

Module Catalogue for the Module studies (Bachelor)

Functional Materials

Examination regulations version: 2020 Responsible: Faculty of Chemistry and Pharmacy Responsible: Chair of Chemical Technology of Material Synthesis



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The subject is divided into

section / sub-section		starting page
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Abbreviations used

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

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

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

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

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

Conventions

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

Notes

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

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

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

In accordance with

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

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

15-May-2019 (2019-36)

27-Jun-2019 (2019-41)

14-Nov-2019 (2019-52)

22-Jan-2020 (2020-13)

o6-May-2020 (2020-39)

22-Jul-2020 (2020-57)

17-Dec-2020 (2020-110)

10-Mar-2021 (2021-17)



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o9-Jun-2021 (2021-58)
22-Dec-2021 (2021-85)
05-Jul-2022 (2022-52)
31-Jan-2023 (2022-86)
15-Jun-2023 (2023-58)
13-Dec-2023 (2023-107)
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This module handbook seeks to render, as accurately as possible, the data that is of statutory relevance according to the examination regulations of the degree subject. However, only the FSB (subject-specific provisions) and SFB (list of modules) in their officially published versions shall be legally binding. In the case of doubt, the provisions on, in particular, module assessments specified in the FSB/SFB shall prevail.



Winter Term 2020

(o ECTS credits)



Module title				Abbreviation		
Experimental Chemistry					o8-AC-ExChem-152-mo1	
Module coordinator				Module offered by		
lecturer of lecture "Experimentalchemie" (Experimental Chemistry)			e" (Experimental	Institute of Inorganic Chemistry		
ECTS Method of grading Only after succ. compl. of module(s)						
5	nume	rical grade	-			
Duratio	n	Module level	Other prerequisites	Other prerequisites		
1 semes	ster	undergraduate				
Content	ts					
					Emphasis is placed on the materiquilibrium and complexometry.	
Intende	d learı	ning outcomes				
The student understands the principles of the periodic table and can obtain information from it. He/she is proficient in basic models of the structure of matter and can describe them properly. He/she can depict chemical reactions using typical chemical formula language and interpret them by identifying the type of reaction.						
Courses	5 (type, n	umber of weekly contact hours, l	anguage — if other than Ger	rman)		
V (4)						
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)						
written examination (approx. 90 minutes) Language of assessment: German and/or English						
Allocation of places						
Additional information						
Workload						
150 h						
Teaching cycle						
Teaching cycle: every year, winter semester						

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



Module title			Abbreviation	
Material Science 1 (Basic introduction) 08-FU-MaWi1-152-mo1				
Module coordinator		Module offered by		
holder of the Chair of Chemical Techno thesis	logy of Material Syn-	- Chair of Chemical Technology of Material Synthe		
ECTS Method of grading	Only after succ. con	npl. of module(s)		
5 numerical grade				
Duration Module level	Other prerequisites			
1 semester undergraduate				
Contents				
Uncertainty analysis, process engineer Vacuum technology, coating processes		ution, agglomeratior	n, separation, drying, conveying.	
Intended learning outcomes				
chemical process engineering. For a given objective they are able to weigh the pros and cons of different techniques and can suggest ways of fabrication, processing and treatment of materials. Furthermore they are confident in handling of measurement data as well as statistical and systematic errors and posess extensive knowledge about nomenclature, significance as well as practically determining characteristic material properties.				
Courses (type, number of weekly contact hours, l	anguage — if other than Ger	rman)		
V (3) + Ü (1)				
Method of assessment (type, scope, langua module is creditable for bonus)	ge — if other than German,	examination offered — if no	ot every semester, information on whether	
a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English				
Allocation of places				
Additional information				
Workload				
150 h				
Teaching cycle				
Referred to in LPO I (examination regulation	s for too shing dogree nroars	,		



Winter Term 2021

(o ECTS credits)



Module title					Abbreviation	
Experimental Chemistry				o8-AC-ExChem-152-mo1		
Module coordinator				Module offered by		
lecturer of lecture "Experimentalchemie" (Experimentalchemie)		e" (Experimental	Institute of Inorganic Chemistry			
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites	Other prerequisites		
1 seme	ster	undergraduate	-			
Conten	ts					
					Emphasis is placed on the materiquilibrium and complexometry.	
Intende	ed lear	ning outcomes				
The student understands the principles of the periodic table and can obtain information from it. He/she is proficient in basic models of the structure of matter and can describe them properly. He/she can depict chemical reactions using typical chemical formula language and interpret them by identifying the type of reaction.						
Course	S (type, r	number of weekly contact hours, l	anguage — if other than Ge	rman)		
V (4)						
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)						
written examination (approx. 90 minutes) Language of assessment: German and/or English						
Allocation of places						
Additional information						
Workload						
150 h						
Teaching cycle						
Teaching cycle: every year, winter semester						

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



Winter Term 2022

(o ECTS credits)



Module title				Abbreviation		
Experimental Chemistry					o8-AC-ExChem-152-mo1	
Module coordinator				Module offered by		
lecturer of lecture "Experimentalchemie" (Experimental Chemistry)			e" (Experimental	Institute of Inorganic Chemistry		
ECTS Method of grading Only after succ. compl. of module(s)						
5	nume	rical grade	-			
Duratio	n	Module level	Other prerequisites	Other prerequisites		
1 semes	ster	undergraduate				
Content	ts					
					Emphasis is placed on the materiquilibrium and complexometry.	
Intende	d learı	ning outcomes				
The student understands the principles of the periodic table and can obtain information from it. He/she is proficient in basic models of the structure of matter and can describe them properly. He/she can depict chemical reactions using typical chemical formula language and interpret them by identifying the type of reaction.						
Courses	5 (type, n	umber of weekly contact hours, l	anguage — if other than Ger	rman)		
V (4)						
Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)						
written examination (approx. 90 minutes) Language of assessment: German and/or English						
Allocation of places						
Additional information						
Workload						
150 h						
Teaching cycle						
Teaching cycle: every year, winter semester						

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