

Subdivided Module Catalogue for the Subject

Chemistry

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

Examination regulations version: 2014 Responsible: Faculty of Chemistry and Pharmacy



Course of Studies - Contents and Objectives

The Master's program in 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: $\mathbf{E} = \text{field trip}$, $\mathbf{K} = \text{colloquium}$, $\mathbf{O} = \text{conversatorium}$, $\mathbf{P} = \text{placement/lab course}$, $\mathbf{R} = \text{project}$, $\mathbf{S} = \text{seminar}$, $\mathbf{T} = \text{tutorial}$, $\ddot{\mathbf{U}} = \text{exercise}$, $\mathbf{V} = \text{lecture}$

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

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

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

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

Conventions

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

Notes

Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the method of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the customary manner.

Should the module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below.

Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

In accordance with

the general regulations governing the degree subject described in this module catalogue:

ASPO2009

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

19-Feb-2014 (2014-1)

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



The subject is divided into

	credits	grading	pa	
ompulsory Electives (90	ECTS credits)			
Compulsory Electives Foo	,			
	ree focuses with 25 ECTS credits each.			
Inorganic Chemistry (25				
Compulsory Courses (ı		_
08-ACM1-141-m01	Advanced Inorganic Chemistry	10	NUM	1
08-ACPM-132-m01	Inorganic Chemistry practical course for advanced	10	B/NB	1
Compulsory Electives		1		
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	1
08-ACM3-141-m01	Solid state chemistry and inorganic materials	5	NUM	1
08-HKM2-141-m01	Advanced organometallic chemistry and its application in ho-	5	NUM	3
· ·	mogeneous catalysis			
Organic Chemistry (25 I	ECTS credits)			
Compulsory Courses (15 ECTS credits)	1		
08-OCM-SYNT-141-	Modern Synthetic Methods	5	NUM	5
mo1	· ·	,		Ľ
o8-OCM-NMRMS-141-	Advanced NMR- and Mass Spectrometry	5	NUM	4
mo1	Tarisas and mass operations,	,		_
08-OCM-AKP1-122-	Advanced Research Project	5	B/NB	4
mo1				L'
Compulsory Electives	(10 ECTS credits)			
o8-OCM-NAT-141-	Modern Aspects of Natural Product Chemistry and Biological	5	NUM	4
mo1	Chemistry	,		
08-OCM-FM-141-m01	Organic Functional Materials	5	NUM	4
o8-HKM1-141-mo1	Organo- and Biocatalysis	5	NUM	3
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	6
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	6
08-TCM2-141-m01	Computational Chemistry	5	NUM	6
Physical Chemistry (25	ECTS credits)			
Compulsory Courses (10 ECTS credits)			
08-PCM1a-132-m01	Laser Spectroscopy	5	NUM	5
08-PCM1b-132-m01	Advanced Physical Chemistry (Lab)	5	B/NB	5
Compulsory Electives	(15 ECTS credits)			
08-PCM2-102-m01	Chemical Dynamics	5	NUM	5
08-PCM3-102-m01	Nanoscale Materials	5	NUM	5
o8-PCM4-141-mo1	Ultrafast spectroscopy and quantumcontrol	5	NUM	5
08-PCM5-141-m01	Physical chemistry of supramolecular assemblies	5	NUM	5
08-PCM6-132-m01	Physical Chemistry (Advanced Lab)	5	B/NB	5
08-TCM1-141-m01	Theoretical Chemistry (Basics)	5	NUM	6
08-TCM2-141-m01	Computational Chemistry	5	NUM	6
Biochemistry (25 ECTS	1	<u>, </u>	1.0	



			,	
o8-BC-MOLM-141- mo1	Molecular Biology	5	NUM	22
08-BC-MOLP-141-mo1	Molecular Biology Lab	10	NUM	23
Compulsory Electives ((10 ECTS credits)		Į.	
08-BC-VPMM-141- m01	Practical course Molecular Machines for advanced students	10	NUM	24
08-BC-VPPD-141-m01	Practical course Protein Degradation in Eukaryotes for advanced students	10	NUM	25
08-BC-VPRB-141-m01	Practical course RNA Biochemistry for advanced students	10	NUM	26
08-BC-VPSB-141-m01	Practical course Structural Biology for advanced students	10	NUM	27
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	17
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	35
08-OCM-NAT-141- mo1	Modern Aspects of Natural Product Chemistry and Biological Chemistry	5	NUM	48
08-MCM3-132-m01	Principles of drug design	5	NUM	44
08-PH-KAC-092-m01	Clinical and Analytical Chemistry	5	NUM	58
o8-PH-KACP-o92- mo1	Clinical and Analytical Chemistry (practical course)	5	B/NB	59
Functional Materials (2	ECTS credits)			
Compulsory Courses (<u> </u>			
08-FMM-MP-102-m01	5	B/NB	31	
08-FMM-PA-102-m01	Project Work	5	B/NB	32
08-OCM-FM-141-m01	Organic Functional Materials	5	NUM	47
08-FS1-141-m01	Material Sciences 1 (Principles)	5	NUM	33
Compulsory Electives ((5 ECTS credits)	_		
08-FS2-141-m01	Material Sciences 2 (Materials)	5	NUM	34
08-NTM-141-m01	Chemically and bio-inspired Nanotechnology for Material Synthesis	5	NUM	45
08-FMM-CT-141-m01	Molecular Materials (Lecture)	5	NUM	30
03-FU-PM1-141-m01	Polymer Chemistry	5	NUM	12
03-PM2-122-m01	Polymers II	5	NUM	14
08-PCM3-102-m01	Nanoscale Materials	5	NUM	54
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	60
08-ACM3-141-m01	Solid state chemistry and inorganic materials	5	NUM	18
Homogeneous Catalysis	s (25 ECTS credits)		•	
Compulsory Courses (20 ECTS credits)			
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	35
08-HKM2-141-m01	Advanced organometallic chemistry and its application in homogeneous catalysis	5	NUM	36
08-HKM3AC-132-m01	Practical course Homogeneous catalysis in Inorganic Chemistry	5	B/NB	37
		1	I	⊢—
	<u> </u>	5	B/NB	38
o8-HKM3OC-132-mo1	Practical course Homogeneous catalysis in Organic Chemistry	5	B/NB	38
	Practical course Homogeneous catalysis in Organic Chemistry	5	B/NB NUM	38



08-OCM-SYNT-141- mo1	Modern Synthetic Methods	5	NUM	50
08-TCM2-141-m01	Computational Chemistry	5	NUM	67
03-FU-PM1-141-m01	Polymer Chemistry	5	NUM	12
Medicinal Chemistry (2)	5 ECTS credits)		1	
Compulsory Courses (:	25 ECTS credits)			
08-MCM1-102-m01	Practical course medicinal chemistry	10	B/NB	41
08-MCM2a-141-m01	Pharmaceutical/Medicinal Chemistry 1	5	NUM	42
08-MCM2b-141-m01	Pharmaceutical/Medicinal Chemistry 2	5	NUM	43
08-MCM3-132-m01	Principles of drug design	5	NUM	44
Supramolecular Chemis	1			<u> </u>
Compulsory Courses (:	. • • • • • • • • • • • • • • • • • • •			
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	60
08-SCM2-102-m01	Supramolecular Chemistry (Practical Course)	5	B/NB	6
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	6:
Compulsory Electives	1		1	
	e two modules o8-SCM3 or o8-PCM5 must be completed in the fo	ocus.		
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	6
08-PCM5-141-m01	Physical chemistry of supramolecular assemblies	5	NUM	5
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	1
08-MCM3-132-m01	Principles of drug design	5	NUM	4
08-TCM2-141-m01	Computational Chemistry	5	NUM	6
08-0CM-FM-141-m01	Organic Functional Materials	5	NUM	4
08-PCM3-102-m01	Nanoscale Materials	5	NUM	5.
Theoretical Chemistry (25 ECTS credits)		•	
Compulsory Courses (:	10 ECTS credits)			
08-TCM1-141-m01	Theoretical Chemistry (Basics)	5	NUM	6
08-TCM3-102-m01	Programming in Theoretical Chemistry	5	NUM	6
Compulsory Electives	(15 ECTS credits) les 08-TCAP1, 08-TCAP2 and 08-TCAP3 must be taken.			
	Computational Chemistry	5	NUM	6
08-TCAP1-132-m01	Theoretical Chemistry - Project course wave-packet dynamics	5	B/NB	6
00 16/11 132 11101	Theoretical Chemistry - Project coursewave function based me-)	D/ND	
08-TCAP2-132-m01	thods	5	B/NB	6
08-TCAP3-132-m01	Theoretical Chemistry - Project course Computational Photo- chemistry	5	B/NB	6
08-MCM3-132-m01	Principles of drug design	5	NUM	4
Additional qualifications	(15 ECTS credits)			
	s Compulsory Electives Focuses (5 ECTS credits) s (Schwerpunkte) area of mandatory electives that has not been	usod as n	ant of a focus	- Libio
08-ACM1-141-m01	Advanced Inorganic Chemistry	10	NUM	1
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	1
08-ACM3-141-m01	Solid state chemistry and inorganic materials	5	NUM	1
	Modern Synthetic Methods	5	NUM	5
08-0CM-NMRMS-141-	Advanced NMR- and Mass Spectrometry	5	NUM	4
mo1				7



08-OCM-NAT-141-m01	Modern Aspects of Natural Product Chemistry and Biological Chemistry	5	NUM	48		
08-OCM-FM-141-m01	Organic Functional Materials	5	NUM	47		
o8-PCM4-141-mo1	Ultrafast spectroscopy and quantumcontrol	5	NUM	55		
o8-PCM5-141-mo1	Physical chemistry of supramolecular assemblies	5	NUM	56		
	Molecular Biology	5	NUM	22		
· · · · · · · · · · · · · · · · · · ·	Molecular Biology Lab	10	NUM	23		
	B-BC-VPMM-141-mo1 Practical course Molecular Machines for advanced students					
08-BC-VPPD-141-m01	ced students					
08-BC-VPRB-141-m01	Practical course RNA Biochemistry for advanced students	10	NUM	20		
08-BC-VPSB-141-m01						
08-FS2-141-m01						
08-NTM-141-m01	thesis					
08-FMM-CT-141-m01	Molecular Materials (Lecture)	5	NUM	3		
03-FU-PM1-141-m01	Polymer Chemistry	5	NUM	1		
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	3		
08-HKM2-141-m01	5	NUM	3			
08-HKM4-141-m01	HKM4-141-mo1 Advanced transition metal chemistry					
08-MCM2a-141-m01	Pharmaceutical/Medicinal Chemistry 1	5	NUM	4		
08-MCM2b-141-m01	Pharmaceutical/Medicinal Chemistry 2	5	NUM	4		
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	6		
08-TCM1-141-m01	Theoretical Chemistry (Basics)	5	NUM	6		
08-TCM2-141-m01	Computational Chemistry	5	NUM	6		
08-FS1-141-m01	Material Sciences 1 (Principles)	5	NUM	3		
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	6		
08-PCM2-102-m01	Chemical Dynamics	5	NUM	5		
08-PCM3-102-m01	Nanoscale Materials	5	NUM	5		
08-PH-KAC-092-m01	Clinical and Analytical Chemistry	5	NUM	5		
08-PH-KACP-092-m01	Clinical and Analytical Chemistry (practical course)	5	B/NB	5		
08-FMM-MP-102-m01	Lab Course Materials Science	5	B/NB	3		
08-FMM-PA-102-m01	Project Work	5	B/NB	3		
08-MCM1-102-m01	Practical course medicinal chemistry	10	B/NB	4		
08-SCM2-102-m01	Supramolecular Chemistry (Practical Course)	5	B/NB	ϵ		
08-TCM3-102-m01	Programming in Theoretical Chemistry	5	NUM	6		
03-PM2-122-m01	Polymers II	5	NUM	1		
08-PCM1a-132-m01	Laser Spectroscopy	5	NUM	5		
08-PCM1b-132-m01	Advanced Physical Chemistry (Lab)	5	B/NB	5		
08-PCM6-132-m01	Physical Chemistry (Advanced Lab)	5	B/NB	5		
08-MCM3-132-m01	Principles of drug design	5	NUM	4		
08-HKM3AC-132-m01	Practical course Homogeneous catalysis in Inorganic Chemistry	5	B/NB	3		
08-HKM30C-132-m01	Practical course Homogeneous catalysis in Organic Chemistry	5	B/NB	3		
00-HNM30C-132-III01						



