2006)	Master (12

Module	e title				Abbreviation				
FOKUS	Resear	rch Module Type VK10N N	Nanostructure Techno	ology	11-FM-VK10N-072-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	npl. of module(s)					
10	nume	rical grade							
Duratio	on	Module level	Other prerequisites						
1 seme	ster	graduate							
Conten	ts								
field of tencies	nanos . Appli	tructure technology, repr	oduction of knowledg ofessional knowledge	ge, acquisition of so	search area, especially in the cial and methodological compe- w scientific questions in a mini				
Intende	ed leari	ning outcomes							
especia the acc cessful	ally in t Juired r ly impl	he field of nanostructure nethods, to summarise a ement the acquired knov	technology, and are sub-area of the curre vledge and methods	able to reproduce th ent research area in in a mini research pr	vork in a current research area, le acquired knowledge, to apply an oral presentation and to suc- roject.				
		number of weekly contact hours, l			nostructure Technology): V (3				
FOKUS weekly days), o Method	Kompa contac usually d of ass	t hours), German or Engl held during semester br	echnik (FOKUS Block ish, details on availa eak)	Taught Seminar Na bility to be announce	nostructure Technology): S (2 ed (block taught seminar (3 ot every semester, information on whether				
1. Topio tes) o repo 2. Semi	cs cove or oral ( rt (appi inar: ta		ises: written examina idate each or oral exa ıtes)	amination in groups	nutes) or talk (approx. 30 minu- (approx. 30 minutes) or project				
Studen Details	ts mus on whe	t register for assessment en assessment compone nodule, students must pa	components 1 and 2 nts 1 and 2 will be of	online (details to be fered to be announc	ed.				
Allocat	ion of p	olaces							
Additio	nal inf	ormation							
Workload									
Worklo									
Worklo									
	d to in	LPO I (examination regulation	s for teaching-degree progra	mmes)					
	ed to in	LPOI (examination regulation	s for teaching-degree progra	mmes)					
			s for teaching-degree progra	mmes)					

Master's with 1 major FOKUS Physics - Nanostructu-	JMU Wi
ring Technology (2006)	Maste

Module	title			Abbreviation		
FOKUS	Resear	ch Module Type VK12N N	anostructure Techno	ology	11-FM-VK12N-072-m01	
Module coordinator				Module offered by		
chairpe	chairperson of examination committee			Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
12	numerical grade					
Duratio	n	Module level	Other prerequisites			
1 semes	ster	graduate				
Contents						
field of tencies	nanost . Applic	tructure technology, repr	oduction of knowledg ofessional knowledge	ge, acquisition of so	search area, especially in the cial and methodological compe- w scientific questions in a mini	
Intende	ed learr	ning outcomes				
especia the acq cessfull	ally in th uired n ly imple	he field of nanostructure nethods, to summarise a ement the acquired know	technology, and are sub-area of the curre /ledge and methods i	able to reproduce th ent research area in a in a mini research pr	vork in a current research area, e acquired knowledge, to apply an oral presentation and to suc- roject.	
		umber of weekly contact hours, l			nostructure Technology): V (4	
FOKUS weekly days), u	Kompa contac ısually	t hours), German or Engli held during semester bro	echnik (FOKUS Block ish, details on availa eak)	Taught Seminar Nar bility to be announce	be announced nostructure Technology): S (2 ed (block taught seminar (3 nt every semester, information on whether	
module is	creditab	le for bonus)				
1. Topic tes) c repor	s cove or oral e t (appr		ises: written examina idate each or oral exa		nutes) or talk (approx. 30 minu- (approx. 30 minutes) or project	
Studen Details	ts musi on whe	omponents 1 and 2 will b t register for assessment en assessment compone odule, students must pa	components 1 and 2 nts 1 and 2 will be off	online (details to be fered to be announce	ed.	
Allocati	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
Module	appea	irs in				
Master'	s degre	ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	-			

Master's with 1 major FOKUS Physics - Nanostructu-	JMU Wi
ing Technology (2006)	Maste

Module title			Abbreviation			
FOKUS Research Module Type VMK12N Nanostructure Technology		11-FM-VMK12N-072	-m01			
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	e	Faculty of Physics a	ind Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
12 numerical grade						
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
field of tencies	nanos . Appli	dvanced knowledge of tructure technology, rep cation of the acquired p ect (e.g. experiments, ca	production of knowledge professional knowledge	ge, acquisition of so	cial and methodolog	ical compe-
Intende	ed lear	ning outcomes				
especia the acq	ally in t Juired r	nave special and advan he field of nanostructur nethods, to summarise ement the acquired kno	e technology, and are a sub-area of the curre	able to reproduce th ent research area in a	e acquired knowleds an oral presentation	ge, to apply
Course	<b>S</b> (type, r	umber of weekly contact hours	, language — if other than Ger	man)		
weekly FOKUS weekly days), t FOKUS (2 weel	contac Kompa contac usually Minifo kly cont	rungsmodul Nanostruki t hours) + Ü/P (1 weekl ktseminar Nanostruktu t hours), German or En held during semester b rschungsprojekt Nanos tact hours), German or	y contact hour), details rtechnik (FOKUS Block glish, details on availa oreak) trukturtechnik (FOKUS English, details on ava	on availability to be Taught Seminar Nan bility to be announce Mini Research Proje ilability to be annour	e announced nostructure Technolo ed (block taught sem ct Nanostructure Tec nced (approx. 3 weel	ogy): S (2 ninar (3 hnology): P ks, part time)
		s <b>essment</b> (type, scope, lang le for bonus)	uage — if other than German, o	examination offered — if no	ot every semester, informati	on on whether
This mo 1. Topio tes) o repo 2. Semi 3. Rese	odule h cs cove or oral rt (appi inar: ta arch pi	as the following assess red in lectures and exe examination of one can rox. 8 pages) lk (approx. 30 to 45 min roject: project report (ap	rcises: written examina didate each or oral exa nutes) oprox. 8 pages)	amination in groups		
Studen Details	ts mus on wh	omponents 1 through 3 t register for assessmen en assessment compor rodule, students must p	nt components 1 throug ents 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additional information						
Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ins in				
Master's wi ring Technc		FOKUS Physics - Nanostructu- 6)		ierated 11-Jan-2023 • exam. r FOKUS Physik - Nanostruktur	-	page 94 / 114

Module title			Abbreviation			
FOKUS Research Module Type VMK13N Nanostructure Technology		11-FM-VMK13N-072	-m01			
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	ee	Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
13 numerical grade						
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
field of tencies	Specific and advanced knowledge of independent scientific work in a current research area, especially in the field of nanostructure technology, reproduction of knowledge, acquisition of social and methodological competencies. Application of the acquired professional knowledge and methods to new scientific questions in a mini research project (e.g. experiments, case studies etc.).					
Intende	ed lear	ning outcomes				
especia the acq	ally in t juired r	have special and advar he field of nanostructu nethods, to summarise ement the acquired kno	re technology, and are a sub-area of the curre	able to reproduce th ent research area in	e acquired knowleds an oral presentation	ge, to apply
Course	<b>S</b> (type, r	number of weekly contact hour	s, language — if other than Ger	rman)		
weekly FOKUS weekly days), t FOKUS (2 weel	contac Kompa contac usually Minifo kly cont	rungsmodul Nanostruk t hours) + Ü/P (1 weekl ktseminar Nanostruktu t hours), German or En held during semester I rschungsprojekt Nanos tact hours), German or	y contact hour), details irtechnik (FOKUS Block glish, details on availa preak) trukturtechnik (FOKUS English, details on ava	on availability to be Taught Seminar Nar bility to be announce Mini Research Proje ilability to be annou	e announced nostructure Technolo ed (block taught sem ct Nanostructure Tec nced (approx. 3 weel	ogy): S (2 ninar (3 chnology): P ks, part time)
		<b>sessment</b> (type, scope, lang le for bonus)	uage — if other than German,	examination offered — if no	ot every semester, informati	on on whether
This mo 1. Topio tes) o repo 2. Semi 3. Rese	odule h cs cove or oral rt (appi inar: ta arch pi	as the following assess red in lectures and exe examination of one car rox. 8 pages) lk (approx. 30 to 45 min roject: project report (a	rcises: written examina didate each or oral exa nutes) oprox. 8 pages)	amination in groups		-
Studen Details	ts mus on wh	omponents 1 through 3 t register for assessme en assessment compor nodule, students must j	nt components 1 throug nents 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	ars in				
Master's wi ring Techno		r FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. 1 FOKUS Physik - Nanostruktur	-	page 96 / 114

Module title			Abbreviation			
FOKUS Research Module Type VMK14N Nanostructure Technology		11-FM-VMK14N-072	-m01			
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	ee	Faculty of Physics a	ind Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
14 numerical grade						
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
field of tencies	Specific and advanced knowledge of independent scientific work in a current research area, especially in the field of nanostructure technology, reproduction of knowledge, acquisition of social and methodological competencies. Application of the acquired professional knowledge and methods to new scientific questions in a mini research project (e.g. experiments, case studies etc.).					
Intende	ed lear	ning outcomes				
especia the acq	ally in t juired r	nave special and advar he field of nanostructu nethods, to summarise ement the acquired kno	re technology, and are a sub-area of the curre	able to reproduce th ent research area in a	e acquired knowleds an oral presentation	ge, to apply
Course	<b>S</b> (type, r	umber of weekly contact hour	s, language — if other than Ger	man)		
weekly FOKUS weekly days), t FOKUS (2 weel	contac Kompa contac usually Minifo kly cont	rungsmodul Nanostruk t hours) + Ü/P (2 week ktseminar Nanostruktu t hours), German or En held during semester I rschungsprojekt Nanos tact hours), German or	y contact hours), detai irtechnik (FOKUS Block glish, details on availa preak) trukturtechnik (FOKUS English, details on ava	ls on availability to b Taught Seminar Nar bility to be announco Mini Research Proje ilability to be annou	be announced nostructure Technolo ed (block taught sem ct Nanostructure Tec nced (approx. 3 weel	ogy): S (2 ninar (3 hnology): P ks, part time)
		s <b>essment</b> (type, scope, lang le for bonus)	uage — If other than German, (	examination offered — if no	ot every semester, informati	on on whether
This mo 1. Topio tes) o repo 2. Semi 3. Rese	odule h cs cove or oral rt (appi inar: ta arch pi	as the following assess red in lectures and exe examination of one car rox. 8 pages) lk (approx. 30 to 45 min roject: project report (a	rcises: written examina didate each or oral exa nutes) oprox. 8 pages)	amination in groups		-
Studen Details	ts mus on wh	omponents 1 through 3 t register for assessme en assessment compor rodule, students must j	nt components 1 throug nents 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	ars in				
Master's wi ring Techno		r FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. 1 FOKUS Physik - Nanostruktur	-	page 98 / 114

Module title			Abbreviation			
FOKUS Research Module Type VMK16N Nanostructure Technology		11-FM-VMK16N-072	-m01			
Module	e coord	inator		Module offered by		
chairpe	erson o	f examination committe	ee	Faculty of Physics a	and Astronomy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
16 numerical grade						
Duration Module level Other prerequisites						
1 seme	ster	graduate				
Conten	ts					
field of tencies	nanos . Appli	dvanced knowledge of tructure technology, re cation of the acquired   ect (e.g. experiments, c	production of knowledge professional knowledge	ge, acquisition of so	cial and methodolog	ical compe-
Intende	ed lear	ning outcomes				
especia the acq	ally in t uired r	nave special and advar he field of nanostructu nethods, to summarise ement the acquired kn	re technology, and are a sub-area of the curre	able to reproduce th ent research area in	e acquired knowleds an oral presentation	ge, to apply
Course	<b>S</b> (type, r	umber of weekly contact hour	s, language — if other than Gei	rman)		
weekly FOKUS weekly days), u FOKUS (2 week	contac Kompa contac usually Minifo kly cont	rungsmodul Nanostruk t hours) + Ü/P (2 week ktseminar Nanostruktu t hours), German or En held during semester rschungsprojekt Nanos tact hours), German or	y contact hours), detai irtechnik (FOKUS Block glish, details on availa preak) trukturtechnik (FOKUS English, details on ava	ls on availability to b Taught Seminar Nar bility to be announco Mini Research Proje ilability to be annou	be announced nostructure Technolo ed (block taught sem ct Nanostructure Tec nced (approx. 3 wee	ogy): S (2 ninar (3 chnology): P ks, part time)
		le for bonus)				
1. Topic tes) c repor 2. Semi	cs cove or oral rt (appi inar: ta	as the following asses red in lectures and exe examination of one car rox. 8 pages) lk (approx. 30 to 45 mi roject: project report (a	rcises: written examina ididate each or oral exa nutes)			-
Studen Details	ts mus on whe	omponents 1 through 3 t register for assessme en assessment compor rodule, students must	nt components 1 throug nents 1 through 3 will b	gh 3 online (details t e offered to be anno	unced.	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	in and a second s				
Master's wi ring Techno		FOKUS Physics - Nanostructu- 6)		nerated 11-Jan-2023 • exam. 1 FOKUS Physik - Nanostruktur	-	page 100 / 114



# **Compulsory Electives Non-technical**

(6 ECTS credits)

Module	Module title Abbreviation					
Basic m	nodule	Competence for Acquiri	ng Information - for s	tudents of natural	41-IK-NW1-072-m01	
science	S		-			
Module	Module coordinator Module offered by			Module offered by		
head of	Unive	rsity Library		University Library		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
1	(not) s	successfully completed				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Conten	ts					
- Search - Using - Resou - Online - Overvi - Refere on disci Intende Student within t differen ses) and they ha with the	n strate the lib rces fo e search ew of a iplines ed learn ts know heir di nce in c d inform ve four e skills	in the natural sciences). <b>ning outcomes</b> w what information is need scipline and beyond in a puality between informati mation they have found on and, using reference mana	s. ases and journals. arning etc.). ns of the module will eded for what purpos variety of resources a on they have retrieve on the free web. Stud gement software and on and literature that	e. They are able to lo and to evaluate this d from specific, rest ents are able to mar d eLearning tools. Th t is relevant to the to	disciplines (wherever possible, ocate information that is relevant information. They recognise the ricted access resources (databa- nage and process the information e module aims to equip students opics of their Bachelor's theses.	
Ü (no in	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		<b>eessment</b> (type, scope, langua le for bonus)	ge — if other than German, e	examination offered — if no	ot every semester, information on whether	
written	examiı	nation (60 minutes)				
Allocati	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Keferre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
 Madula anneas in						
	Module appears in Bachelor' degree (1 major) Chemistry (2007)					
Master' Master'	s degro	ee (1 major) Vanostructur ee (1 major) FOKUS Physi ee (1 major) FOKUS Physi	e Technology (2010) cs - Nanostructuring			

Module title Abbreviation							
Second module: Competence for Acquiring Information - for students of natu- 41-IK-NW2-072-m01							
ral sciences							
Module coordinator Module offered by							
head o	of Unive	rsity Library		University Library			
ECTS				compl. of module(s)			
2	nume	rical grade		-			
Duration Module level Other prerequisites							
1 seme	ester	undergraduate					
Conter	nts						
- Public - Subje - New V - Searc - Inforr - Copyr - Electr the nat Intend Studer cipline tools to format ped an	shing a ect-spec web-bas hing fo nation s right an ronic pu tural sc <b>ed lear</b> and ar o locate ion retr unders	ences). <b>ning outcomes</b> e developed a differentiat e familiar with the possib subject-specific facts in leval tools as well as to u	tools, e. g. classification munication technologing g. substances and p place. will focus on particu ted understanding of ilities offered by elect a variety of resource se new web-based te ework surrounding p	tions and thesauri. gies. ohysical data). lar disciplines (when the publishing and tronic publishing. T s. Students are able echnologies to share ublications, informa	rever possible, on disciplines in information practices in their dis- hey are able to use electronic to work with subject-specific in- e information. They have develo- ation, and communication in an		
Course	<b>es</b> (type, r	umber of weekly contact hours, l	anguage — if other than Ger	rman)			
Ü (no i	nforma	ion on SWS (weekly cont	act hours) and cours	e language availabl	e)		
module i	s creditab	le for bonus)	ge — if other than German, o	examination offered — if no	ot every semester, information on whether		
		nation (60 minutes)					
Allocat	tion of p	olaces					
Additio	onal inf	ormation					
Worklo	ad						
Referre	ed to in	LPOI (examination regulations	s for teaching-degree progra	mmes)			
Modul	e appea	irs in					
	-	ree (1 major) Chemistry (2					
	-	ee (1 major) Nanostructur					
	-	ee (1 major) FOKUS Physi					
waster	Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2006)						

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Module	e title				Abbreviation	
Fachsp	orache E	Englisch Naturwissensch	aften (1)		42-FS3-EN_NW1-072-m01	
Module coordinator				Module offered by		
head of Language Centre (ZFS)			-	Language Centre (ZfS)		
ECTS	Metho	Nethod of grading Only after succ. compl. of module(s)				
11 numerical grade 42-UC2-EN or assessment test (at least 80 points			80 points)			
Duration Module level Oth		Other prerequisites	her prerequisites			
1 semester undergraduate						
Conten	Its					
		quips students with natu anguage, both at universi			will allow them to communicate	
Intend	ed lear	ning outcomes				
velop a allow t	advance hem to	ed subject-specific langu communicate about sele	age skills - including cted topics in the na	subject-specific tern tural sciences in cor	in the target language. They de- ninology and structures - that wil responding situations.	
	-	number of weekly contact hours, l as 3 components; inform				
• 4	2-FS3-1 2-FS3-1	EN_NW-2-072: Ü + Ü (no i	mation on language nformation on langua	and number of week age and number of w	ly contact hours available) veekly contact hours available)	
module is This mo	s creditab odule h	le for bonus)	sment components. T	o pass the module a	ot every semester, information on whether as a whole students must pass	
• 3 • 0 h n c 3 b	BECTS of Option a nension ninutes comprel go minu peginnin	redits, method of gradin a: written multi-compone , listening comprehensio ) and written multi-comp hension, listening compr attes total) as well as 2 to ng of the course, all comp	g: numerical grade nt examination (60 m n, writing, communic onent examination (3 rehension, writing) of 4 written assessment conents/assessment	inutes total) with 4 ation skills) or option to to 45 minutes tota option 3: 2 to 4 or ots (approx. 5 to 8 p	g auf die Fachsprache Englisch components (reading compre- n 2: oral assessment (approx. 5 al) with 3 components (reading al assessments (approx. 15 to bages total) as specified at the	
		ge of assessment: English		W	II Fachenracha Naturuisean	
<ul> <li>Assessment component to module component 42-FS3-EN_NW-1-072: Englisch III Fachsprache Naturwissenschaften intensiv</li> <li>8 ECTS credits, method of grading: numerical grade</li> <li>option 1: written multi-component examination (120 minutes total) with 4 components (reading comprehension, listening comprehension, writing, communication skills) or option 2: oral assessment (approx. 10 minutes) and written multi-component examination (60 to 90 minutes total) with 3 components (reading comprehension, listening comprehension, writing) or option 3: 2 to 4 oral assessments (approx. 30 to 60 minutes total) as well as 2 to 4 written assessments (approx. 10 to 15 pages total) as specified at the beginning of the course, all components/assessments each weighted 1:1</li> <li>Assessment offered once a year, dates to be announced at the beginning of the respective course.</li> <li>Language of assessment: English</li> </ul> Assessment component to module component 42-FS3-EN_NW-2-072: Englisch III Fachsprache Naturwissen-schaften						
• 8 • c h	B ECTS of the section	, listening comprehensio	nt examination (120 n on, writing, communic	ation skills) or optic	components (reading compre- on 2: oral assessment (approx. total) with 3 components (rea-	

Master's with 1 major FOKUS Physics - Nanostructu-	JMU Würzburg • generated 11-Jan-2023 • exam. reg. data record	page 105 / 114
ring Technology (2006)	Master (120 ECTS) FOKUS Physik - Nanostrukturtechnik - 2006	

ding comprehension, listening comprehension, writing) or option 3: 2 to 4 oral assessments (approx. 30 to 60 minutes total) as well as 2 to 4 written assessments (approx. 10 to 15 pages total) as specified at the beginning of the course, all components/assessments each weighted 1:1

- Assessment offered once a year, dates to be announced at the beginning of the respective course.
- Language of assessment: English

#### Allocation of places

Additional information

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Workload

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

Module appears in

	e title			Abbreviation		
Fachsp	orache I	Englisch Naturwissensch	aften (2)		42-FS3-EN_NW2-07	72-m01
Module coordinator				Module offered by		
head of Language Centre (ZFS)			Language Centre (ZfS)			
ECTS	S Method of grading Only after succ. compl. of module(s)					
8	numerical grade 42-FS3-EN_V or assessment test (at least 85 points)					
Duration Module level Other prerequisites						
1 semester undergraduate						
Conter			1			
This m	odule e	quips students with natu anguage, both at universi			will allow them to c	ommunicate
		ning outcomes				
velop a allow t	advance hem to	natural sciences-specific ed subject-specific langu communicate about sele	age skills - including ected topics in the na	subject-specific terr tural sciences in cor	ninology and structu	ures - that wi
Course	<b>es</b> (type, r	number of weekly contact hours, I	language — if other than Ger	rman)		
• /	42-FS3- 42-FS3-	as 2 components; inforn EN_NW-1-072: Ü (no infor EN_NW-2-072: Ü + Ü (no i sessment (type, scope, langua	rmation on language information on langua	and number of week age and number of w	kly contact hours ava veekly contact hours	available)
		le for bonus)			sectory semester, mornal	aon on whether
This m one of <b>Assess</b> schafte	the two sment c en inter	as the following 2 assess assessment component omponent to module cor asiv	ts. mponent 42-FS3-EN_I			·
This m one of Assess schafte c t t t	the two sment c en inter 3 ECTS o option 1 nension to minu ding con to 60 m the begi Assessr	as the following 2 assess assessment component omponent to module cor nsiv credits, method of gradin : written multi-component , listening comprehension tes) and written multi-co nprehension, listening co inutes total) as well as 2 inning of the course, all co nent offered once a year,	ts. mponent 42-FS3-EN_I ng: numerical grade nt examination (120 n on, writing, communic mponent examinatio omprehension, writin to 4 written assessm components/assessm dates to be announc	NW-1-072: Englisch I ninutes total) with 4 cation skills) or option n (60 to 90 minutes g) or option 3: 2 to 4 nents (approx. 10 to nents each weighted	III Fachsprache Natu components (readir on 2: oral assessmen total) with 3 compo oral assessments ( 15 pages total) as s 1:1	ng compre- nt (approx. nents (rea- approx. 30 pecified at
This m one of Assess schafte • C • C • C • C • C • C • C • C • C • C	the two sment c en inter 3 ECTS o option 1 nension to minu ding cor to 60 m he begi Assessr Languag	as the following 2 assess assessment component omponent to module cor asiv credits, method of gradin : written multi-component , listening comprehension tes) and written multi-co mprehension, listening co inutes total) as well as 2 inning of the course, all co	ts. mponent 42-FS3-EN_I ng: numerical grade nt examination (120 m on, writing, communic mponent examinatio omprehension, writin to 4 written assessm components/assessm dates to be announce h	<b>WW-1-072:</b> Englisch I ninutes total) with 4 cation skills) or option n (60 to 90 minutes g) or option 3: 2 to 4 nents (approx. 10 to nents each weighted ed at the beginning	III Fachsprache Natu components (readir on 2: oral assessmen total) with 3 compo- oral assessments ( 15 pages total) as s 1:1 of the respective co	ng compre- nt (approx. nents (rea- approx. 30 pecified at urse.
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This m one of Assess schafte c c t t t Assess schafte c t t t t t t t	the two sment c en inter 3 ECTS ( option 1 hension to minu ding cor o 60 m he begi Assessr anguas sment c en 3 ECTS ( option 1 hension to minu ding cor to 60 m he begi Assessr	as the following 2 assess of assessment component omponent to module cor- nsiv credits, method of gradin : written multi-component , listening comprehensio tes) and written multi-co- nprehension, listening co- inutes total) as well as 2 inning of the course, all co- nent offered once a year, ge of assessment: English omponent to module cor credits, method of gradin : written multi-component , listening comprehensio tes) and written multi-co- nprehension, listening co- inutes total) as well as 2 inning of the course, all co-	ts. mponent 42-FS3-EN_I ng: numerical grade nt examination (120 m on, writing, communic mponent examinatio omprehension, writin to 4 written assessm dates to be announce h mponent 42-FS3-EN_I ng: numerical grade nt examination (120 m on, writing, communic mponent examinatio omprehension, writin to 4 written assessm dates to be announce mponents/assessm dates to be announce mponents/assessm dates to be announce	NW-1-072: Englisch I ninutes total) with 4 cation skills) or option n (60 to 90 minutes g) or option 3: 2 to 4 nents (approx. 10 to nents each weighted ed at the beginning NW-2-072: Englisch ninutes total) with 4 cation skills) or option n (60 to 90 minutes g) or option 3: 2 to 4 nents (approx. 10 to nents each weighted	III Fachsprache Natu components (readir on 2: oral assessment total) with 3 compo- oral assessments ( 15 pages total) as s 1:1 of the respective co III Fachsprache Natu components (readir on 2: oral assessment total) with 3 compo- oral assessments ( 15 pages total) as s 1:1	nrwissen- ng compre- nt (approx. nents (rea- approx. 30 pecified at urse. urwissen- ng compre- nt (approx. nents (rea- approx. 30 pecified at
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# Workload

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

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#### Module appears in

Fachsp	e title		_	Abbreviation		
Fachsprache Französisch Naturwissenschaften (1)       42-FS3-FR_NW1-07						2-m01
Module coordinator				Module offered by	Module offered by	
head of Language Centre (ZFS)			Language Centre (Z	/fS)		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
11	nume	merical grade 42-UC2-FR or assessment test (at least 80 points)				
		Other prerequisites	5			
1 semester undergraduate						
Conter	nts	~	• •			
		equips students with natu anguage, both at universi			will allow them to c	ommunicate
Intend	ed lear	ning outcomes				
velop a allow t	advance hem to	natural sciences-specific ed subject-specific langu communicate about sele number of weekly contact hours, l	age skills - including ected topics in the na	subject-specific terr atural sciences in cor	ninology and structu	ires - that wil
• 2	42-FS3- 42-FS3- 42-FS3-	nas 3 components; inform FR_V-1-072: Ü (no informa FR_NW-1-072: Ü (no infor FR_NW-2-072: Ü + Ü (no i Sessment (type, scope, langua	ation on language an mation on language nformation on langua	nd number of weekly and number of week age and number of w	contact hours availa ly contact hours ava reekly contact hours	ilable) available)
		le for bonus)			semester, monilat	en miether
the firs	st asses	sment component and o	ne of the remaining t	•	as a whole students	must pass
Assess sisch • ( H r c t	sment of 3 ECTS of Option hensior minutes compre 30 minu beginni	omponent to module cor credits, method of gradin a: written multi-compone b, listening comprehensio b) and written multi-comp hension, listening comp ites total) as well as 2 to ng of the course, all com	mponent 42-FS3-FR_Y g: numerical grade nt examination (60 n on, writing, communic oonent examination ( rehension, writing) o o 4 written assessment ponents/assessment	wo. V-1-072: Vorbereitun ninutes total) with 4 cation skills) or option 30 to 45 minutes tota or option 3: 2 to 4 or nts (approx. 5 to 8 p	g auf die Fachsprach components (readin n 2: oral assessment al) with 3 component al assessments (app ages total) as speci	ne Franzö- ng compre- (approx. 5 ts (reading prox. 15 to
Assess sisch • ( + + • ( + + + + + + + + + + + + + + + + + + +	sment o 3 ECTS o Dption - hensior minutes compre 30 minu beginni Languag sment o	omponent to module cor credits, method of gradin 1: written multi-compone 1, listening comprehensio 2) and written multi-comp hension, listening compr ites total) as well as 2 to ng of the course, all com ge of assessment: French omponent to module cor	mponent 42-FS3-FR_Y g: numerical grade nt examination (60 n on, writing, communic conent examination ( rehension, writing) o o 4 written assessment ponents/assessment	wo. V-1-072: Vorbereitun ninutes total) with 4 cation skills) or option 30 to 45 minutes tota or option 3: 2 to 4 or nts (approx. 5 to 8 p ts each weighted 1:1.	g auf die Fachsprach components (readin n 2: oral assessment al) with 3 component al assessments (app ages total) as speci	ne Franzö- ng compre- (approx. 5 ts (reading prox. 15 to fied at the
Assess sisch • ( • ( • ( • ( • ( • ( • ( • ( • ( • (	sment of 3 ECTS of Deption in hensior minutes compre 30 minutes compre 30 minutes compre 30 minutes sment of compre 5 ECTS of compre 5 ECTS of 5 ECTS of 5 Sment of 5 Sm	omponent to module cor credits, method of gradin 1: written multi-compone 1, listening comprehensio 2) and written multi-comp hension, listening compr ites total) as well as 2 to ng of the course, all com ge of assessment: French omponent to module cor	mponent 42-FS3-FR_Y g: numerical grade nt examination (60 n on, writing, communic onent examination (7 rehension, writing) o 4 written assessment ponents/assessment mponent 42-FS3-FR_I g: numerical grade nt examination (120 r on, writing, communic mponent examinatio omprehension, writing to 4 written assessment dates to be announce mponent 42-FS3-FR_I g: numerical grade nt examination (120 r	wo. V-1-072: Vorbereitum ninutes total) with 4 cation skills) or option 30 to 45 minutes tota or option 3: 2 to 4 or nts (approx. 5 to 8 p ts each weighted 1:1. NW-1-072: Französis minutes total) with 4 cation skills) or option (60 to 90 minutes ng) or option 3: 2 to 4 nents (approx. 10 to nents each weighted ced at the beginning NW-2-072: Französis minutes total) with 4	g auf die Fachsprach components (readin n 2: oral assessment al) with 3 component al assessments (app ages total) as speci ch III Fachsprache Na components (readin on 2: oral assessment total) with 3 compon oral assessments (a 15 pages total) as sp 1:1 of the respective con ch III Fachsprache N components (readin	ne Franzö- og compre- (approx. 5 ts (reading prox. 15 to fied at the aturwissen- ng compre- nt (approx. 30 pecified at urse. aturwissen- ng compre-

10 minutes) and written multi-component examination (60 to 90 minutes total) with 3 components (reading comprehension, listening comprehension, writing) or option 3: 2 to 4 oral assessments (approx. 30 to 60 minutes total) as well as 2 to 4 written assessments (approx. 10 to 15 pages total) as specified at the beginning of the course, all components/assessments each weighted 1:1

- Assessment offered once a year, dates to be announced at the beginning of the respective course.
- Language of assessment: French

### Allocation of places

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#### Additional information

Workload

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

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#### Module appears in

Fast.	e title				Abbreviation	
Fachsprache Französisch Naturwissenschaften (2)					42-FS3-FR_NW2-072-m01	
Module coordinator				Module offered by		
head c	of Langu	uage Centre (ZFS)		Language Centre (	(ZfS)	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
8 numerical grade						
Duration Module level		Other prerequisites	Other prerequisites			
1 semester undergraduate		By way of exceptior assessments.	n, additional prereq	uisites are listed in the section on		
Conter	nts	• •				
		equips students with na anguage, both at unive			at will allow them to communicate	
Intend	ed lear	ning outcomes				
allow t	hem to		elected topics in the na	tural sciences in co	minology and structures - that wil rresponding situations.	
	_				-	
• /	42-FS3-		ormation on language	and number of wee	ach component. kly contact hours available) weekly contact hours available)	
	thetwo	o assessment compone			as a whole students must pass	
schafte	en inter 3 ECTS option : nensior to minu ding co to 60 m he beg Assessi Langua Other p	component to module c nsiv credits, method of grad a: written multi-compon n, listening comprehens ites) and written multi- mprehension, listening inutes total) as well as inning of the course, al ment offered once a yea ge of assessment: Fren rerequisites: Assessme	omponent 42-FS3-FR_ ling: numerical grade tent examination (120 r sion, writing, communi component examinatio comprehension, writir 2 to 4 written assessr l components/assessr ar, dates to be annound ch ent test to be successfu	minutes total) with a cation skills) or opt on (60 to 90 minutes ng) or option 3: 2 to nents (approx. 10 to nents each weighte ced at the beginning ally completed with	sch III Fachsprache Naturwissen- 4 components (reading compre- ion 2: oral assessment (approx. 5 total) with 3 components (rea- 4 oral assessments (approx. 30 0 15 pages total) as specified at d 1:1 g of the respective course. a minimum score of 85 points.	
schafte • { • c + 1 c t t • 4 • ( • 4 • ( • ( • ( • ( • ( • ( • ( • (	en inter 3 ECTS option : nensior to minu ding co to 60 m the beg Assessi Langua Other p <b>sment c</b> en 3 ECTS option :	component to module c nsiv credits, method of grad written multi-compon n, listening comprehens ites) and written multi- mprehension, listening inutes total) as well as inning of the course, al nent offered once a yea ge of assessment: Fren rerequisites: Assessme component to module c credits, method of grad written multi-compon	omponent 42-FS3-FR_ ling: numerical grade ent examination (120 r sion, writing, communi component examinatio comprehension, writir 2 to 4 written assessr l components/assessr ar, dates to be annound ch ent test to be successfu omponent 42-FS3-FR_ ling: numerical grade ent examination (120 r	minutes total) with a cation skills) or opt on (60 to 90 minutes og) or option 3: 2 to nents (approx. 10 to nents each weighte ced at the beginning ully completed with <b>NW-2-072:</b> Französi minutes total) with a	sch III Fachsprache Naturwissen- 4 components (reading compre- ion 2: oral assessment (approx. 5 total) with 3 components (rea- 4 oral assessments (approx. 30 0 15 pages total) as specified at d 1:1 g of the respective course.	
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Master's with 1 major FOKUS Physics - Nanostructu-	JMU Würzburg • generated 11-Jan-2023 • exam. reg. data record	page 111 / 114
ring Technology (2006)	Master (120 ECTS) FOKUS Physik - Nanostrukturtechnik - 2006	

#### **Allocation of places**

#### Additional information

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# Workload

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

#### Module appears in



# **Thesis** (30 ECTS credits)

Modul	e title				Abbreviation		
Master Thesis FOKUS Nanostructuring Technology         11-MA-NF-072-m01							
Modul	e coord	linator		Module offered by	,		
chairperson of examination committee				Faculty of Physics and Astronomy			
ECTS				npl. of module(s)			
30							
			Other prerequisites				
1 semester graduate R					ed out electronically. Deadlines onsult with your supervisor.		
Conter	nts	•					
					task in a current research area of htific aspects; writing of the thesis.		
Intend	ed lear	ning outcomes					
and to	Summa es (type, i	arise their results in a fin number of weekly contact hours,	al paper.		n methods and scientific aspects		
no cou	irses as	signed	_				
		<b>sessment</b> (type, scope, langu ble for bonus)	age — if other than German,	examination offered — if n	ot every semester, information on whether		
		(approx. 75 pages) assessment: German or E	nglish				
Alloca	tion of	places					
Additi	onal inf	ormation					
Workload							
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)							
Modul	e appea	ars in					
	-	ee (1 major) FOKUS Phys ee (1 major) FOKUS Phys	•	•, · ·			