

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Chemistry as Unterrichtsfach with the degree "Erste Staatsprüfung für das Lehramt an Grundschulen"

Responsible: Faculty of Chemistry and Pharmacy

Examination regulations version: 2015

Abbreviations used: Course types: **E** = field trip, **K** = colloquium, **O** = conversatorium, **P** = placement/lab course, **R** = project, **S** = seminar, **T** = tutorial, **Ü** = exercise, **V**

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB:

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

Information on assessment procedures:

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 a 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:

LASP02015

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

08-Sep-2015 (2015-128)

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.

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration	(in semesters)	Method of grading		Module level				
	Courses		To be spe	To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessm	ent								
	Only after su completion of		ıl if applica	f applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		ocati- if applica	if applicable							
	Additional information		ion if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Scientific Disciplin	e (54 ECTS credi	ts)							
Compulsory Course	es (54 ECTS credi	its)							
08-AC1-152-m01	Principles of In	organic (Chemis	try					
	ECTS 8	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses		V (4) +						
	Method of asse		exami (appro Langu § 42 I	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 42 Nr. 1 and § 22 Nr. 1 h) 62 Nr. 1					
08-AC-KAC-152-	Concepts of Inc	rganic C					· ·		
mo1	Concepts of Inorganic C			1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses		V (1) +		Method of glading	numencat grade	Modulievel	undergraduate	
	Method of asse	ssment	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						
	Referred to in L		§ 42 l § 62 l	Nr. 1					
08-ACP1-LA-152-	Inorganic and Analytical Chemistry (lab) (teaching degree)								
mo1	ECTS 7	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate	
	Courses Method of assessment		P (12) Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Assessment offered: Once a year, summer semester Language of assessment: German and/or English						
	Referred to in L	PO I	§ 42 l § 62 l						
08-0C1-	Organic Chemis	stry 1 (te	aching	degree for seconda	ry schools)				
LAGMR-152-mo1	ECTS 6	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses		V (3) +						
	Method of asse		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						
	Referred to in L	PO I	§ 42 l	Nr. 2 and § 22 II Nr.	1 h)		-		

08-0C2-VL-152-	Organi	c Chemi	istry 2									
mo1	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	:S		V (3)	+ Ü (1)			•				
	Method	d of asso	essment	exam (appr	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							
	Referre	ed to in L			42 Nr. 2 and § 22 Nr. 1 h) 62 Nr. 2							
08-OCP-	Organic Chemistry - lab			orator	y course (teaching	degree for secondary	schools)					
LAGMR-152-mo1	ECTS 5 Duratio			1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			P (7)		•						
	Method of assessment			and a	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Assessment offered: Once a year, summer semester Language of assessment: German and/or English							
	Modules successfully completed			08-0	C1-LAGMR							
	Referre	ed to in L	_PO I	§ 42 l	Nr. 2							
o8-PC-LAGMR-152-	Physical Chemistry (teaching degree for secondary schools)											
m01	ECTS	6	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			$V(2) + \ddot{U}(1) + V(1) + \ddot{U}(1)$								
	Method of assessment			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								
	Referre	d to in L	PO I	§ 42 l	Nr. 1 and § 22 II Nr	. 1 h)						
08-BC1-152-m01	Bioche	mistry 1	<u> </u>									
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			V (2)	V (2) + Ü (1)							
	Method	d of ass	essment	writte	written examination (approx. 60 to 90 minutes)							
	Referred to in LPO I		§ 42 Nr. 2 § 62 Nr. 2									

o8-ÜiVmD-	Exercis	es in Ex	cperiment	al Pre	sentation (teaching	g degree for secondary	schools)				
LAGMR-152-mo1	ECTS	6	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	S		Ü (3)	+ Ü (3) + Ü (3)			•			
	Method	d of ass	essment	Asses	One talk each in the fields of inorganic, organic and physical chemistry including demonstrations (approx. 45 minutes each) Assessment offered: Once a year, winter semester Language of assessment: German and/or English						
	Module comple	es succe eted	essfully	08-00	o8-OCP-LAGMR						
	Referre	d to in I	LPO I	§ 42 l	Nr. 3						
Teaching (12 ECTS	credits)										
Compulsory Cours	es (12 EC	TS cred	lits)								
08-FD1-	Introdu	ction ir	ito Teachi	ing Ch	emistry for Elemen	tary, Secondary and M	iddle School				
LAGMR-152-mo1	ECTS	4	Duration	n	1 semester	Method of grading	numerical grade	Modul level	unknown		
[Course	S		V (2)	+ S (2)						
	Method of assessment				approx. 90 minutes) a t: German and/or Engl	nd b) presentation (approx. 20 ish	minutes)				
	Referred to in LPO I			§ 42 l	Nr. 4						
08-FD2-LAGM-152-	Teaching Chemical Practice for Elementary and Secondary School										
mo1	ECTS	5	Duration	n	2 semester	Method of grading	numerical grade	Modul level	unknown		
	Course	S		S (2)	S (2) + S (2)						
	Method	d of ass	essment	a) presentation with practical examination (approx. 30 minutes) and b) presentation (approx. 20 minutes) Language of assessment: German and/or English							
	Referred to in LPO I			§ 38 Nr. 1 § 42 Nr. 4 and § 36 Nr. 7							
08-FD3-LAGM-152-	Chemis	stry in E	lementar	y and S	Secondary School						
mo1			Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	unknown		
	Course	S		S (2)							
	Method of assessment			presentation (approx. 20 minutes) Language of assessment: German and/or English							

Paper (4 ECTS credits)

Referred to in LPO I

§ 42 l Nr. 4

Students studying for a teaching degree Grundschule must complete a practical training in didactics and teaching methodology (studienbegleitendes fachdidaktisches Praktikum) which refers to one of the subjects they selected as vertieft studiertes Fach (subject studied with a focus on the scientific discipline) pursuant to Section 34 Subsection 1 No. 4 LPO I (examination regulations for teaching-degree programmes). The obligatory accompanying tutorial is offered by the respective subject. The ECTS

credits obtained are counted in the subject Erziehungswissenschaften pursuant to Section 10 Subsection 3 LASPO (general academic and examination regulations for teaching-degree programms).

o cl cpp li											
o8-Ch-SBPrakt-	Internship at Elementary Schools										
LAGS-152-mo1 ECTS 4 Duration 1 semester Method of grading (not) successfully completed Modul level L									unknown		
	Courses $P(0) + S(2)$										
				term paper (written elaboration of teaching practice, approx. 8 pages) Contents and duration of placement as specified in Section 34 Subsection 1 Sentence 1 No. 4 LPO I (examination regulations for teaching-degree programmes); participation in mandatory teaching practice, completion of all set tasks as specified by placement school.							
	Referred to in LPO I § 34 I 1 Nr. 4										

Freier Bereich (general as well as subject-specific electives) (0-15 ECTS credits)

Teaching degree students must take modules worth a total of 15 ECTS credits in the area Freier Bereich (general as well as subject-specific electives) (Section 9 LASPO (general academic and examination regulations for teaching-degree programmes)). To achieve the required number of ECTS credits, students may take any modules from the areas below.

Freier Bereich -- interdisciplinary: The interdisciplinary additional offer for a teaching degree can be found in the respective Annex "Ergänzende Bestimmungen für den "Freien Bereich" im Rahmen des Studiums für ein Lehramt".

Subject-specific Extra Skills

(Freier Bereich (general as well as subject-specific electives) -- subject specific)

08-AC-Spec-152-	Practic	al spect	roscopy	2							
mo1	ECTS	3	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	S		V (2)	/ (2)						
	Method	d of asse	essment	exami (appr	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) anguage of assessment: German and/or English						
	Referred to in LPO I			§ 22 l	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)						
08-0C-Spec-152-	Practical spectroscopy 1										
mo1	ECTS 3 Duratio		1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)							
	Method of assessment			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							
	Referred to in LPO I				l Nr. 1 h) l Nr. 2 f) Nr. 2						

08-AC-FK-152-m01	Solid S	tate Ch	emistry			,		,				
	ECTS	3	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	*	-						
	Method	d of ass	essment	exam (appr	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							
	Referred to in LPO I Elemental Organic Cher			§ 22 l	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 62 Nr. 1							
08-AC-ELO-152-	Elemen	ital Org	anic Chen	nistry								
mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ Ü (1)			,				
	Method of assessment			exam (appr	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) anguage of assessment: German and/or English							
	Referre	d to in l	PO I	§ 22 l	22 Nr. 1 h) 22 Nr. 2 f) 22 Nr. 3 f)							
08-0C3-152-m01	Organi	c Chemi	istry 3									
	ECTS	6	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ Ü (2)			,				
	Method of assessment			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) presentatic (approx. 30 minutes) Language of assessment: German and/or English								
		d to in l		§ 22 l	Nr. 1 h) Nr. 2 f) Nr. 3 f)							
08-0C4-152-m01		c Chemi										
	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			` ′	+ Ü (2)							
	Method of assessment			exam (appr Langı	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							
	Referred to in LPO I				l Nr. 1 h) l Nr. 2 f) Nr. 2							

08-TC-152-m01	Quantur	m Chemistry									
	ECTS	3 Dura	tion	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		V (2)) + Ü (1)		,					
	Method	of assessme	exan (app Lang	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 creditable for bonus							
	Referred	to in LPO I	§ 22	3 22 Nr. 1 h) 3 22 Nr. 2 f) 3 22 Nr. 3 f)							
08-PC-SBL1-152-	Symmetry, chemical bonding and light - Part 1										
mo1	ECTS	6 Dura	tion	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		V (3)) + Ü (2)	· · · · · · · · · · · · · · · · · · ·						
	Method	of assessme	exan (app	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							
	Referred	to in LPO I	§ 22	e II Nr. 1 h) e II Nr. 2 f) e II Nr. 3 f)							
03-TR-152-m01	Toxicology and legal studies										
	ECTS	3 Dura	tion	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		V (1)	+ V (1)							
	Method	of assessme	nt writt	written examination (approx. 90 minutes)							
	Referred	to in LPO I	§ 22	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)							
08-PVAC-152-m01	Training	for Exams ir	Inorgar	nic Chemistry							
	ECTS	2 Dura	tion	1 semester	Method of grading (not) successfully comp	oleted Modul level	undergraduate				
	Courses		S (2))	· · · · · · · · · · · · · · · · · · ·						
	Method	of assessme		2 to 4 short talks on selected exercises (approx. 10 minutes each) Language of assessment: German and/or English							
	Referred	to in LPO I	§ 22	ll Nr. 1 h) ll Nr. 2 f) ll Nr. 3 f)							

08-PVOC-152-m01	Training	for Exams in O	ganic Chemistry							
	ECTS 3	Duratio	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Courses		S (2)							
	Method o	of assessment		on selected assignments (approx. 10 minutes each)						
				essment: German and/or English						
	Referred	to in LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f)							
			§ 22 II Nr. 3 f)							
o8-FD-PV-	Training	for Exams in Cl	J ,	for Elementary, Secondary and Middle School Teachers						
LAGMRS-152-mo1	ECTS 2	4		1 semester Method of grading (not) successfully completed Modul level unknown						
	Courses	Į.	S (2)							
	Method o	of assessment		d assignments (approx. 30 minutes each) essment: German and/or English						
	Referred	to in LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f)							
08-FD-WA-152-m01	Instruction	ons for Scientif	ic Research							
	ECTS 2	Duratio	1 semester	Method of grading (not) successfully completed	Modul level	unknown				
	Courses	`	S (2)	·	-					
	Method o	of assessment	presentation (app Language of asse	orox. 30 minutes) essment: German and/or English						
	Referred	to in LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)	§ 22 Nr. 2 f)						
08-FD-LLL-152-m01	Chemistr	y SchoolLabs								
	ECTS 2	Duratio	1 semester	Method of grading (not) successfully completed	Modul level	unknown				
	Courses		P (3)	· · · · · · · · · · · · · · · · · · ·	-					
	Method o	of assessment		practical assignment (successful supervision of 2 sessions in learn-teach-lab, approx. 4 to 6 hours each) Language of assessment: German and/or English						
	Referred	to in LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)							
08-FD-MS-152-m01	Microsca	le Experiments	in Chemistry Teac	ching						
	ECTS 2	2 Duratio	1 semester	Method of grading (not) successfully completed	Modul level	unknown				
	Courses	·	S (2)							
	Method o	of assessment	project: presentation of a project (approx. 30 minutes) Language of assessment: German and/or English							
	Referred	to in LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)							
LA Grundschulen Chemis				IMII Würzburg • generated an-Mär-ag		record 1 022 - - H 2015 n200 0 / 10				

08-FD-ASL-152-	D-ASL-152- Out-Of-School Education									
mo1	ECTS	2	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	unknown	
	Courses S (2)									
	Metho	d of asse	essment	project: presentation of a project (approx. 30 minutes) Language of assessment: German and/or English						
Referred to in LPO I § 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)										

Paper (10 ECTS credits)

Preparation of a written Hausarbeit (thesis) in accordance with the provisions of Section 29 LPO I (examination regulations for teaching-degree programmes) is a prerequisite for teaching degree students to be admitted to the Erste Staatsprüfung (First State Examination). In accordance with the provisions of Section 29 LPO I, students studying for a teaching degree Grundschule may write this thesis in the subject Didaktik der Grundschule (Didactics of Grundschule), in the subject they selected as Unterrichtsfach (subject studied with a focus on the scientific discipline) or in the subject Erziehungswissenschaften (Educational Science). Pursuant to Section 29 Subsection 1 Sentence 2 LPO I, students may also choose to write an interdisciplinary thesis.

L	terree z Er o i, staat	nee 2 Et 0 i, state in a way also en oose to write an interassiplinary thesis.										
- 1		Final Thesis according to § 29 LPO I in Chemistry for Elementary School Teachers										
	GS-152-m01	ECTS	ECTS 10 Duratio			1 semester	Method of grading	numerical grade	Modul level	undergraduate		
Courses No courses assigned to module												
		Method of assessment			Langu		German; exceptions	I (examination regulations for pursuant to Section 29 Subsec		e programmes) (30 to 50 pages) amination regulations for tea-		
Referred to in LPO I § 29												