08-TCAP2-132-m01	Theoretical Chemistry - Project coursewave function based methods	5	B/NB	64		
08-TCAP3-132-m01	Theoretical Chemistry - Project course Computational Photo- chemistry	5	B/NB	65		
Other additional qualifi	cations (10 ECTS credits)		•	•		
08-WRM1-132-m01	Tutoring 1 (practical course)	5	B/NB	71		
08-WRM2-132-m01	Tutoring 2 (practical course)	5	B/NB	72		
08-APM1-132-m01	Foreign Studies (short)	5	B/NB	20		
08-APM2-132-m01	Foreign Studies (long)	10	B/NB	21		
08-CHPM1-141-m01	Chemistry-related courses outside of the Natural Sciences	5	B/NB	28		
08-CHPM2-141-m01	Chemistry-related courses within the Natural Sciences	5	B/NB	29		
Compulsory Courses (doubl	e degree) (5 ECTS credits)					
03-TR-072-m01	Toxicology and legal studies	3	NUM	15		
08-VPM-DA-132-m01	Advanced chemical practical course	2	B/NB	69		
Compulsory Electives (doub	le degree) (55 ECTS credits)					
	ocuses (focus 1 with 30 ECTS credits, focus 2 with 25 ECTS credit	ːs).				
Inorganic Chemistry (25 E	-					
Compulsory Courses (20			1			
08-ACM1-141-m01	Advanced Inorganic Chemistry	10	NUM	16		
08-ACPM-132-m01	- 1 - 1					
Compulsory Electives	,		1			
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	17		
08-ACM3-141-m01	Solid state chemistry and inorganic materials	5	NUM	18		
08-HKM2-141-m01	Advanced organometallic chemistry and its application in ho-	5	NUM	36		
	mogeneous catalysis		110111) "		
08-TCM2-141-m01	Computational Chemistry	5	NUM	67		
08-OCM-NMRMS-141- mo1	Advanced NMR- and Mass Spectrometry	5	NUM	49		
Organic Chemistry (25 EC)	S credits)					
Compulsory Courses (15	ECTS credits)					
08-OCM-SYNT-141-m01	Modern Synthetic Methods	5	NUM	50		
08-OCM-NMRMS-141- mo1	Advanced NMR- and Mass Spectrometry	5	NUM	49		
08-OCM-AKP1-122-m01	Advanced Research Project	5	B/NB	46		
Compulsory Electives			l			
08-OCM-NAT-141-m01	Modern Aspects of Natural Product Chemistry and Biological Chemistry	5	NUM	48		
08-OCM-FM-141-m01	Organic Functional Materials	5	NUM	47		
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	35		
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	60		
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	62		
08-TCM2-141-m01	Computational Chemistry	5	NUM	67		
08-PH-KACP-092-m01	Clinical and Analytical Chemistry (practical course)	5	B/NB	59		
Physical Chemistry (25 EC			<u>'</u>			
Compulsory Courses (20						
08-PCM1a-132-m01	Laser Spectroscopy	5	NUM	51		
		,	1	, , , , , , , , , , , , , , , , , , ,		



08-PCM1b-132-m01	Advanced Physical Chemistry (Lab)	5	B/NB	52	
08-PCM2-102-m01	Chemical Dynamics	5	NUM	53	
08-PCM6-132-m01	Physical Chemistry (Advanced Lab)		B/NB	57	
Compulsory Electives	,,		'	J,	
08-PCM3-102-m01	Nanoscale Materials	5	NUM	54	
08-PCM4-141-m01	Ultrafast spectroscopy and quantumcontrol		NUM	55	
08-PCM5-141-m01	Physical chemistry of supramolecular assemblies	5	NUM	56	
08-TCM1-141-m01	Theoretical Chemistry (Basics)	5	NUM	66	
08-TCM2-141-m01	Computational Chemistry	5	NUM	67	
08-TCM3-102-m01	Programming in Theoretical Chemistry	5	NUM	68	
08-TCAP1-132-m01	Theoretical Chemistry - Project course wave-packet dynamics		B/NB		
00-1CAF1-132-11101	Theoretical Chemistry - Project coursewave function based me-	5	D/ND	63	
08-TCAP2-132-m01	thods	5	B/NB	64	
08-TCAP3-132-m01	Theoretical Chemistry - Project course Computational Photo- chemistry	5	B/NB	65	
08-FS1-141-m01	Material Sciences 1 (Principles)	5	NUM	33	
08-FMM-MP-102-m01	Lab Course Materials Science	5	B/NB	31	
Biochemistry (25 ECTS cre	dits)				
Compulsory Courses (15 I	ECTS credits)				
08-BC-MOLM-141-m01	Molecular Biology	5	NUM	22	
	o8-BC-MOLP-141-mo1 Molecular Biology Lab				
Compulsory Electives	G,			23	
Specialist Lab Course (1	o ECTS credits)				
	Practical course Molecular Machines for advanced students	10	NUM	24	
	Practical course Protein Degradation in Eukaryotes for advan-		NOW	-4	
08-BC-VPPD-141-m01	practical course Protein Degradation in Eukaryotes for advan- ced students		NUM	25	
08-BC-VPRB-141-m01	Practical course RNA Biochemistry for advanced students	10	NUM	26	
08-BC-VPSB-141-m01	Practical course Structural Biology for advanced students	10	NUM	27	
Other Courses					
08-MCM3-132-m01	Principles of drug design	5	NUM	44	
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	17	
08-OCM-NAT-141-m01	Modern Aspects of Natural Product Chemistry and Biological Chemistry	5	NUM	48	
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	35	
08-PH-KAC-092-m01	Clinical and Analytical Chemistry	5	NUM	58	
	Clinical and Analytical Chemistry (practical course)		B/NB	59	
Functional Materials (25 E		,	1 2,	<u> </u>	
Compulsory Courses (20				,	
08-FMM-MP-102-m01	Lab Course Materials Science	5	B/NB	21	
08-FMM-PA-102-m01	Project Work		B/NB	31	
	·	5 5	NUM	32	
08-FS1-141-m01	B-OCM-FM-141-mo1 Organic Functional Materials		NUM	47	
· · · · · · · · · · · · · · · · · · ·	Material Sciences 1 (Principles)	5	INOM	33	
Compulsory Electives	Matarial Caianaga a (Matariala)	5	NUM		
-0 FC	08-FS2-141-m01 Material Sciences 2 (Materials)			l 34	
08-FS2-141-m01	Chemically and bio-inspired Nanotechnology for Material Syn-			71	



08-PCM3-102-m01	Nanoscale Materials	5	NUM	54	
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	60	
08-TCM2-141-m01	Computational Chemistry	5	NUM	67	
08-FMM-CT-141-m01	Molecular Materials (Lecture)	5	NUM	30	
08-ACM3-141-m01	Solid state chemistry and inorganic materials	5	NUM	18	
03-FU-PM1-141-m01	Polymer Chemistry	5	NUM	12	
03-PM2-122-m01	Polymers II	5	NUM	14	
Homogeneous Catalysis (2	25 ECTS credits)	,	•		
Compulsory Courses (20	ECTS credits)				
08-HKM1-141-m01	Organo- and Biocatalysis	5	NUM	35	
0.111/44	Advanced organometallic chemistry and its application in ho-				
08-HKM2-141-m01	mogeneous catalysis	5	NUM	36	
- O 111/M - A.C	Practical course Homogeneous catalysis in Inorganic Che-		D/ND		
08-HKM3AC-132-m01	mistry	5	B/NB	37	
08-HKM30C-132-m01	Practical course Homogeneous catalysis in Organic Chemistry	5	B/NB	38	
Compulsory Electives		,	,		
08-HKM4-141-m01	08-HKM4-141-m01 Advanced transition metal chemistry				
08-PCM2-102-m01	Chemical Dynamics	5	NUM	53	
08-OCM-SYNT-141-m01	Modern Synthetic Methods	5	NUM	50	
08-TCM2-141-m01	Computational Chemistry	5	NUM	67	
03-FU-PM1-141-m01	Polymer Chemistry	5	NUM	12	
Medicinal Chemistry (25 E	CTS credits)			'	
Compulsory Courses (10	ECTS credits)				
08-MCM1-102-m01	Practical course medicinal chemistry	10	B/NB	41	
Compulsory Electives			ı	'	
08-MCM2a-141-m01	Pharmaceutical/Medicinal Chemistry 1	5	NUM	42	
08-MCM2b-141-m01	Pharmaceutical/Medicinal Chemistry 2	5	NUM	43	
08-MCM3-132-m01	Principles of drug design	5	NUM	44	
08-PH-KAC-092-m01	Clinical and Analytical Chemistry	5	NUM	58	
08-PH-KACP-092-m01	Clinical and Analytical Chemistry (practical course)	5	B/NB	59	
08-OCM-SYNT-141-m01	Modern Synthetic Methods	5	NUM	50	
08-OCM-NAT-141-m01	Modern Aspects of Natural Product Chemistry and Biological Chemistry	5	NUM	48	
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	17	
o8-BC-MOLM-141-mo1	Molecular Biology	5	NUM	22	
08-BC-VPSB-141-m01	Practical course Structural Biology for advanced students	10	NUM	27	
Supramolecular Chemistry					
Compulsory Courses (10	<u>, i - </u>				
08-SCM1-102-m01	Supramolecular Chemistry (Basics)	5	NUM	60	
08-SCM2-102-m01	Supramolecular Chemistry (Practical Course)	5	B/NB	61	
Compulsory Electives	Supramorecular enemistry (Fluencal essaise)] ,	5/115	1 01	
	vo modules 08-SCM3 or 08-PCM5 must be completed in the foci	us			
08-SCM3-141-m01	Bioorganic Chemistry	5	NUM	62	
08-PCM5-141-m01	Physical chemistry of supramolecular assemblies	5	NUM	56	
08-ACM2-141-m01	Bioanorganic Chemistry	5	NUM	17	
08-MCM3-132-m01	Principles of drug design	5	NUM	44	
	*				



08-TCM2-141-m01	Computational Chemistry	5	NUM	67	
08-OCM-FM-141-m01	Organic Functional Materials	5	NUM	47	
08-PCM3-102-m01	Nanoscale Materials	5	NUM	54	
Theoretical Chemistry (25	ECTS credits)				
Compulsory Courses (10	ECTS credits)				
08-TCM1-141-m01	Theoretical Chemistry (Basics)	5	NUM	66	
08-TCM3-102-m01	Programming in Theoretical Chemistry	5	NUM	68	
Compulsory Electives					
08-TCAP1-132-m01	Theoretical Chemistry - Project course wave-packet dynamics	5	B/NB	63	
00 TCADo 100 mo1	Theoretical Chemistry - Project coursewave function based me-	_	B/NB		
08-TCAP2-132-m01	thods	5		64	
08-TCAP3-132-m01	Theoretical Chemistry - Project course Computational Photo-	F	B/NB	65	
06-1CAF3-132-11101	chemistry	5		U 05	
08-TCM2-141-m01	Computational Chemistry	5	NUM	67	
08-MCM3-132-m01	Principles of drug design	5	NUM	44	
Key Area 1 (double degree) (30 ECTS credits)				
Key Area 2 (double degree) (25 ECTS credits)				
Courses at partner universi	ty abroad (30 ECTS credits)				
08-VPU-141-m01	o8-VPU-141-mo1 Courses at the partner university				
Thesis (30 ECTS credits)				•	
08-MA-132-m01	8-MA-132-mo1 Master-Thesis				



Modul	e title				Abbreviation			
Polymer Chemistry				-	03-FU-PM1-141-m01			
Module coordinator Module of								
holder Dentis		Chair of Functional M	Materials in Medicine and	Faculty of Medicine				
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)				
5	nume	rical grade						
Duration Module level		Other prerequisites	Other prerequisites					
1 seme	ester graduate							
Conter	nts							

Basic methods of polymerisation: free radical polymerisations, polyadditions, ionic polymerisations, controlled radical polymerisations; characterisation of polymers and polymer analytics: gel permeation chromatography, endgroup analysis, mass spectrometry, rheology.

Intended learning outcomes

The students are familiar with the fundamentals of polymer chemistry and the related methods for their characterisation.

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

This module comprises 2 module components. Information on courses will be listed separately for each module component.

- 03-FU-PM1-1-141: V (no information on SWS (weekly contact hours) and course language available)
- 03-FU-PM1-2-122: P (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.

Assessment in module component 03-FU-PM1-1-141: Polymer Chemistry (Lecture)

- 3 ECTS, Method of grading: numerical grade
- a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course.

Assessment in module component o3-FU-PM1-2-122: Polymer Chemistry (Practical course)

- 2 ECTS, Method of grading: (not) successfully completed
- Vortestate (pre-experiment exams, approx. 15 minutes each) and logs (approx. 5 pages each)
- Assessment offered: once a year, summer semester

Language of assessment: German, English if agreed upon with the examiner
Allocation of places
Additional information
Workload
Teaching cycle
Referred to in LPO I (examination regulations for teaching-degree programmes)

Master's with 1 major Chemistry (2014)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 12 / 72
	reg. data record Master (120 ECTS) Chemie - 2014	



N.A	~4		_	_				:-
IVI	υa	u	e	a	טט	ea	rs	Ш



Module title					Abbreviation
Polymers II					03-PM2-122-m01
Module coordinator				Module offered by	
holder of the Chair of Functional Materia		ials in Medicine and	Faculty of Medicine	2	
ECTS	CTS Method of grading Only after succ. co			ıpl. of module(s)	
5	nume	rical grade			
Duration	on	Module level	Other prerequisites		
1 seme	ester	graduate			
Conter	nts				
tions -	control analysi:	led radical polymerisatio	n - polymer characteı	isation (e. g. gel per	polyaddition - ionic polymerisa- rmeation chromatography, end- block-copolymers, polymer topo-
Intend	ed lear	ning outcomes			
Studer	nts acqu	uire an advanced knowle	dge of polymer synth	esis, modification a	nd characterisation.
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	an)
S + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avai	lable)
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
(30 mi	nutes)	mination (approx. 90 mir ssessment: German or E		ination of one cand	idate each (20 minutes) or c) talk
Alloca	tion of	olaces			
Additio	onal inf	ormation			
Worklo	oad				
Teachi	ng cycl	е			
	- 5 - 5 - 6	-			
Referre	ed to in	LPO I (examination regu	lations for teaching-	legree nrogrammes	
KCICIII	Lu to III	Li O i (Chaiimiation legu	tations for teaching-t	regice programmes	,

Master's degree (1 major) Chemistry (2013)

Master's degree (1 major) Chemistry (2014)

Master's degree (1 major) Technology of Functional Materials (2010)

Master's degree (1 major) Functional Materials (2012)



Module title					Abbreviation		
Toxico	logy an	d legal studies			03-TR-072-m01		
Module coordinator				Module offered by			
lecturer of lecture "Toxikologie und Rechtskur			chtskunde"	Faculty of Medicine			
ECTS	Meth	od of grading	Only after succ. con	fter succ. compl. of module(s)			
3	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	Contents						

Basics of legal regulations for chemists (handling and transportation of hazardous materials), fundamentals of toxicology.

Intended learning outcomes

The students master the basics of legal regulations for chemists (handling and transport of hazardous substances) as well as the fundamentals of toxicology.

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

V + V (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (approx. 90 minutes)

Allocation of places

--

Additional information

--

Workload

--

Teaching cycle

--

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

--

Module appears in

Bachelor' degree (1 major) Biochemistry (2011)

Bachelor' degree (1 major) Biochemistry (2013)

Bachelor' degree (1 major) Biochemistry (2009)

Bachelor' degree (1 major) Chemistry (2007)

Bachelor' degree (1 major) Chemistry (2008)

Bachelor' degree (1 major) Chemistry (2010)

Bachelor' degree (1 major) Chemistry (2009)

Bachelor' degree (1 major) Food Chemistry (2009)

Bachelor' degree (1 major) FOKUS Chemistry (2011)

Master's degree (1 major) Chemistry (2013)

Master's degree (1 major) Chemistry (2010)

Master's degree (1 major) Chemistry (2014)

First state examination for the teaching degree Grundschule Chemistry (2009)

First state examination for the teaching degree Hauptschule Chemistry (2009)

First state examination for the teaching degree Realschule Chemistry (2009)

First state examination for the teaching degree Gymnasium Chemistry (2009)

First state examination for the teaching degree Mittelschule Chemistry (2013)



Module					Abbreviation	
Advanced Inorganic Chemistry					08-ACM1-141-m01	
Module coordinator Module offered by			Module offered by			
Managing Director of the Institute of Inorganic Chemistry Institute of			Institute of Inorgan	ic Chemistry		
ECTS				npl. of module(s)		
10	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
2 seme	ster	graduate				
Conten	ts					
special	comp		elements (MGEs), bo		metal chemistry. It focuses on MGEs and MGE compounds, the	
Intende	ed lear	ning outcomes				
the che	emical dinatio	properties of transition mon compounds.	etals and analyse the	e structure as well as	roup elements. They can describe s chemical and physical aspects	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S + S (r	o info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
30 min or d) lo and ler	utes) o g (app igth of	or c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
	-					

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

Module appears in



Module	title				Abbreviation	
Bioanorganic Chemistry					08-ACM2-141-m01	
Module coordinator				Module offered by		
lecturer of seminar "Anorganische Aspekte der Biochemie and Medizinischen Chemie" (Inorganic Aspects of Bioche- mistry and Medicinal Chemistry)				Institute of Inorgan	ic Chemistry	
				pl. of module(s)		
		rical grade				
Duratio		Module level	Other prerequisites			
1 semes	ter	graduate				
Content	:S					
	s of BI				chemistry (BIC). It discusses the ns of BIC in the fields of diagnosis	
Intende	d learr	ning outcomes				
		able to describe the princ as enzymes and describe			xplain the structure and effects medicine.	
Courses	type,	number of weekly conta	ct hours, language –	if other than Germa	ın)	
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	<u>e</u>)	
		essment (type, scope, la on on whether module ca			ition offered — if not every seme-	
30 minu or d) log and leng	ites) or g (appr gth of a	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 n course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Allocati		_				
	V. p					
Addition	nal info	ormation			_	
Workloa	ad					
Teachin	g cycle	e				
Referre	d to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Module	appea	rs in				
Master's	Master's degree (1 major) Chemistry (2014)					



Modul	e title				Abbreviation	
Solid state chemistry and inorganic materials					08-ACM3-141-m01	
Module coordinator				Module offered by		
		minar "Festkörperchemie		Institute of Inorgan	ic Chemistry	
Materialien" (Solid State Chemistry and Inorganic Materials)			d Inorganic Materi-			
ECTS				npl. of module(s)		
5		rical grade		input or modulo(c)		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ıts					
		provides an introduction t nthesis methods and sel			structure, chemical and physical	
Intend	ed lear	ning outcomes				
					xplain methods for solid-state the corresponding solids.	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
S (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-	
30 min or d) lo and ler	utes) o og (app ngth of	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, §	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Modul	e appea	ars in				
Master	Master's degree (1 major) Chemistry (2014)					



Module title Abbreviation					Abbreviation
Inorga	Inorganic Chemistry practical course for advanced				08-ACPM-132-m01
Module	Module coordinator				у
focus p	oint co	ordinator "Inorganic Che	mistry"	Institute of Inorga	anic Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites	•	
1 seme	ster	graduate			
Conten	its				
tral and	alysis a	nd crystallography. Stud	ents will be expected	under inert atmosp I to conduct their w	d synthesis and analytical me- heres, purification methods, spec- vork in the lab independently, write
tral and a lab re Intende Studen	alysis a eport do ed lear its are a	nd crystallography. Stud ocumenting their finding: ning outcomes able to use advanced syn	ents will be expected s and deliver a preser thesis and analytical	under inert atmosp I to conduct their w ntation. I methods in inorga	theres, purification methods, spec- work in the lab independently, write
tral and a lab re Intende Studen terpret	alysis a eport do ed lear ets are a their fi	nd crystallography. Stud ocumenting their findings ning outcomes able to use advanced syn ndings. They are able to	ents will be expected s and deliver a preser other a preser others and analytical write a lab report doc	under inert atmosp I to conduct their w ntation. I methods in inorgo cumenting their fin	theres, purification methods, spec- work in the lab independently, write anic chemistry in the lab and to in- dings and deliver a presentation.
tral and a lab re Intende Studen terpret Course	ed learned their fines (type	nd crystallography. Stud ocumenting their findings ning outcomes able to use advanced syn ndings. They are able to , number of weekly conta	ents will be expected and deliver a present thesis and analytical write a lab report docute thours, language —	under inert atmosp I to conduct their w ntation. I methods in inorga cumenting their fin - if other than Gerr	theres, purification methods, spec- work in the lab independently, write anic chemistry in the lab and to in- dings and deliver a presentation.
tral and a lab re Intender Studenterpret Course P (no in	alysis a eport de ed lear ats are a their fi es (type aformate d of ass	nd crystallography. Stud ocumenting their findings ning outcomes able to use advanced syn ndings. They are able to number of weekly contaction on SWS (weekly contaction on SWS)	ents will be expected and deliver a present thesis and analytical write a lab report docuted hours, language—tact hours) and cours anguage—if other the	under inert atmosp I to conduct their w ntation. I methods in inorga cumenting their fin - if other than Gerr le language availal an German, exami	wheres, purification methods, spec- work in the lab independently, write anic chemistry in the lab and to in- dings and deliver a presentation. man)
tral and a lab re Intende Studen terpret Course P (no ir Method ster, in practic	alysis a eport de ed lear ths are a their fi es (type aformati al work	nd crystallography. Stud ocumenting their findings ning outcomes able to use advanced syn ndings. They are able to number of weekly contaction on SWS (weekly contaction on SWS)	ents will be expected and deliver a preser where a lab report document hours, language—tact hours) and cours anguage—if other than be chosen to earn 20 pages) and talk (a	under inert atmosp I to conduct their w ntation. I methods in inorgoumenting their fin - if other than Gerr e language availal an German, exami a bonus)	cheres, purification methods, spectork in the lab independently, write anic chemistry in the lab and to indings and deliver a presentation. man) pole) nation offered — if not every seme-
tral and a lab re Intende Studen terpret Course P (no ir Method ster, in practic	alysis a eport de ed lear ats are a their fi s (type aformat al work age of a	nd crystallography. Stud ocumenting their findings ning outcomes able to use advanced syn ndings. They are able to , number of weekly conta- tion on SWS (weekly conta- tion on whether module contains on whether module contains on whether module contains on the session of the	ents will be expected and deliver a preser where a lab report document hours, language—tact hours) and cours anguage—if other than be chosen to earn 20 pages) and talk (a	under inert atmosp I to conduct their w ntation. I methods in inorgoumenting their fin - if other than Gerr e language availal an German, exami a bonus)	cheres, purification methods, spectork in the lab independently, write anic chemistry in the lab and to indings and deliver a presentation. man) pole) nation offered — if not every seme-

Additional information

Additional information on module duration: block placement with a duration of a minimum of 40 working days.

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)



Module title					Abbreviation
Foreign Studies (short)					08-APM1-132-m01
Module	e coord	linator		Module offered by	
Erasmu	ıs prog	ramme coordinator Chen	nie (Chemistry)	Faculty of Chemistr	y and Pharmacy
ECTS	Method of grading		Only after succ. co	mpl. of module(s)	
5	(not)	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 semester graduate			(a maximum of 2 in	cidents of absence);	regular attendance of placement consultation with course advisommended; not to be combined
Conten	ts				

Practical course to be completed at universities abroad. Students may complete this course in the context of exchange programmes such as Erasmus etc. The contents of the course should correspond to the contents of a lab course offered in the context of the Master's programme in Chemistry (120 ECTS credits); please consult with the competent coordinator in advance.

Intended learning outcomes

Students are familiar with procedures and processes used at universities in countries other than Germany. They have acquired subject-specific skills as well as language and interpersonal skills.

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, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

report (2 pages); proof of having completed lab course

Language of assessment: German or English; language of the respective placement country where required

Allocation of places

--

Additional information

Additional information on module duration: block placement abroad with a duration of a minimum of 20 working days.

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)



Module title					Abbreviation		
Foreign Studies (long)					08-APM2-132-m01		
Module	coord	inator		Module offered by			
Erasmu	ıs prog	ramme coordinator Chen	nie (Chemistry)	Faculty of Chemistr	y and Pharmacy		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
10	(not)	successfully completed					
Duratio	n	Module level	Other prerequisites				
2 semester graduate Admission prerequisite to assessment: regular attend (a maximum of 2 incidents of absence); consultation by service prior to placement highly recommended; no with o8-APM1.			consultation with course adviso-				
Conten	Contents						
		•		•	e this course in the context of ex-		

Practical course to be completed at universities abroad. Students may complete this course in the context of exchange programmes such as Erasmus etc. The contents of the course should correspond to the contents of a lab course offered in the context of the Master's programme in Chemistry (120 ECTS credits); please consult with the competent coordinator in advance.

Intended learning outcomes

Students are familiar with procedures and processes used at universities in countries other than Germany. They have acquired subject-specific skills as well as language and interpersonal skills.

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, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

report (2 pages); proof of having completed lab course

Language of assessment: German or English; language of the respective placement country where required

Allocation of places

--

Additional information

Additional information on module duration: block placement abroad with a duration of a minimum of 40 working days.

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)



Module title					Abbreviation		
Molecular Biology					08-BC-MOLM-141-m01		
Module coordinator				Module offered by			
holder	of the (Chair of Biochemistry		Chair of Biochemis	try		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	,		
5	numerical grade						
	Duration Module level Other prerequisite						
1 seme	ster	undergraduate					
Conten	ts						
Compri tional b			his module discusse	s advanced topics ir	n molecular physiology and func-		
Intende	ed learı	ning outcomes					
Studen	ts have	e developed a sound kno	wledge of molecular	biology.			
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
V + Ü (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la on on whether module ca			ition offered — if not every seme-		
didate 30 min about t	each (a utes, g the met	approx. 20 minutes) or d)	oral examination in g nutes) or d) presenta sessment prior to the	groups of up to 3 car ation (approx. 30 mir	or c) oral examination of one candidates (groups of 2: approx. nutes). Students will be informed		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
-							
Worklo	ad						
-							
Teachi	ng cycl	e					
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)			
Module	Module appears in						
Master	Master's degree (1 major) Chemistry (2014)						



Modul	Module title Abbreviation						
Molecular Biology Lab 08-BC-MOLP-14					o8-BC-MOLP-141-mo1		
Module coordinator				Module offered by			
holder of the Chair of Biochemistry				Chair of Biochemis	try		
ECTS			npl. of module(s)	,			
10	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conten	ıts						
of mac	romole				ngineering and characterisation is of biochemical processes, and		
Intend	ed lear	ning outcomes					
Studer	nts have	e developed a knowledge	of molecular biology	and are able to app	oly it to practical experiments.		
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)		
Ü (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language availabl	e)		
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-		
didate 30 min about t Assess	each (a outes, g the met oment o	approx. 20 minutes) or d)	oral examination in ginutes) or e) presenta sessment prior to the er semester	groups of up to 3 car tion (approx. 30 mir	or c) oral examination of one can- ndidates (groups of 2: approx. nutes). Students will be informed		
Allocat	tion of	places					
Bioche	mistry	Bachelor's: 24 places. Ch	nemistry Master's: 6 p	olaces.			
Additio	onal inf	ormation					
	_		•				
Worklo	oad						
Teachi	ng cycl	e					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
					,		



Module	Module title Abbreviation					
Practical course Molecular Machines for advanced students				S	08-BC-VPMM-141-m01	
Module coordinator				Module offered by		
holder of the Chair of Biochemistry				Chair of Biochemis	itry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	,	
10	nume	rical grade	o8-BC-MOLP			
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
lar biol	ogy an		mutagenesis, protein	expression and pu	d methods and topics in molecurification, RNA-protein and protemplexes.	
Intende	ed lear	ning outcomes				
Studen work.	ts are a	able to explore a specific	research topic and d	eliver an oral preser	ntation on the results of their	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
P (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language availabl	e)	
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
		o pages) and talk (appro ssessment: German, Eng				
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Additio	nal inf	ormation on module dura	tion: block placemer	nt with a duration of	a minimum of 40 working days.	
Worklo	ad					
Teachi	ng cycl	e				
Referre	d to in	LPO I (examination regu	lations for teaching-o	degree programmes)	



Module coor holder of the ECTS Meth 10 num Duration 1 semester Contents This module karyotes. Intended lea Students are work.	dinator Chair of Biochemistry nod of grading erical grade Module level graduate	Only after succ. compl. c	dule offered by	o8-BC-VPPD-141-mo1
holder of the ECTS Meth 10 num Duration 1 semester Contents This module karyotes. Intended lea Students are work.	Chair of Biochemistry nod of grading erical grade Module level	Only after succ. compl. c	ir of Biochemis	irv
Duration 1 semester Contents This module karyotes. Intended lea Students are work.	nod of grading erical grade Module level	Only after succ. compl. o		trv
num Duration 1 semester Contents This module karyotes. Intended lea Students are work.	erical grade Module level	o8-BC-MOLP	of module(s)	· <i>j</i>
Duration 1 semester Contents This module karyotes. Intended lea Students are work.	Module level			
1 semester Contents This module karyotes. Intended lea Students are work.		041		
Contents This module karyotes. Intended lea Students are work.	graduate	Other prerequisites		
This module karyotes. Intended lea Students are work.				
karyotes. Intended lea Students are work.				
Students are work.	gives students the opport	unity to explore a researc	h topic in the fie	eld of protein degradation in eu-
work.	rning outcomes			
	able to explore a specific	research topic and delive	r an oral presen	tation on the results of their
Courses (typ	e, number of weekly conta	ct hours, language — if of	ther than Germa	n)
P (no informa	ation on SWS (weekly cont	act hours) and course lan	guage available	(غ)
	ssessment (type, scope, la tion on whether module ca			tion offered — if not every seme-
	20 pages) and talk (appro assessment: German, Eng			
Allocation of	places			
Additional in	formation			
Additional in	formation on module dura	ition: block placement wit	th a duration of	a minimum of 40 working days.
		·		
Teaching cyc	 :le			
	1			
Referred to i				



Module title Abbreviation					
Practical course RNA Biochemistry for advanced students 08-BC-VPRB-141-m01					
Module co	ordinator		Module offered by		
holder of th	ne Chair of Biochemistry		Chair of Biochemis	try	
	thod of grading	Only after succ. con	ipl. of module(s)		
10 nu	merical grade	o8-BC-MOLP			
Duration	Module level	Other prerequisites			
1 semester	graduate				
Contents					
mes as "me		ory mechanisms of eu		eld of RNA biochemistry. Ribososynthesis. Gradient centrifugati-	
Intended le	earning outcomes				
manner.	e help of different methods /pe, number of weekly conta			appropriate and understandable an)	
P (no inform	mation on SWS (weekly cont	act hours) and cours	e language available	e)	
	assessment (type, scope, lanation on whether module c			ation offered — if not every seme-	
	k. 20 pages) and talk (appro of assessment: German, Eng				
Allocation	of places				
Additional information					
Additional information on module duration: block placement with a duration of a minimum of 40 working days.					
Workload					
					
Teaching cycle					
Referred to	in LPO I (examination regu	llations for teaching-o	degree programmes)		



Module title					Abbreviation	
Practic	al cour	se Structural Biology for	advanced students		08-BC-VPSB-141-m01	
Module	e coord	inator		Module offered by		
holder	of the	Chair of Biochemistry		Chair of Biochemis	try	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade	o8-BC-MOLP			
Duratio	on	Module level	Other prerequisites	i .		
1 seme	ster	graduate				
Conten	ıts					
	ıdamer	ital principles and techni			stallisation. It teaches students sation as well as crystallographic	
Intend	ed lear	ning outcomes				
					constructs for crystallisation. ell as data collection and proces-	
Course	s (type	, number of weekly conta	ect hours, language –	- if other than Germa	an)	
P (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language availabl	e)	
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
		o pages) and talk (appro ssessment: German, Eng				
Allocat	tion of	places				
Additio	onal inf	ormation				
Additional information on module duration: block placement with a duration of a minimum of 40 working days.						
Workload						
Teaching cycle						
Referre	ed to in	IPOI (examination regu	lations for teaching.	degree nrogrammes		
Referred to in LPO I (examination regulations for teaching-degree programmes)						



Modul	Module title Abbreviation				
Chemi	stry-rel	ated courses outside of t	he Natural Sciences		08-CHPM1-141-m01
Modul	e coord	inator		Module offered by	<u>, </u>
Dean c	of Studi	es Chemie (Chemistry)		Faculty of Chemistr	y and Pharmacy
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	graduate	Please consult with	course advisory serv	vice.
Conter	ıts				
other F	acultie		cluded in the acaden		elated courses that are offered by leir programmes. Students MUST
Intend	ed lear	ning outcomes			
Studer	nts have	e developed the knowled	ge and skills taught i	n the courses attend	led by them.
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	nn)
A (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			ition offered — if not every seme-
		r successful completion a ssessment: German, Eng		turer	
Allocat	tion of	olaces			
Additio	onal inf	ormation			
Worklo	oad				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
		ee (1 major) Chemistry (2	014)		



Module title Ab				Abbreviation		
Chemis	stry-rel	ated courses within the N	latural Sciences		08-CHPM2-141-m01	
Module	e coord	inator		Module offered by		
Dean o	f Studi	es Chemie (Chemistry)		Faculty of Chemistr	y and Pharmacy	
ECTS		od of grading	Only after succ. con		,	
5	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate	Please consult with	course advisory serv	vice.	
Conten	ts					
other F	acultie		cluded in the acaden		elated courses that are offered by eir programmes. Students MUST	
Intend	ed learı	ning outcomes				
Studen	its have	e developed the knowled	ge and skills taught i	n the courses attend	ed by them.	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
A (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)	
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		r successful completion a ssessment: German, Eng		turer		
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
	Master's degree (1 major) Chemistry (2014)					



Module title Abbreviation						
Molecu	ılar Ma	terials (Lecture)		o8-FMM-CT-141-mo1		
Module	coord	inator		Module offered by		
Dean o	f Studie	es Funktionswerkstoffe (F	unctional Materials)	Chair of Chemical T	echnology of Material Synthesis	
ECTS		od of grading	Only after succ. com	ıpl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
This mo	odule d	iscusses the theoretical	principles of molecul	ar and soft materials	5.	
Intende	ed learı	ning outcomes				
		e developed a knowledge ge to research problems.	of the principles of n	nolecular and soft m	aterials and are able to apply	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)	
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)	
		sessment (type, scope, la			tion offered — if not every seme-	
presen	tation (approx. 30 minutes) and	examination			
Allocat	ion of p	olaces				
	· · · · ·					
Additio	nal inf	ormation				
Worklo	ad					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Master	Master's degree (1 major) Chemistry (2014)					



Module title					Abbreviation	
Lab Co	urse M	aterials Science			08-FMM-MP-102-m01	
Modul	Module coordinator			Module offered by		
	rs spec	ialisation subject Funktio	onsmaterialien (Fun-		echnology of Material Synthesis	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conter	its					
Ten se	lected 6	experiments in materials	science.			
Intend	ed lear	ning outcomes				
Studer	its have	e developed an advanced	proficiency in the pe	erformance of experi	ments in materials science.	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)	
P (no ii	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	<u>e</u>)	
ster, in Vortes cal per	format tate (pr forman	ion on whether module ca	an be chosen to earn I Nachtestate (post-e	a bonus)	tion offered — if not every seme- 5 minutes), assessment of practi	
Allocat		•				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master	Master's degree (1 major) Chemistry (2013) Master's degree (1 major) Chemistry (2010) Master's degree (1 major) Chemistry (2014)					



Module title Abbreviation					Abbreviation	
Project	Work				08-FMM-PA-102-m01	
Module	e coord	inator		Module offered by		
		search group offering the	module		echnology of Material Synthesis	
ECTS		od of grading	Only after succ. con		eciniology of Material Synthesis	
5		successfully completed		.pu or mounte(s)		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	its					
		ives students the opport findings.	unity to explore a res	earch topic under th	e guidance of a supervisor and to	
Intende	ed learı	ning outcomes				
Studen	its have	e developed an advanced	proficiency in the pe	erformance of experi	ments in materials science.	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)	
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		.5 minutes) and log (appr ssessment: German or Er				
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Master's degree (1 major) Chemistry (2013)						
	Master's degree (1 major) Chemistry (2010)					
Master	Master's degree (1 major) Chemistry (2014)					



Module title Abbreviation					
Materia	al Scie	nces 1 (Principles)			08-FS1-141-m01
Module	coord	inator		Module offered by	
			Functional Materials)		echnology of Material Synthesis
ECTS		od of grading	Only after succ. com		
5		rical grade		•	
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		liscusses the fundamenta rties of materials.	al relations between o	chemical bonding, th	ne structure, the microstructure
Intende	ed lear	ning outcomes			
					al bonding, the structure, the to apply them to research pro-
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	ın)
V + Ü (r	no info	rmation on SWS (weekly o	contact hours) and co	urse language avail	able)
		sessment (type, scope, la			tion offered — if not every seme-
30 minutes or d) log and len	utes) o g (appi igth of	r c) oral examination in g	roups (groups of 2: a ntation (approx. 30 n ourse.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	Workload				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master'	's degr	ee (1 major) Chemistry (2	014)		



Module title					Abbreviation	
Materia	Material Sciences 2 (Materials)				08-FS2-141-m01	
Module	coord	inator		Module offered by		
	_		Functional Materials)		echnology of Material Synthesis	
		od of grading	Only after succ. con		O, ,	
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate				
Content						
		eals with the fabrication	and properties of the	main material grou	ps.	
Intende	d lear	ning outcomes				
		e developed a knowledge knowledge to research pr		d properties of the n	nain material groups and are able	
Courses	s (type	, number of weekly conta	ct hours, language –	if other than Germa	n)	
V + Ü (n	o infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)	
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-	
30 minu or d) log and len	utes) o g (appr gth of	r c) oral examination in g	roups (groups of 2: a ntation (approx. 30 r ourse.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Allocati	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
						
Module appears in						
Master'	Master's degree (1 major) Chemistry (2014)					



Modul	e title				Abbreviation	
Organ	o- and E	Biocatalysis			08-HKM1-141-m01	
Modul	e coord	inator		Module offered by		
lecture	r of the	seminar "Organo- and E	Biokatalyse"	Institute of Organic	Chemistry	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
proces	ses. Or plicatio	ganocatalysis: enantios	elective implementati	on, principles, green	ounds and enzymes in catalytic chemistry, substance classes cts, especially regarding organic	
Intend	ed lear	ning outcomes				
Students are able to categorise organocatalysts and explain their effects and areas of application. They can describe the structure and applications of enzymes in organic synthesis. They are able to mechanistically describe and analyse the effects of enzymes.						
Courses (type, number of weekly contact hours, language — if other than German)						

S (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course.

Language of assessment: German, English

Allocation of places

--

Additional information

__

Workload

--

Teaching cycle

--

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

--

Module appears in



Module title					Abbreviation		
Advanced organometallic chemistry and its application in homogeneous cata-					08-HKM2-141-m01		
lysis							
Module				Module offered by			
1		seminar "Spezielle Meta	_	Institute of Inorgan	ic Chemistry		
		vendung in der Homogen					
ECTS 5		od of grading rical grade	Only after succ. com	ipi. or module(s)			
Duratio		Module level	Other prerequisites				
1 seme		graduate					
Conten		g					
		vaminos alamantany arga	unic compounds of tr	ancition motals with	homogeneous catalytic applica-		
tions.	Juule e	railines elementary orga	inic compounds of the	ansition metats with	nomogeneous catalytic applica-		
Intende	ed lear	ning outcomes					
			structure, reactivity	and analysis of elem	entary organic compounds. They		
					neous catalysis reactions.		
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)		
S (no ir	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)		
Method	d of ass	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-		
ster, in	formati	on on whether module ca	an be chosen to earn	a bonus)			
					e candidate each (approx. 20 to		
					groups of 3: approx. 40 minutes) vill be informed about the type		
		assessment prior to the c		mates). Students w	nt be informed about the type		
		ssessment: German, Eng					
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	Module appears in						
		ee (1 major) Chemistry (2	014)				
	Muster's degree (1 major) enemistry (2014)						



Module	title				Abbreviation	
		se Homogeneous catalys	is in Inorganic Chem	istry	08-HKM3AC-132-m01	
Module	coord	inator		Module offered by		
		seminar "Spezielle Meta	llorganische Chemie	-	ic Chemistry	
		vendung in der Homoger		mistitute of morgan	ic chemistry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	(not) s	successfully completed				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
thods in	n homo stallog	geneous catalysis. The f	ocus will be on cataly xpected to conduct t	st synthesis and ch	synthesis and analytical me- aracterisation, spectral analysis independently, write a lab report	
Intende	ed learı	ning outcomes				
					eneous catalysis in the lab and to dings and deliver a presentation.	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
P (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la on on whether module ca			ation offered — if not every seme-	
		with lab report (approx. ssessment: German or E		pprox. 15 minutes)		
Allocati	ion of p	olaces				
Additio	nal inf	ormation				
Additio	Additional information on module duration: block placement with a duration of a minimum of 20 working days.					
Workload						
Teachir	Teaching cycle					
Referre	d to in	LPO I (examination regu	lations for teaching-o	degree programmes)		

Master's degree (1 major) Chemistry (2013)



Modul	Module title Abbreviation							
Practic	ractical course Homogeneous catalysis in Organic Chemistry 08-HKM3OC-132-mo1							
Modul	e coord	inator		Module offered by	l .			
lecture	r of the	seminar "Spezielle Meta	llorganische Chemie	Institute of Organic	Chemistry			
and de	ren An	wendung in der Homoger	katalyse"					
ECTS		od of grading	Only after succ. con	ıpl. of module(s)				
5		successfully completed						
Duratio		Module level	Other prerequisites					
1 seme	ester	graduate						
Conter	ıts							
thods i	in homo ystallog	ogeneous catalysis. The f	ocus will be on cataly xpected to conduct t	st synthesis and ch	synthesis and analytical me- paracterisation, spectral analysis independently, write a lab report			
Intend	ed lear	ning outcomes						
					eneous catalysis in the lab and to dings and deliver a presentation.			
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	an)			
P (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language availabl	e)			
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-			
		with lab report (approx. essessment: German or E		pprox. 15 minutes)				
Allocat	tion of	places						
Additio	onal inf	ormation						
Additio	nal inf	ormation on module dura	tion: block placemer	nt with a duration of	a minimum of 20 working days.			
Worklo	oad		·					
Teaching cycle								
Referred to in LPO I (examination regulations for teaching-degree programmes)								
				<u> </u>	,			
Modul	e appea	ars in						

Master's degree (1 major) Chemistry (2013) Master's degree (1 major) Chemistry (2014)



Module	Module title Abbreviation						
Advand	ced trai	nsition metal chemistry			o8-HKM4-141-mo1		
Module	e coord	inator		Module offered by			
lecture	r of the	seminar "Spezielle Übe	rgangsmetallchemie"	Institute of Inorgan	ic Chemistry		
ECTS		od of grading	Only after succ. con		,		
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ıts						
nation	chemis				of transition metals and coordidicusses recent developments		
Intend	ed lear	ning outcomes					
		able to explain transition field. They can explain th			monstrating a high degree of exchemistry.		
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	an)		
S (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language availabl	e)		
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-		
30 min or d) lo and ler	utes) o og (app ogth of	r c) oral examination in g	groups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type		
Allocat	ion of	places					
Additio	onal inf	ormation					
Workload							
Teachi	Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						



Module title					Abbreviation
Master-Thesis					08-MA-132-m01
Modul	e coord	linator		Module offered by	
degree	progra	mme coordinator Chem	ie (Chemistry)	Faculty of Chemistry and Pharmacy	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
30	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester graduate Where applicable, specific mo			pecific modules as	specified by supervisor.	
Contents					
This module gives students the opportunity to research and write on a defined problem within a given time frame					

and using the scientific methods they have learned during the programme. **Intended learning outcomes**

Students are able to conduct research on a defined problem/topic, adhering to the principles of good scientific practice, and to present the results of their work in written form.

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

no courses assigned

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written thesis (approx. 60 to 80 pages)

Language of assessment: German or English

Allocation of places

--

Additional information

Additional information on module duration: 6 months.

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)



Module title					Abbreviation	
Practic	al cour	se medicinal chemistry			08-MCM1-102-m01	
Module	e coord	inator		Module offered by		
lecture mistry)		mazeutische Chemie (Ph	armaceutical Che-	Institute of Pharma	cy and Food Chemistry	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
10	(not)	successfully completed				
Duratio		Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
Selecte	ed meth	nods and topics in medic	inal chemistry (synth	esis, testing, analysi	is, theory, pharmacokinetics).	
Intend	ed lear	ning outcomes				
Studen	its have	e developed a knowledge	of medicinal chemis	try and are able to a	pply it to practical experiments.	
Course	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	2)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
of prac	tical pe	e-experiment exams) and erformance, written repor ssessment: German or El	t (approx. 30 to 50 pa		pprox. 20 minutes), assessment	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Module appears in						
	Master's degree (1 major) Chemistry (2013)					
	Master's degree (1 major) Chemistry (2010)					
	_	ee (1 major) Chemistry (2	•			
Master	Master's degree (1 major) FOKUS Pharmacy (2012)					



Module title					Abbreviation		
Pharm	aceutio	cal/Medicinal Chemistry	1		08-MCM2a-141-m01		
Modul	e coord	linator		Module offered by			
lecture		rmazeutische Chemie (Ph	armaceutical Che-	Institute of Pharma	cy and Food Chemistry		
ECTS		od of grading	Only after succ. con	npl. of module(s)			
5	nume	erical grade					
Durati	on	Module level	Other prerequisites				
1 sem	ester	graduate					
Conte	nts						
structo in the drug d	ure-acti module evelopi	vity relationships; molecte; drug analysis; drug syn ment: discussion of spec	ular effect mechanisn thesis; biotransforma	ns; pharmacological	gies for active agent discovery; principles of the drugs discussed tics of individual drugs; history o		
Intend	led lear	ning outcomes					
Stude	nts hav	e developed a knowledge	of pharmaceutical/r	nedicinal chemistry.			
Course	es (type	e, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
V (no i	nforma	tion on SWS (weekly con	act hours) and cours	e language available	2)		
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-		
30 mir or d) lo	nutes) o og (app	or c) oral examination in g	roups (groups of 2: a entation (approx. 30 r	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type		
Alloca	tion of	places					
Additi	onal inf	formation					
Workl	oad						
Teach	Teaching cycle						
Referr	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appe	ars in					
		ree (1 major) Chemistry (2	014)				
music	i Jucgi	ce (I major) chemistry (2	·4)				



Module coordinator lecturers Pharmazeutische Chemie (Pharmaceutical Chemistry) Institute of Pharmacy and Food Chemistry	Module title					Abbreviation		
lecturers Pharmazeutische Chemie (Pharmaceutical Chemistry) Institute of Pharmacy and Food Chemistry mistry)	Pharmaceutical/Medicinal Chemistry 2					08-MCM2b-141-m01		
Recturers Pharmazeutische Chemie (Pharmaceutical Chemistry) RECTS Method of grading Only after succ. compt. of module(s) numerical grade	Modul	e coord	inator		Module offered by			
Duration Module level Other prerequisites 1 semester graduate	lecture mistry)		mazeutische Chemie (Ph	armaceutical Che-	Institute of Pharma	cy and Food Chemistry		
Duration Module level graduate	ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)			
Contents Chemistry of drugs by field of indication; principles of drug development, strategies for active agent discovery; structure-activity relationships; molecular effect mechanisms; pharmacological principles of the drugs discusse in the module; drug analysis; drug synthesis; biotransformation, pharmacokinetics of individual drugs; history of drug development: discussion of specific examples. Intended learning outcomes Students have developed a knowledge of pharmaceutical/medicinal chemistry. Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places	5	nume	rical grade					
Contents Chemistry of drugs by field of indication; principles of drug development, strategies for active agent discovery; structure-activity relationships; molecular effect mechanisms; pharmacological principles of the drugs discusse in the module; drug analysis; drug synthesis; biotransformation, pharmacokinetics of individual drugs; history of drug development: discussion of specific examples. Intended learning outcomes Students have developed a knowledge of pharmaceutical/medicinal chemistry. Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places	Duratio	on	Module level	Other prerequisites				
Chemistry of drugs by field of indication; principles of drug development, strategies for active agent discovery; structure-activity relationships; molecular effect mechanisms; pharmacological principles of the drugs discusse in the module; drug analysis; drug synthesis; biotransformation, pharmacokinetics of individual drugs; history of drug development: discussion of specific examples. Intended learning outcomes Students have developed a knowledge of pharmaceutical/medicinal chemistry. Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places	1 seme	ster	graduate					
structure-activity relationships; molecular effect mechanisms; pharmacological principles of the drugs discusse in the module; drug analysis; drug synthesis; biotransformation, pharmacokinetics of individual drugs; history of drug development: discussion of specific examples. Intended learning outcomes Students have developed a knowledge of pharmaceutical/medicinal chemistry. Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places	Conter	ıts						
Students have developed a knowledge of pharmaceutical/medicinal chemistry. Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places	structuin the i	ire-activ module evelopr	vity relationships; molecu; drug analysis; drug synt nent: discussion of speci	ular effect mechanisn thesis; biotransforma	ns; pharmacological	principles of the drugs discussed		
Courses (type, number of weekly contact hours, language — if other than German) V (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places Additional information Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in		-						
Wethod of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places			· · · · · · · · · · · · · · · · · · ·		•			
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places Additional information Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
ster, information on whether module can be chosen to earn a bonus) a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (approx. 20 to 30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places Additional information Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	V (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)		
30 minutes) or c) oral examination in groups (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes). Students will be informed about the type and length of assessment prior to the course. Allocation of places Additional information Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in						tion offered — if not every seme-		
Additional information Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	30 min or d) lo	utes) o og (appi	r c) oral examination in g rox. 20 pages) or e) prese	roups (groups of 2: a entation (approx. 30 r	pprox. 30 minutes, g	groups of 3: approx. 40 minutes)		
Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Allocat	tion of _I	places					
Workload Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in								
Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Additio	onal inf	ormation					
Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in								
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Worklo	ad						
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in								
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Teaching cycle							
Module appears in								
Module appears in	Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
· · · · · · · · · · · · · · · · · · ·								
· · · · · · · · · · · · · · · · · · ·	Module	Module appears in						
Masici s aceice it major citellistiv (2014)		Master's degree (1 major) Chemistry (2014)						



Modul	Module title Abbreviation					
Princip	Principles of drug design 08-MCM ₃ -1 ₃₂ -mo ₁					
Modul	e coord	inator		Module offered by		
lecture mistry)		mazeutische Chemie (Ph	armaceutical Che-	Institute of Pharma	cy and Food Chemistry	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conte	ıts					
turally copho QSAR.	occurri re mode Predict	ng substances. Theoretic els, docking, virtual scree	al methods: molecul ning, simulation met	ar modelling, structu thods, de novo desig	HTS, combinatorial chemistry, naure-based drug design, pharmagn. Ligand-based drug design. ase examples, prodrug strate-	
Intend	ed lear	ning outcomes				
Studer	nts mas	ter the theoretical and ex	perimental methods	and aspects of drug	design.	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
S + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-	
		with discussion (approx. ssessment: German or E				
Alloca	tion of	olaces	. -			
	,					
Additio	onal inf	ormation				
Workle	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) Chemistry (2013)					
Maste	Master's degree (1 major) Chemistry (2014)					



Modul	e title	,			Abbreviation		
Chemi	cally ar	d bio-inspired Nanotech	nology for Material S	synthesis	08-NTM-141-m01		
Modul	e coord	inator		Module offered by	I.		
holder thesis	of the	Chair of Chemical Techno	logy of Material Syn-	Chair of Chemical T	echnology of Material Synthesis		
ECTS		od of grading	Only after succ. con	npl. of module(s)			
5	nume	rical grade					
Durati	on	Module level	Other prerequisites				
1 seme	ester	undergraduate					
Conte	nts						
of ana	lysis us		nerated materials. It	also discusses the f	istry and discusses the methods undamental principles of biomisynthesis.		
Intend	ed lear	ning outcomes					
Studer	nts have	e developed an advanced	knowledge of sol-ge	l chemistry and bior	mineralisation.		
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)		
V + V (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-		
30 mir or d) lo	nutes) o og (app	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type		
Alloca	tion of	places					
Additio	onal inf	ormation					
Worklo	oad						
Teachi	ing cycl	e					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	Module appears in						
	Master's degree (1 major) Chemistry (2014)						



Modul	Module title Abbreviation					
Advan	ced Res	earch Project			08-0CM-AKP1-122-m01	
Modul	Module coordinator			Module offered by		
head o	of the re	search group offering the	module	Institute of Organic	Chemistry	
ECTS		od of grading	Only after succ. con			
5		successfully completed		•		
Duratio	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
		rives students the opport of Organic Chemistry and			f the research groups based at ytical methods.	
Intend	ed lear	ning outcomes				
		able to describe and use well as to describe theor		s and analytical met	hods typically used by the rese-	
Course	es (type	, number of weekly conta	ct 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-	
		15 minutes) and log (appr ssessment: German or E				
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
	1					
Teachi	ng cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	Module appears in					
	Master's degree (1 major) Chemistry (2013)					
	Master's degree (1 major) Chemistry (2014)					



Module	Module title Abbreviation					
Organi	c Funct	ional Materials			08-OCM-FM-141-m01	
Module	e coord	inator		Module offered by		
		seminar "Organische Fui	nktionsmaterialien"		Chemistry	
ECTS		od of grading	Only after succ. con		Chemistry	
5		rical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ıts					
sical ef	ffects ir nents s	n organic molecular and p	olymeric semicondu	ctors as well as their	is on fundamental (photo)phy- r application in (opto)electronic ganic solar cells as well as in non-	
Intend	ed lear	ning outcomes				
ents su near of	ich as f		ganic light-emitting d	iodes or in organic p	ion in (opto)electronic compon- photovoltaics as well as in nonli- un)	
		tion on SWS (weekly cont				
Metho	d of ass	•	nguage — if other tha	an German, examina	tion offered — if not every seme-	
30 min or d) lo and ler	utes) o g (appi ngth of	r c) oral examination in g	roups (groups of 2: a ntation (approx. 30 r ourse.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type	
Allocat	ion of	places				
Additio	nal inf	ormation				
Workload						
Teachi	Teaching cycle					
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		



Modul	Module title Abbreviation					
Moder	n Aspe	cts of Natural Product Ch	emistry and Biologic	al Chemistry	08-0CM-NAT-141-m01	
Modul	e coord	inator		Module offered by		
		seminar		Institute of Organic	Chemistry	
ECTS	1	od of grading	Only after succ. com			
5		rical grade		•		
Durati	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conte	nts					
This m	odule c	liscusses advanced topic	s in natural product o	themistry and biolog	gical chemistry.	
Intend	ed lear	ning outcomes				
Stude	nts are a	able to discuss advanced	topics in natural pro	duct chemistry and	biological chemistry.	
Course	es (type	, number of weekly conta	ct hours, language –	if other than Germa	an)	
S (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-	
30 mir or d) lo and le	nutes) o og (app ngth of	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Alloca	tion of	olaces				
Chemi	stry Ma	ster's: no restrictions. Bio	ochemistry Master's:	20 places. Places w	ill be allocated by lot.	
Additi	onal inf	ormation				
Workle	oad					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Chemistry (2014)						



Module title Abbreviation					Abbreviation	
Advanced NMR- and Mass Spectrometry					08-OCM-NMRMS-141-m01	
Module coordinator				Module offered by		
		pervisor		Institute of Organic	Chemistry	
ECTS		od of grading	Only after succ. com			
5		rical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conten	nts					
sights	into the		the two measuring to	echniques and inclu	ectrometry. It offers deeper indes exercises that give students meter.	
Intend	ed lear	ning outcomes				
		able to discuss NMR and to experiment with both s			degree of expertise in the field.	
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	2)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
30 min or d) lo and ler	utes) o og (app ngth of	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
		(
Module	e appea	ars in				
	Module appears in					



Module	e title				Abbreviation		
Modern Synthetic Methods 08-OCM-SYNT-141-mo1							
Module	e coord	inator		Module offered by			
lecture	r of the	seminar		Institute of Organic	Chemistry		
ECTS	Metho	od of grading	Only after succ. con		,		
5	nume	rical grade					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
		liscusses modern stereos emistry and catalysis.	selective synthesis m	ethods. It focuses o	n selected total syntheses, orga-		
Intend	ed lear	ning outcomes					
	an expl	ain total syntheses. They			stereochemically analyse them. chemistry and catalysis in synthe-		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
S + Ü (1	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la			ntion offered — if not every seme-		
30 min or d) lo and ler	utes) o g (appi igth of	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						
Teachi	ng cycl	e					
	.3 -, -,	-					
Referre	d to in	LPO I (examination regu	lations for teaching-	legree nrogrammes)			
	u to III	Li O i (examination regu	tations for teaching-t	regice programmes)			
	·						



Module	e title	'			Abbreviation	
Laser Spectroscopy					08-PCM1a-132-m01	
Module	Module coordinator			Module offered by	<u> </u>	
lecture copy)	r of ser	ninar "Laserspektroskop	ie" (Laser Spectros-	<u> </u>	l and Theoretical Chemistry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5		rical grade				
Duratio	n	Module level	Other prerequisites	i		
1 seme	ster	graduate				
Conten	ts					
		ntroduces students to the spectroscopy.	e fundamental princi	oles of laser spectro	scopy. It discusses absorption	
Intend	ed lear	ning outcomes				
		able to explain the comp ology. They are able to d			as well as the optical principles	
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	an)	
S + Ü (ı	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		sessment (type, scope, l			ntion offered — if not every seme-	
		nation (90 minutes) or o ssessment: German or E		ninutes)		
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad		1,			
Teachi	ng cvcl	e				
	<u> </u>					
Referre	ed to in	LPO I (examination reg	ulations for teaching-	degree programmes)		
Module	e appea	ars in				
		ee (1 major) Chemistry (2	2013)			
	Master's degree (1 major) Chemistry (2014)					



Module title					Abbreviation	
Advanced Physical Chemistry (Lab)					08-PCM1b-132-m01	
Module	e coord	inator		Module offered by		
lecturer of seminar "Laserspektroskopi copy)		ie" (Laser Spectros-	Institute of Physical and Theoretical Chemistry			
ECTS	Meth	od of grading	Only after succ. con	Only after succ. compl. of module(s)		
5	(not)	successfully completed				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
	_	•	•	•	ds in physical chemistry in the lats in the lats in the laboratory. Students wi	

Intended learning outcomes

Students have developed a high level of proficiency in modern experimental methods in physical chemistry. They are able to analyse the resulting measurements and write a lab report.

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

be expected to take tests and write lab reports to demonstrate their knowledge.

P (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Vortestate (pre-experiment exams) and Nachtestate (post-experiment exams) (approx. 15 minutes) and log (approx. 15 pages)

Language of assessment: German or English

Allocation of places

--

Additional information

Additional information on module duration: block placement with a duration of a minimum of 20 working days.

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)



Module	e title				Abbreviation	
Chemical Dynamics					08-PCM2-102-m01	
Module	e coord	inator		Module offered by		
	_	ninar "Chemische Dynam	ik" (Chemical Dyna-		l and Theoretical Chemistry	
mics)		<u>, </u>	,	,	,	
ECTS		od of grading	Only after succ. com	ıpl. of module(s)		
5	L	rical grade	 			
Duratio		Module level	Other prerequisites			
1 seme		graduate	<u> </u>			
Conten						
					ical kinetics and reaction dyna- cribing chemical reactions.	
		ning outcomes		<u> </u>	<u> </u>	
			topics in chemical k	inetics and reaction	dynamics. They can describe me-	
		dels for the investigation			,	
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	n)	
S + Ü (ı	no info	rmation on SWS (weekly o	contact hours) and co	urse language avail	able)	
			-		tion offered — if not every seme-	
-		ion on whether module ca		•		
		ssessment: German or Ei		e candidate each (20	o minutes) or talk (30 minutes)	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
	1					
Worklo	ad					
Teachi	ng cycl	e				
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)		
Module	e appea	ars in				
	_	ee (1 major) Chemistry (2	٥,			
	_	ee (1 major) Chemistry (2				
Master	Master's degree (1 major) Chemistry (2014)					

Master's degree (1 major) Mathematics (2012)

Master's degree (1 major) Computational Mathematics (2012)



Module title Abbreviation						
Nanoscale Materials					08-PCM3-102-m01	
Module coordinator Module offered by						
lecture	lecturer of the seminar "Nanoskalige Materialien"			Institute of Physical and Theoretical Chemistry		
ECTS	Meth	od of grading	Only after succ. co	Only after succ. compl. of module(s)		
5	numerical grade					
Duratio	Duration Module level		Other prerequisite	Other prerequisites		
1 seme	1 semester graduate					
Conten	Contents					

This module discusses advanced topics in nanoscale materials. It focuses on the structure, properties, fabrication, modern characterisation methods and application areas of nanoscale materials.

Intended learning outcomes

Students are able to characterise nanoscale materials. They are able to name analytical methods and application areas of nanoscale materials.

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

S + Ü (no information on SWS (weekly contact hours) and course language available)

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

written examination (90 minutes) or oral examination of one candidate each (20 minutes) or talk (30 minutes) Language of assessment: German or English

Allocation of places

--

Additional information

--

Workload

--

Teaching cycle

--

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

--

Module appears in

Bachelor' degree (1 major) Nanostructure Technology (2010)

Bachelor' degree (1 major) Nanostructure Technology (2012)

Master's degree (1 major) Chemistry (2013)

Master's degree (1 major) Chemistry (2010)

Master's degree (1 major) Chemistry (2014)

Master's degree (1 major) Mathematics (2012)

Master's degree (1 major) Computational Mathematics (2012)

Master's degree (1 major) Functional Materials (2012)



Modul	le title				Abbreviation
Ultrafast spectroscopy and quantumcontrol					o8-PCM4-141-mo1
Modul	le coord	linator		Module offered by	
	er of the enkont	e seminar "Ultrakurzzei rolle"	tspektroskopie and	Institute of Physica	l and Theoretical Chemistry
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	nume	erical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	graduate	Prior successful con ly recommended.	npletion of modules	o8-PCM1a and o8-PCM1b is high-
Conte	nts				
			pics in ultrafast spectro ectroscopy and coheren		control. It focuses on ultrashort
Intend	led lear	ning outcomes			
plain t princi	the theo	ory of time-resolved las d applications of quant	er spectroscopy and na cum control.	me experimental me	naracterise them. They can exethods. They can describe the
		•	ntact hours, language –		•
		· -	ly contact hours) and co		·
			, language — if other the e can be chosen to earn		ition offered — if not every seme-
(appro	ох. 30 m	nation (approx. 90 min ninutes) assessment: German, E		on of one candidate	each (approx. 20 minutes) or talk
Alloca	tion of	places			
			·		
Additi	onal in	formation			
Workl	oad				
Teach	ing cyc	le			
Referr	ed to in	LPO I (examination re	gulations for teaching-	degree programmes)	
Modul	le appe	ars in			
		ree (1 major) Chemistry	(2014)		
		•	*		



Modul	e title				Abbreviation
Physical chemistry of supramolecular assemblies					08-PCM5-141-m01
Modul	e coord	inator		Module offered by	
	r of the r Strukt	seminar "Physikalische uren"	Chemie Supramole-	Institute of Physica	l and Theoretical Chemistry
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			
Conter	nts				
		examines the basic intera of aggregates as well as			he formation and physical-cheministry.
Intend	ed lear	ning outcomes			
in the f	field. Th		ation and physical-c		trating a high degree of expertise of aggregates. They can name mo-
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
S + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
(appro	x. 30 m	nation (approx. 90 minut inutes) Issessment: German, Eng		on of one candidate	each (approx. 20 minutes) or talk
Allocat		_			
Additio	onal inf	ormation			
Worklo	oad				
Teachi	ng cycl	e			
Referre	ed to in	LPO I (examination regu	lations for teaching-	degree nrogrammes)	
	<u> </u>	L. J. (CAUIIIIIation legu	tations for teaching-t	actice programmes)	
Modul	e appea	ars in			
	<u> </u>	ee (1 major) Chemistry (2	014)		
	2 4551	co (1 major) chemistry (2	~/		



Module title Abbreviation					
Physical Chemistry (Advanced Lab) 08-PCM6-132-m01					
Module coordinator	Module offere	d by			
ecturers Physikalische Chemie (Physical Chemistry)	Institute of Ph	ysical and Theoretical Chemistry			
	c. compl. of module(s)			
(not) successfully completed 08-PCM1					
Duration Module level Other prerequ	sites				
ı semester graduate					
Contents					
This module gives students the opportunity to get invo the Institute of Physical Chemistry and learn some adv					
Intended learning outcomes					
Students have become proficient in the research metharch group. They are able to analyse their findings and	, ,	, , ,			
Courses (type, number of weekly contact hours, langu	age — if other than C	German)			
P (no information on SWS (weekly contact hours) and	course language ava	ilable)			
Method of assessment (type, scope, language — if other, information on whether module can be chosen to		ımination offered — if not every seme-			
presentation (approx. 20 minutes) Language of assessment: German or English					
Allocation of places					
-					
Additional information					
Additional information on module duration: block pla	ement with a duration	on of a minimum of 20 working days.			
Workload		<u> </u>			
-					
Teaching cycle					
Referred to in LPO I (examination regulations for teac	ning-degree nrogram	ıması			
	ing degree program	inics)			

Master's degree (1 major) Chemistry (2013) Master's degree (1 major) Chemistry (2014)



Module	Module title Abbreviation					
Clinica	l and A	nalytical Chemistry			08-PH-KAC-092-m01	
Module	coord	inator		Module offered by		
		ture "Klinisch-analytische l Chemistry)	e Chemie" (Clinical	Institute of Pharma	cy and Food Chemistry	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
This mo	odule d	liscusses advanced topic	s in clinical analytica	l chemistry.		
Intende	ed lear	ning outcomes				
Studen	ts have	e developed an advanced	l knowledge of molec	ular biology.		
Course	s (type	, number of weekly conta	ıct hours, language –	- if other than Germa	ın)	
V (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	2)	
ster, in	formati	sessment (type, scope, la ion on whether module c nation (120 minutes)			tion offered — if not every seme-	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	d to in	LPO I (examination regu	lations for teaching-	degree programmes)		
Module	appea	ars in				
Master	Master's degree (1 major) Biochemistry (2012) Master's degree (1 major) Chemistry (2013) Master's degree (1 major) Chemistry (2010)					
	_	ee (1 major) Chemistry (2				



Module title Ab					Abbreviation
Clinica	l and A	nalytical Chemistry (prac	ctical course)		08-PH-KACP-092-m01
Modul	e coord	inator		Module offered by	
		ture "Klinisch-analytische l Chemistry)	e Chemie" (Clinical	Institute of Pharma	cy and Food Chemistry
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5		successfully completed		<u> </u>	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conter	ıts				
This m		overs practical topics in	clinical chemistry and	d clinical diagnostics	s as well as the related analytical
Intend	ed lear	ning outcomes			
Studer ments.		e developed a knowledge	of clinical analytical	chemistry and are a	ble to apply it to practical experi-
Course	s (type	, number of weekly conta	ıct hours, language –	- if other than Germa	ın)
P (no ii	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la			tion offered — if not every seme-
examir	nation t	alks (Testate, approx. 15	minutes each), log (a	pprox. 5 to 10 pages	s)
Allocat	ion of	places			
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
	_				
Referre	ed to in	LPO I (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
Master	's degr	ee (1 major) Biochemistry	/ (2012)		
	_	ee (1 major) Chemistry (2			
	_	ee (1 major) Chemistry (2			
Master	's degr	ee (1 major) Chemistry (2	014)		



Module title					Abbreviation
Supramolecular Chemistry (Basics)					08-SCM1-102-m01
Module	e coord	inator		Module offered by	
lecture	r of lect	ture "Organischen Ch	emie"	Faculty of Chemistr	y and Pharmacy
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites	<u> </u>	
1 seme	ster	graduate			
Conten	ts				
Intendo Studen field as	ed lear ets are a s well a	s to describe the form	ctions between molecule	ymers of coordinatio	igh degree of expertise in the n compounds. They are able to the characteristics of synthetic
			ern applications of supra		
Course	s (type	, number of weekly co	ontact hours, language –	- if other than Germa	ın)
S (no ir	nformat	tion on SWS (weekly	contact hours) and cours	e language available	e)
			e, language — if other th le can be chosen to earn		ition offered — if not every seme
		nation (approx. 90 m ssessment: German (on of one candidate	each (approx. 20 minutes)
Allocat	ion of p	olaces			

--

Workload

--

Teaching cycle

--

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

--

Module appears in

Master's degree (1 major) Chemistry (2013)

Master's degree (1 major) Chemistry (2010)

Master's degree (1 major) Chemistry (2014)

Master's degree (1 major) Functional Materials (2012)



Module	Module title Abbreviation						
Supran	nolecul	ar Chemistry (Practical C		08-SCM2-102-m01			
Module	e coord	inator		Module offered by			
		ture "Supramolekularen (kalische Chemie)"	Chemie (Organische	Faculty of Chemistr	y and Pharmacy		
ECTS		od of grading	Only after succ. com	pl. of module(s)			
5	(not)	successfully completed					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
mistry.	They w		host-guest complexes		ents in supramolecular che- d nanoparticles and use advan-		
Intende	ed lear	ning outcomes					
		able to perform syntheses hem. They are able to pro			roscopic methods to analyse and hem microscopically.		
Course	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	2)		
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
		., logs (approx. 5 pages e ssessment: German or E					
Allocat	ion of p	olaces	•				
Additio	nal inf	ormation					
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) Chemistry (2013)						
	Master's degree (1 major) Chemistry (2010)						
Master	Master's degree (1 major) Chemistry (2014)						



Module	Module title Abbreviation					
Bioorganic Chemistry				•	08-SCM3-141-m01	
Module	e coord	inator		Module offered by		
lecture Chemis		ture "Bioorganische Cher	nie" (Bioorganic	Institute of Organic	Chemistry	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
lar inte	raction	•		,	medicine. It focuses on molecunew aspects of DNA, RNA, prote-	
Intend	ed lear	ning outcomes				
can exp	olain th		oiological systems. T	ney can characterise	s of bioorganic chemistry. They the fabrication of agents. They	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)	
S (no ir	nforma	tion on SWS (weekly cont	tact hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
30 min or d) lo and ler	utes) o g (app igth of	r c) oral examination in g	roups (groups of 2: a entation (approx. 30 r course.	pprox. 30 minutes, §	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Allocat	ion of	places				
Additio	nal inf	ormation				
			•			
Worklo	ad					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
	Module appears in					
module appeals in						



Modul	Module title Abbreviation					
Theore	Theoretical Chemistry - Project course wave-packet dynamics 08-TCAP _{1-132-m01}					
Modul	e coord	inator		Module offered by		
head o	of the re	search group offering the	e module	Institute of Physica	ll and Theoretical Chemistry	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	graduate				
Conter	nts					
the Ins	titute o				f the research groups based at used in the discipline. The focus	
Intend	ed learı	ning outcomes				
		e learned some of the me ics. They are able to expl			stry and, in particular, in wave f wave packet dynamics.	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
P (no i	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la			ation offered — if not every seme-	
		approx. 30 minutes) ssessment: German or Eı	nglish			
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Additio	onal info	ormation on module dura	tion: 4 weeks.			
Worklo	_		,			
Teachi	ng cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master	Master's degree (1 major) Chemistry (2013)					
Master	Master's degree (1 major) Chemistry (2014)					



Module title Abbreviation					Abbreviation	
Theoretical Chemistry - Project coursewave function based methods 08-TCAP2-132-m01					08-TCAP2-132-m01	
Modul	e coord	inator		Module offered by	y	
head o	of the re	search group offering the	e module	Institute of Physic	cal and Theoretical Chemistry	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites	i .		
1 seme	ester	graduate				
Conter	ıts					
the Ins	stitute o				of the research groups based at used in the discipline. The focus	
Intend	ed lear	ning outcomes				
					nistry and, in particular, in wave of wave function methods.	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Gern	nan)	
P (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language availab	ole)	
		sessment (type, scope, la ion on whether module c			nation offered — if not every seme-	
		(approx. 30 minutes) ssessment: German or E	nglish			
Allocat	tion of	olaces				
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	ation: 4 weeks.			
Worklo						
	ı					
Teachi	ng cycl	e				
Referre	ed to in	LPO I (examination regu	llations for teaching-	degree programme	s)	
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Chemistry (2013)					
	Master 5 degree (1 major) entrinistry (2015)					



Module title Abbreviation					Abbreviation
Theore	etical Cl	nemistry - Project course	Computational Phot	ochemistry	08-TCAP3-132-m01
Modul	e coord	inator		Module offered by	,
head o	of the re	search group offering the	e module	Institute of Physic	al and Theoretical Chemistry
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	graduate			
Conten	ıts				
the Ins	stitute o				of the research groups based at used in the discipline. The focus
Intend	ed lear	ning outcomes			
					istry and, in particular, in theoretidof theoretical photochemistry.
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germ	an)
P (no ii	nformat	tion on SWS (weekly cont	act hours) and cours	e language availabl	le)
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
		(approx. 30 minutes) ssessment: German or E	nglish		
Allocat	tion of p	places			
Additio	onal inf	ormation			
Additio	onal inf	ormation on module dura	ntion: 4 weeks.		
Worklo					
Teachi	ng cvcl	e			
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Chemistry (2013)				



Module title					Abbreviation	
Theoretical Chemistry (Basics)					08-TCM1-141-m01	
Module coordinator				Module offered by		
lecture	r of lect	ure "Theoretische Chemi	e"		l and Theoretical Chemistry	
ECTS		od of grading	Only after succ. com	· · · · · · · · · · · · · · · · · · ·	,	
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
This mo	odule ir	ntroduces students to the	fundamental princip	oles of theoretical ch	emistry.	
Intende	ed learı	ning outcomes				
		able to describe the math amical approaches of the		al principles underly	ing the quantum chemical and	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
S + Ü (r	o infor	mation on SWS (weekly o	contact hours) and co	urse language avail	able)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
30 minu or d) log and len	utes) o g (appr gth of	r c) oral examination in g	roups (groups of 2: a ntation (approx. 30 n ourse.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type	
Allocati	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master'	Master's degree (1 major) Chemistry (2014)					



Module	Module title Abbreviation						
Computational Chemistry					08-TCM2-141-m01		
Module coordinator				Module offered by			
		ture "Computational Che	mistrv"	•	l and Theoretical Chemistry		
ECTS		od of grading	Only after succ. com		t and medical architecty		
5		rical grade		,			
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
This mo	odule ir	ntroduces students to the	e fundamental princip	oles of computation	al chemistry.		
Intende	ed learı	ning outcomes					
		able to explain the theore emistry.	tical principles of co	mputational chemis	try and to apply methods in com-		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)		
S + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-		
30 minutes or d) logand len	utes) o g (appr igth of	r c) oral examination in g	roups (groups of 2: a ntation (approx. 30 r ourse.	pprox. 30 minutes, g	e candidate each (approx. 20 to groups of 3: approx. 40 minutes) will be informed about the type		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Master'	Master's degree (1 major) Chemistry (2014)						



Module title					Abbreviation		
Programming in Theoretical Chemistry					o8-TCM3-102-m01		
Modul	e coord	linator		Module offered by			
		,	T	 			
mie"	er of lec	ture "Programmieren i	n Theoretischer Che-	Institute of Physica	l and Theoretical Chemistry		
ECTS		od of grading	Only after succ. cor	mpl. of module(s)			
5	nume	rical grade					
Duration	on	Module level	Other prerequisites	5			
1 seme	ester	graduate					
Conter	ıts						
		provides an introduction	on to the fundamentals	of programming in th	neoretical chemistry and discus-		
Intend	ed lear	ning outcomes					
		able to explain and us		ng languages typical	ly used in theoretical chemistry		
Course	es (type	, number of weekly co	ntact hours, language -	– if other than Germa	an)		
S + Ü (no info	rmation on SWS (week	kly contact hours) and c	ourse language avail	able)		
ster, in	format etion a	ion on whether modul nd discussion of appro	e can be chosen to earr ox. 5 programming exerc	n a bonus)	ation offered — if not every seme- (approx. 45 minutes)		
	tion of	assessment: German o	or English				
Alloca	LIOII OI	piaces					
V 4 4;+;	onal inf	ormation					
Additio	onat mi	Officiation					
Worklo	nad						
Teachi	ng cyc	Α					
	iig cyc						
	ed to in	LPO I (examination re	egulations for teaching-	degree programmes			
	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	Module appears in						
		ree (1 major) Chemistry	/ (2013)				
	Master's degree (1 major) Chemistry (2010)						
	Master's degree (1 major) Chemistry (2014)						
	Master's degree (1 major) Mathematics (2012)						
Master	Master's degree (1 major) Mathematics (2010)						
AA 4	Martine de una (a maia) Communication el Martine (a						

Master's degree (1 major) Computational Mathematics (2012)



Module title Abbreviation					Abbreviation
Advand	ced che	emical practical course			08-VPM-DA-132-m01
Modul	e coord	inator		Module offered by	
		search group offering the	module	Faculty of Chemistr	v and Pharmacy
ECTS		od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	,,
2	(not)	successfully completed		•	
Duratio	on	Module level	Other prerequisites		
1 seme	ester	graduate			
Conter	ıts				
		rives students the opport ne in question.	unity to explore a res	earch topic and app	ly the methods commonly used
Intend	ed lear	ning outcomes			
	nts are a		research topic and p	resent the results of	their work in a written report or
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	e)
		sessment (type, scope, la ion on whether module ca			ition offered — if not every seme-
		(approx. 3 pages) Issessment: German, Eng	lish		
Allocat	tion of	places			
Additio	onal inf	ormation			
	-1				
Worklo	oad				
Teachi	ng cycl	e			
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master	Master's degree (1 major) Chemistry (2013) Master's degree (1 major) Chemistry (2014)				



Module title					Abbreviation	
Course	Courses at the partner university				08-VPU-141-m01	
Modul	e coord	inator		Module offered by	<u> </u>	
progra	mme co	oordinator of the exchang	ge programme	Faculty of Chemistr	y and Pharmacy	
ECTS		od of grading	Only after succ. con		,	
30	(not)	successfully completed				
Duration	on	Module level	Other prerequisites			
2 seme	ester	graduate	Please consult with	course advisory serv	vice.	
Conter	nts		,			
This m	odule d	liscusses topics from the	curriculum of the pa	rtner university abro	ad.	
Intend	ed lear	ning outcomes				
Studer sity.	nts have	e developed the knowled	ge and skills taught i	n the courses attend	led by them at the partner univer-	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
V (no i	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
assess on (ap examin	nformat sment o prox. 9 nation i assessi	ion on whether module ca or successful completion a o to 180 minutes) or b) or	an be chosen to earn as certified by the lec al examination of on prox. 30 minutes); st	a bonus) turer; methods of as e candidate each (ap	sessment: a) written examinatioprox. 20 to 30 minutes) or c) oral ned about the method and length	
	tion of		-3			
Additio	onal inf	ormation				
Worklo	oad					
Teachi	ing cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
Master	Master's degree (1 major) Chemistry (2013)					
Maste	Master's degree (1 major) Chemistry (2014)					



Module	Module title Abbreviation						
Tutorin	g 1 (pra	actical course)			08-WRM1-132-m01		
Module	coord	inator		Module offered by	L		
Dean of	f Studie	es Chemie (Chemistry)		Faculty of Chemistr	y and Pharmacy		
ECTS		od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	,		
5	(not) s	successfully completed					
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate	,	tted. The exercise m	arch assistant contract for this lust accompany a different course		
Conten	tc		than the exercise he	eta III module 08-wk	IW12.		
		ives students the ennert	unity to toach a tutor	ial accompanying a	lecture offered by the Faculty of		
		Pharmacy and learn how					
Intende	ed learı	ning outcomes					
Studen needs.	ts are a	able to teach students in	earlier stages of thei	r degrees and tailor	their teaching to those students'		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)		
Ü (no ir	nformat	tion on SWS (weekly cont	tact hours) and cours	e language available	e)		
		sessment (type, scope, la on on whether module ca			ation offered — if not every seme-		
		materials for demonstra ssessment: German or E		approx. 120 hours to	otal)		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						
Teachir	ng cycl	e					
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
	Master's degree (1 major) Chemistry (2013)						
Master'	Master's degree (1 major) Chemistry (2014)						



Module title Abbreviation					Abbreviation	
Tutorin	Tutoring 2 (practical course)				08-WRM2-132-m01	
Module	coord	inator		Module offered by		
		es Chemie (Chemistry)		Faculty of Chemistr	v and Pharmacy	
ECTS		od of grading	Only after succ. con		y und i namiaey	
5		successfully completed		1		
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate	,	tted. The exercise m	arch assistant contract for this nust accompany a different course M1.	
Conten	ts					
		ives students the opport I Pharmacy and learn hov			lecture offered by the Faculty of an appropriate manner.	
Intende	ed lear	ning outcomes				
Studen needs.	ts are a	able to teach students in	earlier stages of thei	r degrees and tailor	their teaching to those students'	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	an)	
Ü (no ir	nforma	tion on SWS (weekly cont	tact hours) and cours	e language available	e)	
		sessment (type, scope, la on on whether module ca			ation offered — if not every seme-	
		f materials for demonstra ssessment: German or E		approx. 120 hours to	otal)	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachir	ng cycl	e	,			
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
	Master's degree (1 major) Chemistry (2013)					
Master'	Master's degree (1 major) Chemistry (2014)					