

Subdivided Module Catalogue for the Subject

Chemistry

as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Examination regulations version: 2015 Responsible: Faculty of Chemistry and Pharmacy

JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record 82|032|-|-|H|2015



Learning Outcomes

German contents and learning outcome available but not translated yet.

Wissenschaftliche Befähigung

- Die Absolvent/innen beherrschen die grundlegenden Kenntnisse der Basis-Wissenschaften, vor allem der Allgemeinen, Anorganischen, Organischen, Physikalischen und Theoretischen Chemie, der Biochemie sowie der Mathematik und Physik. Die Grundlagen hierfür werden in den entsprechenden Vorlesungen und Übungen der verschiedenen Fächer vermittelt und in Klausuren überprüft.
- Die Absolvent/innen können unter Anleitung Experimente durchführen, analysieren und die erhaltenen Ergebnisse darstellen und bewerten. Vermittelt werden diese Fähigkeiten im Rahmen von Laborpraktika während des Studiums. Das Erreichen der Ziele wird durch Kolloquien, die erfolgreiche Versuchsdurchführung und das Verfassen von Protokollen überprüft.
- Die Absolvent/innen setzten die erlernten theoretischen und experimentellen Methoden ein, um unter Anleitung neue Erkenntnisse zu erlangen. Die erlernten theoretischen und experimentellen Methoden werden im Rahmen der Bachelorarbeit angewendet.
- Die Absolvent/innen können sich mit Hilfe von Fachliteratur in neue Fragestellungen und Aufgabengebiete einarbeiten, konkrete experimentelle oder theoretische Aufgabenstellungen verstehen, