

Subdivided Module Catalogue for the Subject

FOKUS Chemistry

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

Examination regulations version: 2013 Responsible: Faculty of Chemistry and Pharmacy

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Course of Studies - Contents and Objectives

The Master's program in FOKUS Chemistry is offered by the Faculty of Chemistry and Pharmacy of the JMU as a fundamentally-oriented course with the degree of "Master of Science" (M.Sc.), in the context of a consecutive Bachelor's and Master's degree program.

The Master's course prepares students for scientific as well as doctoral work in chemistry and the eventual award of the degree Dr. rer. nat. The aim of the training is to provide students with in-depth knowledge of scientific work in the research and application of chemistry and the associated basic concepts. Through the education and training of analytical thinking, students should acquire the ability to independently apply the basic knowledge obtained earlier in their Bachelor studies and to transfer it to, and later familiarize themselves with, a wide variety of new tasks.

Through the thesis, students should show that they are able to deal with an experimental or theoretical task in a thematically-limited extent using known methods and from a scientific point of view. The Master's examination intends to determine whether the candidate or the candidate has an overview of the relationships in chemistry, and has the ability to apply the learned scientific methods. It allows the acquisition of an internationally comparable degree in the field of chemistry and provides a professional qualification to prepare for future work in research and development.

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:

ASP02009

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

10-Jul-2013 (2013-82)

This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses "Add	itional Qualifications" (10 ECTS credits)			
08-FOM-HOT-132-m01	Advanced discussion of hot topics in contemporary chemical research	5	B/NB	14
08-FOM-TOP-132-m01	Latest topics of current chemical research	5	B/NB	16
Thesis (30 ECTS credits)	·			
08-FOKUS-MA-132-m01	Master's Thesis FOKUS Chemie	30	NUM	11
Compulsory Electives (80 E	CTS credits)			
Compulsory Electives Focu Students must select no le				
Focus Inorganic Chemist				
08-ACFM1-132-m01	Research oriented inorganic chemistry	12	NUM	5
08-ACFM2-132-m01	Research oriented practical course in inorganic chemistry	8	B/NB	6
Focus Organic Chemistry		-	,	
08-0CFM1-132-m01	Research oriented organic chemistry	12	NUM	21
08-0CFM2-132-m01	Research oriented practical course in organic chemistry	8	B/NB	22
Focus Physical Chemistry			,	
08-PCFM1-132-m01	Research oriented physical chemistry	12	NUM	23
08-PCFM2-132-m01	Research oriented practical course in physical chemistry	8	B/NB	24
Focus Biochemistry (20 E			,	<u> </u>
08-BCFM1-132-m01	Research oriented biochemistry	12	NUM	7
08-BCFM2-132-m01	Research oriented practical course in biochemistry	8	B/NB	8
Focus Functional Materia				Į
08-FMFM1-132-m01	Research oriented course in functional materials	12	NUM	9
08-FMFM2-132-m01	Research oriented practical course in functional materials	8	B/NB	10
Focus Homogeneous Cata	alysis (20 ECTS credits)			
08-HKFM1-132-m01	Research oriented homogeneous catalysis course	12	NUM	17
08-HKFM2-132-m01	Research oriented practical course in homogeneous catalysis	8	B/NB	18
Focus Medicinal Chemist	ry (20 ECTS credits)	1		
08-MCFM1-132-m01	Research oriented pharmaceutical/medicinal chemistry	12	NUM	19
08-MCFM2-132-m01	Research oriented practical course in pharmaceutical/medi- cinal chemistry	8	B/NB	20
Focus Supramolecular Ch	emistry (20 ECTS credits)	1		<u> </u>
08-SCFM1-132-m01	Research oriented supramolecular chemistry	12	NUM	25
08-SCFM2-132-m01	Research oriented practical course in supramolecular che- mistry	8	B/NB	26
Focus Theoretical Chemis		I		
08-TCFM1-132-m01	Research oriented theoretical chemistry	12	NUM	27
08-TCFM2-132-m01	Research oriented practical course in theoretical chemistry	8	B/NB	28
Compulsory Electives Add		-	,	
08-FOMA-132-m01	Advanced FOKUS Foreign Studies	20	NUM	12
08-FOMI-132-m01	Advanced FOKUS Industrial work experience	20	NUM	15
08-FOMF-132-m01	Advanced research lab course	20	NUM	13

Master's with 1 major FOKUS Chemistry (2013)

Module title Abbreviation						
Research oriented inorganic chemistry				08-ACFM1-132-m01		
Module cod	rdinator		Module offered by	<u> </u>		
focus point	coordinator "Inorganic Ch	emistry"	Institute of Inorgan	ic Chemistry		
	thod of grading	Only after succ. con	npl. of module(s)			
12 nui	nerical grade					
Duration	Module level	Other prerequisites	i			
1 semester	graduate					
Contents						
Three selec	ted research-based course	s exploring advanced	topics in inorganic o	chemistry.		
Intended le	arning outcomes					
	e able to explain and anal ne topics covered in differe			organic chemistry. They are able		
Courses (ty	pe, number of weekly cont	act hours, language –	- if other than Germa	ın)		
S + S + S (n	o information on SWS (wee	ekly contact hours) an	d course language a	vailable)		
	assessment (type, scope, l ation on whether module o			tion offered — if not every seme-		
	ation of one candidate eac f assessment: German, En		s)			
Allocation	of places					
Additional	nformation					
Additional	nformation on module dur	ation: 1 to 2 semester	ſS.			
Workload						
Teaching c	vcle					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module ap	Module appears in					
	Master's degree (1 major) FOKUS Chemistry (2013)					

Module title					Abbreviation	
Resear	rch orie	ented practical course in i	norganic chemistry		08-ACFM2-132-m01	
Modul	e coord	linator		Module offered by	1	
focus p	point co	oordinator "Inorganic Che	mistry"	Institute of Inorga	nic Chemistry	
ECTS		od of grading	Only after succ. con			
8	(not)	successfully completed				
Durati	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
thods i tral an	in inorg alysis a	anic chemistry. The focus	s will be on working u ents will be expected	inder inert atmosph to conduct their we	l synthesis and analytical me- neres, purification methods, spec- ork in the lab independently, write	
Intend	ed lear	ning outcomes				
					nic chemistry in the lab and to in- ings and deliver a presentation.	
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germ	an)	
P (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language availab	le)	
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-	
each) a piece d	and b) : of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) ar	ch). Research lab c	lab reports (approx. 20 pages ourse in one 8-week block: c) one ussion (approx. 30 minutes)	
Alloca	tion of	places				
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	tion: block lab cours	e: two 4-week bloc	ks or one 8-week block.	
Worklo	ad					
Teachi	ng cycl	e				
	- /					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes	3)	
	_				,	
Modul	e appea	ars in				
Master	r's degr	ee (1 major) FOKUS Chem	istry (2013)			

Module title Abbreviation					Abbreviation	
Research oriented biochemistry o8-BCFM1-132-mo1					08-BCFM1-132-m01	
Modul	e coord	inator		Module offered by		
focus p	point co	ordinator "Biochemistry	I	Chair of Biochemist	try	
ECTS	+	od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
Three s	selecte	d research-based courses	s exploring advanced	topics in biochemis	try.	
Intend	ed lear	ning outcomes				
		able to explain and analy cs covered in different co			iochemistry. They are able to si-	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)	
S + S +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		s essment (type, scope, la ion on whether module c			tion offered — if not every seme-	
		ion of one candidate eac ssessment: German, Eng		s)		
Allocat	tion of	olaces				
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	ation: 1 to 2 semester	ʻS.		
Worklo	oad					
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
Master's degree (1 major) FOKUS Chemistry (2013)						

Module title				Abbreviation	
Research oriented practical course in biochemistry				08-BCFM2-132-m01	
Module	e coord	linator		Module offered by	<u> </u>
focus p	point co	oordinator "Biochemistry"		Chair of Biochemis	try
ECTS		od of grading	Only after succ. con	npl. of module(s)	
8	(not)	successfully completed			
Duratio	-	Module level	Other prerequisites		
1 seme	ester	graduate			
Conten	nts				
thods i	in biocl		e expected to conduc	t their work in the la	synthesis and analytical me- b independently, write a lab re-
Intend	ed lear	ning outcomes			
		able to use advanced syn . They are able to write a l			nistry in the lab and to interpret I deliver a presentation.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
P (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
each) a piece c	and b) : of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) ai	ch). Research lab co	ab reports (approx. 20 pages urse in one 8-week block: c) one ssion (approx. 30 minutes)
Allocat	tion of	places			
Additio	onal inf	ormation			
Additic	onal inf	ormation on module dura	tion: block lab cours	e: two 4-week block	s or one 8-week block.
Worklo				·	
	_				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
Master	's degr	ee (1 major) FOKUS Chem	istry (2013)		

Module	e title				Abbreviation	
Resear	Research oriented course in functional materials 08-FMFM1-132-m01					
Module	e coord	inator		Module offered by		
focus p	oint co	ordinator "Functional Ma	iterials"	Chair of Chemical T	echnology of Material Synthesis	
ECTS	<u>.</u>	od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	its					
Three s	elected	d research-based courses	exploring advanced	topics in functional	materials.	
Intend	ed lear	ning outcomes				
		able to explain and analy topics covered in differer			nctional materials. They are able	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S + S +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		essment (type, scope, la on on whether module c			tion offered — if not every seme-	
		ion of one candidate eac ssessment: German, Eng		s)		
Allocat						
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	ition: 1 to 2 semester	s.		
Worklo	ad					
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	Module appears in					
Master	Master's degree (1 major) FOKUS Chemistry (2013)					

Module title Abbro					Abbreviation
Resear	rch orie	nted practical course in f	unctional materials		08-FMFM2-132-m01
Module	e coord	inator		Module offered by	<u> </u>
focus p	point co	ordinator "Functional Ma	iterials"	Chair of Chemical T	echnology of Material Synthesis
ECTS		od of grading	Only after succ. con	·	· · ·
8	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	graduate			
Conten	nts				
thods i	in funct		s will be expected to	conduct their work in	synthesis and analytical me- 1 the lab independently, write a
Intend	ed lear	ning outcomes			
					Is science in the lab and to inter- s and deliver a presentation.
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)
P (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	<u>e)</u>
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
each) a piece c	and b) : of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) ai	ch). Research lab co	ab reports (approx. 20 pages ourse in one 8-week block: c) one ssion (approx. 30 minutes)
Allocat	tion of	places			
Additio	onal inf	ormation			
Additic	onal inf	ormation on module dura	tion: block lab cours	e: two 4-week block	s or one 8-week block.
Worklo	-				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
		ee (1 major) FOKUS Chem	istry (2013)		

Module title Abbreviation					Abbreviation
Master's Thesis FOKUS Chemie 08-FOKUS-MA-132-mo1					
Module coordinator Module offered by					
head o	f the re	search group offering the	e module	Faculty of Chemistr	y and Pharmacy
ECTS	-	od of grading	Only after succ. con	npl. of module(s)	
30	I	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ester	graduate		•	uses) area of mandatory electives in whole (60 ECTS credits).
Conten	nts				
	ching a fic prac		problem within a give	n time frame and ad	hering to the principles of good
Intend	ed lear	ning outcomes			
		able to conduct research to present the results of			the principles of good scientific
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	n)
no cou	rses as	signed			
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-
Master	's thesi	is (approx. 30 to 60 page	s) as well as talk with	n discussion (approx	. 30 minutes total), weighted 9:1
Allocat	tion of p	places			
 Additic	onal inf	ormation			
 Worklo	oad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	llations for teaching-o	degree programmes)	
Module	e appea	urs in			
Master	's degr	ee (1 major) FOKUS Chem	nistry (2013)		

Module	e title				Abbreviation	
Advanced FOKUS Foreign Studies 08-FOMA-132-mo1					08-FOMA-132-m01	
Module	e coord	inator		Module offered by		
degree	progra	mme coordinator FOKUS	Chemie (Chemistry)	Faculty of Chemistr	y and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con			
20	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	ster	graduate	A supervisor from the chosen prior to the chosen prior to the termination of the second secon	•	be an authorised examiner, is to	
Conten	ts					
red in t	he con				e contents of a lab course offe- please consult with the compe-	
Intende	ed leari	ning outcomes				
		amiliar with procedures guage and interpersonal		n industry. They hav	e acquired subject-specific skills	
Course	s (type	, number of weekly conta	ict hours, language –	· if other than Germa	n)	
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la on on whether module c			tion offered — if not every seme-	
		o pages) and talk with di ssessment: German, Eng		minutes); weighted	3:1	
Allocat	ion of p	olaces				
Additio	onal info	ormation				
Worklo	ad					
Teaching cycle						
	-					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Module	Module appears in					
Master	's degr	ee (1 major) FOKUS Cherr	iistry (2013)			

Module title Ab					Abbreviation	
Advanced research lab course					08-FOMF-132-m01	
Module	e coord	inator		Module offered by		
degree	progra	mme coordinator FOKUS	Chemie (Chemistry)	Faculty of Chemistr	y and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
20	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	Its					
		ives students the opport ne in question.	unity to explore a res	earch topic and app	y the methods commonly used	
Intend	ed lear	ning outcomes				
Studen oral pre			research topic and p	resent the results of	their work in a written report or	
Course	e s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
P (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		o pages) and talk with di ssessment: German, Eng		minutes); weighted	3:1	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Teachi	ng cvcl	e				
		-				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) FOKUS Chemistry (2013)						
muster	5 4651		(<u>(</u> 102)			

Module title Abbreviation						
Advanced discussion of hot topics in contemporary chemical research				al research	08-FOM-HOT-132-m01	
Modul	e coord	inator		Module offered	by	
degree	progra	mme coordinator FOKUS	Chemie (Chemistry)	Faculty of Chemi	stry and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)		
5	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
2 seme	ester	graduate				
Conter	nts					
					l research in depth, deliver a pre- in discussion of that topic.	
Intend	ed lear	ning outcomes				
	elevant				h, gather information, find and re- ose topics that are tailored to their	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Ger	man)	
S (no i	nformat	tion on SWS (weekly cont	act hours) and cours	e language availa	ble)	
		essment (type, scope, la on on whether module ca			ination offered — if not every seme-	
		.5 minutes) with discussi ssessment: German, Eng		es)		
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
			-			
Referre	ed to in	LPOI (examination regu	lations for teaching-	legree programm	es)	
Modul	e appea	urs in				
		ee (1 major) FOKUS Chem				

Module title					Abbreviation	
Advanc	ed FOR	KUS Industrial work expe	rience		08-FOMI-132-m01	
Module	e coord	inator		Module offered by		
degree	progra	mme coordinator FOKUS	Chemie (Chemistry)	Faculty of Chemistr	y and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
20	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate	A supervisor from th be chosen prior to th		be an authorised examiner, is to	
Conten	ts					
red in t	he con				e contents of a lab course offe- lease consult with the competent	
Intende	ed lear	ning outcomes				
		amiliar with procedures a series and skills.	and processes used i	n industry. They hav	e developed both subject-speci-	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		essment (type, scope, la on on whether module c			tion offered — if not every seme-	
		o pages) and talk with di ssessment: German, Eng		minutes); weighted	3:1	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)		
Module appears in						
Master	's degr	ee (1 major) FOKUS Cherr	nistry (2013)			

Modul	e title				Abbreviation	
Latest topics of current chemical research					08-FOM-TOP-132-m01	
Modul	e coord	inator		Module offered by		
		mme coordinator FOKUS	Chemie (Chemistry)	Faculty of Chemistr	v and Pharmacy	
ECTS	r -	od of grading	Only after succ. com	,	y and i hannacy	
5	_	successfully completed				
Durati	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
					al research in depth, deliver a in discussion of that issue.	
		ning outcomes		0.0		
Studer	nts have	-			as well as to deliver presentati-	
Course	es (type	, number of weekly conta	ict hours, language –	· if other than Germa	n)	
S (no i	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)	
		Sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		5 minutes) with discussi ssessment: German, Eng		es)		
	tion of p					
Additio	onal inf	ormation				
Worklo	bad					
Teachi	ng cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
				0		
Madul	e annea	urs in				
Modul	Module appears in Master's degree (1 major) FOKUS Chemistry (2013)					

Module title Abbreviation						
Resear	Research oriented homogeneous catalysis course 08-HKFM1-132-m01					
Module coordinator Module offered by						
focus p	oint co	ordinator "Homogeneo	ous Catalysis"	Faculty of Chemistr	y and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	· · · · ·	
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites	;		
1 seme	ster	graduate				
Conten	ts					
Three s	elected	d research-based cours	es exploring advanced	l topics in homogene	eous catalysis.	
Intend	ed lear	ning outcomes				
		able to explain and ana the topics covered in			omogeneous catalysis. They are	
Course	s (type	, number of weekly cor	itact hours, language –	– if other than Germa	an)	
S + S +	S (no i	nformation on SWS (we	eekly contact hours) an	id course language a	vailable)	
		sessment (type, scope, on on whether module			ition offered — if not every seme-	
		ion of one candidate ea ssessment: German, E		s)		
Allocat						
Additio	onal inf	ormation				
Additic	nal info	ormation on module du	Iration: 1 to 2 semester	ſS.		
Worklo	ad					
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination re	gulations for teaching-	degree programmes)		
Modul	Module appears in					
	Master's degree (1 major) FOKUS Chemistry (2013)					

Module title				Abbreviation	
Research oriented practical course in homogeneous catalysis08-HKFM2-132-m01					
Module coordinator Module offered by					
focus point coordinator	"Homogeneous	s Catalysis"	Faculty of Chemistr	y and Pharmacy	
ECTS Method of gradi		Only after succ. con		, ,	
8 (not) successful	ly completed				
Duration Module le	evel	Other prerequisites			
1 semester graduate					
Contents					
	catalysis. Stud	ents will be expected	to conduct their wo	synthesis and analytical me- rk in the lab independently, write	
Intended learning outco	omes				
				eneous catalysis in the lab and to dings and deliver a presentation.	
Courses (type, number o	of weekly conta	ct hours, language –	if other than Germa	n)	
P (no information on SW	/S (weekly cont	act hours) and cours	e language available	<u>e)</u>	
Method of assessment (ster, information on whe				tion offered — if not every seme-	
each) and b) 2 talks with	h discussion (a vith lab report (pprox. 15 minutes ea (approx. 40 pages) ar	ch). Research lab co	ab reports (approx. 20 pages urse in one 8-week block: c) one ssion (approx. 30 minutes)	
Allocation of places					
Additional information					
Additional information c	on module dura	tion: block lab cours	e: two 4-week block	s or one 8-week block.	
Workload					
Teaching cycle					
Referred to in LPO I (exa	amination regu	lations for teaching-	legree programmes)		
Module appears in					

Modul	e title	_			Abbreviation	
Research oriented pharmaceutical/medicinal chemistry 08-MCFM1-13					08-MCFM1-132-m01	
Modul	e coord	inator		Module offered by		
focus p	point co	ordinator "Medicinal Ch	nemistry"	Institute of Pharma	cy and Food Chemistry	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio	-	Module level	Other prerequisites	5		
1 seme	ester	graduate				
Conter	nts					
Three s	selecte	d research-based course	es exploring advanced	topics in medicinal	chemistry.	
Intend	ed lear	ning outcomes				
		able to explain and anal topics covered in differe			edicinal chemistry. They are able	
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)	
S + S +	S (no i	nformation on SWS (we	ekly contact hours) an	d course language a	vailable)	
		sessment (type, scope, l ion on whether module (tion offered — if not every seme-	
		ion of one candidate ea ssessment: German, En		s)		
Allocat	tion of	places				
Additio	onal inf	ormation				
Additio	onal inf	ormation on module du	ration: 1 to 2 semester	ſS.		
Worklo	oad					
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)		
Modul	e appea	ars in				
Master	Master's degree (1 major) FOKUS Chemistry (2013)					

Module title Abbreviation						
Research oriented practical course in pharmaceutical/medicinal chemistry 08-MCFM2-132-m01					08-MCFM2-132-m01	
Modul	e coord	linator		Module offered by		
		oordinator "Medicinal Che	emistry"		cy and Food Chemistry	
ECTS	-	od of grading	Only after succ. con	·		
8	(not)	successfully completed		•		
Durati	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
dicina	l chemi		ected to conduct the		techniques and methods in me- lependently, write a lab report do-	
Intend	ed lear	ning outcomes				
		able to use advanced tec ab report documenting the	•		terpret their findings. They are ab-	
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)	
P (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-	
each) a piece d	and b) : of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) ai	ch). Research lab co	ab reports (approx. 20 pages ourse in one 8-week block: c) one ssion (approx. 30 minutes)	
Alloca	tion of	places				
Additi	onal inf	ormation				
Additio	onal inf	ormation on module dura	ition: block lab cours	e: two 4-week block	s or one 8-week block.	
Workle				-		
Teaching cycle						
	~ / ·					
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes		
Modul	e appe	ars in				
		ee (1 major) FOKUS Chem	iistry (2013)			
	5	· ·				

Module	e title				Abbreviation	
Research oriented organic chemistry 08-0CFM1-132-m01					08-0CFM1-132-m01	
Module	e coord	inator		Module offered by		
focus p	oint co	ordinator "Organic Chem	istry"	Institute of Organic	Chemistry	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Three s	elected	d research-based courses	exploring advanced	topics in organic ch	emistry.	
Intende	ed lear	ning outcomes				
		able to explain and analy bics covered in different o		•	rganic chemistry. They are able to	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S + S +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		ion of one candidate eac ssessment: German, Eng		s)		
Allocat						
Additio	nal inf	ormation				
Additio	nal info	ormation on module dura	tion: 1 to 2 semester	s.		
Worklo	ad					
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
	-					
Module	e appea	urs in				
Master	's degr	ee (1 major) FOKUS Chem	istry (2013)			

Module ti	itle	Abbreviation				
Research oriented practical course in organic chemistry 08-0CFM2-132-m01						
Module c	Module coordinator Module offered by					
focus poi	nt coordinator "Organic Chem	istry"	Institute of Organic	Chemistry		
	Nethod of grading	Only after succ. com	pl. of module(s)			
8 (1	not) successfully completed					
Duration	Module level	Other prerequisites				
1 semeste	er graduate					
Contents						
thods in a	ule gives students the opport organic chemistry. Students w cumenting their findings and	ill be expected to con	nduct their work in th	synthesis and analytical me- ne lab independently, write a lab		
Intended	learning outcomes					
	are able to use advanced syn findings. They are able to writ			chemistry in the lab and to inter- and deliver a presentation.		
Courses ((type, number of weekly conta	ct hours, language —	- if other than Germa	n)		
P (no info	ormation on SWS (weekly cont	act hours) and cours	e language available	2)		
	of assessment (type, scope, la rmation on whether module ca			tion offered — if not every seme-		
each) and piece of p	lab course in two 4-week bloo d b) 2 talks with discussion (a practical work with lab report (e of assessment: German, Eng	pprox. 15 minutes ea approx. 40 pages) ar	ch). Research lab co	urse in one 8-week block: c) one		
Allocatio	n of places					
	•					
Additiona	al information					
Additiona	al information on module dura	tion: block lab cours	e: two 4-week blocks	s or one 8-week block.		
Workload	1					
Teaching	Teaching cycle					
Referred	to in LPO I (examination regu	lations for teaching-o	degree programmes)			
Module a	ppears in					
Master's	Master's degree (1 major) FOKUS Chemistry (2013)					

Module title Abbreviation					Abbreviation	
Research oriented physical chemistry					08-PCFM1-132-m01	
Module	e coord	inator		Module offered by		
focus p	oint co	ordinator "Physical Chen	nistry"	Institute of Physical	l and Theoretical Chemistry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio		Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Three s	elected	l research-based courses	exploring advanced	topics in physical ch	nemistry.	
Intende	ed lear	ning outcomes				
		able to explain and analy topics covered in differer			nysical chemistry. They are able	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S + S +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		ion of one candidate eac ssessment: German, Eng		s)		
Allocat						
Additio	nal inf	ormation				
Additio	nal info	ormation on module dura	ition: 1 to 2 semester	s.		
Worklo	ad					
Teachi	ng cycl	e				
	-					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	Module appears in					
Master	Master's degree (1 major) FOKUS Chemistry (2013)					

Module	e title				Abbreviation	
Research oriented practical course in physical chemistry 08-PCFM2-12					08-PCFM2-132-m01	
Module	e coord	inator	Module offered by			
focus p	oint co	ordinator "Physical Chen	nistry"	Institute of Physica	l and Theoretical Chemistry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
8	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
sical ch	nemistr		ted to conduct their v		techniques and methods in phy- pendently, write a lab report do-	
Intende	ed lear	ning outcomes				
		able to use advanced tecl report documenting their			rpret their findings. They are able	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)	
P (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available		
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
each) a piece o	and b) 2 of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) ar	ch). Research lab co	ab reports (approx. 20 pages urse in one 8-week block: c) one ssion (approx. 30 minutes)	
Allocat	ion of j	olaces				
Additio	onal inf	ormation				
Additio	nal inf	ormation on module dura	ition: block lab cours	e: two 4-week block	s or one 8-week block.	
Worklo	ad					
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)		
Module	e appea	ars in				
	Master's degree (1 major) FOKUS Chemistry (2013)					

Module	e title				Abbreviation	
Research oriented supramolecular chemistry 08-SCFM1-132-m01						
Module	e coord	inator		Module offered by		
focus p	oint co	ordinator "Supramolecu	lar Chemistry"	Faculty of Chemistr	y and Pharmacy	
ECTS	<u>.</u>	od of grading	Only after succ. con	npl. of module(s)		
12	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	Its					
Three s	elected	d research-based courses	s exploring advanced	topics in supramole	cular chemistry.	
Intend	ed lear	ning outcomes				
		able to explain and analy uate the topics covered i		•	upramolecular chemistry. They ext.	
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	n)	
S + S +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		essment (type, scope, la on on whether module c			tion offered — if not every seme-	
		ion of one candidate eac ssessment: German, Enន្		s)		
Allocat			<u>.</u>			
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	ation: 1 to 2 semester	s.		
Worklo	ad					
Teaching cycle						
Referre	ed to in	LPOI (examination regu	llations for teaching-	degree programmes)		
Module	e appea	urs in				
Master	Master's degree (1 major) FOKUS Chemistry (2013)					

Modul	e title				Abbreviation
Resear	rch orie	nted practical course in s	supramolecular chen	nistry	08-SCFM2-132-m01
Modul	e coord	inator		Module offered by	
focus p	point co	ordinator "Supramolecu	lar Chemistry"	Faculty of Chemist	ry and Pharmacy
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
8	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites	5	
1 seme	ester	graduate			
Conter	nts				
thods i	in supra		udents will be expect	ted to conduct their	synthesis and analytical me- work in the lab independently,
Intend	ed lear	ning outcomes			
					nolecular chemistry in the lab and findings and deliver a presentati
Course	es (type	, number of weekly conta	act hours, language –	– if other than Germa	an)
		tion on SWS (weekly cont			
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme
each) a piece c	and b) 2 of pract	2 talks with discussion (a	pprox. 15 minutes ea (approx. 40 pages) a	ach). Research lab co	ab reports (approx. 20 pages ourse in one 8-week block: c) one ossion (approx. 30 minutes)
Allocat	tion of _l	places			
Additio	onal inf	ormation			
Additio	onal inf	ormation on module dura	ation: block lab cours	setwo 4-week block	
Auuilli				$\mathcal{S}_{\mathcal{C}}$ in \mathcal{O} \mathcal{A} in $\mathcal{C}_{\mathcal{C}}$ \mathcal{O} \mathcal{O}	s or one 8-week block.
Worklo	bad				s or one 8-week block.
	bad				s or one 8-week block.
Worklo		e			s or one 8-week block.
Worklo	oad ng cycl	e			s or one 8-week block.
Worklo Teachi 	ng cycl				
Worklo Teachi 	ng cycl	e LPOI (examination regu			
Worklo Teachi Referro 	ng cycl ed to in	LPOI (examination regu			
Worklo Teachi Referre Modul	ng cycl ed to in e appea	LPOI (examination regu	llations for teaching-		

Module title Abbreviation					
Research orie	ented theoretical chemist	ry		08-TCFM1-132-m01	
Module coord	linator		Module offered by		
focus point co	oordinator "Theoretical Cl	nemistry"	· · ·	l and Theoretical Chemistry	
· · · · ·	od of grading	Only after succ. con	· · · · ·	,	
12 nume	rical grade				
Duration	Module level	Other prerequisites			
1 semester	graduate				
Contents					
Three selecte	d research-based courses	s exploring advanced	topics in theoretical	chemistry.	
Intended lear	ning outcomes				
	able to explain and analy he topics covered in diffe			eoretical chemistry. They are ab-	
Courses (type	, number of weekly conta	act hours, language –	- if other than Germa	n)	
S + S + S (no	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
	sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
	ion of one candidate eac assessment: German, Eng		s)		
Allocation of		<u>.</u>			
Additional inf	ormation				
Additional inf	ormation on module dura	ation: 1 to 2 semester	s.		
Workload					
Teaching cyc	e				
-					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master's degree (1 major) FOKUS Chemistry (2013)					

Research oriented practical course in the Module coordinator focus point coordinator "Theoretical Cherrical Cheriria Cherrical Cherrical Cherrical			08-TCFM2-132-m01	
	emistry"	Module offered by		
focus point coordinator "Theoretical Ch	emistry"	module oncice by	Module offered by	
		Institute of Physical and Theoretical Chemistry		
ECTS Method of grading	Only after succ. con	fter succ. compl. of module(s)		
8 (not) successfully completed				
Duration Module level	Other prerequisites	ther prerequisites		
1 semester graduate				
Contents				
This module gives students the opportu mistry. Students will be expected to cor their findings and deliver a presentatior	nduct their work in th			
Intended learning outcomes				
Students are able to use advanced metl to write a lab report documenting their f			rpret their findings. They are able	
Courses (type, number of weekly contact hours, language — if other than German)				
P (no information on SWS (weekly contact hours) and course language available)				
Method of assessment (type, scope, lar ster, information on whether module ca			tion offered — if not every seme-	
Research lab course in two 4-week bloc each) and b) 2 talks with discussion (ap piece of practical work with lab report (a Language of assessment: German, Engl	oprox. 15 minutes ea approx. 40 pages) ar	ch). Research lab co	urse in one 8-week block: c) one	
Allocation of places				
Additional information				
Additional information on module duration: block lab course: two 4-week blocks or one 8-week block.				
Workload				
Teaching cycle				
Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module appears in				
Master's degree (1 major) FOKUS Chemi	istry (2013)			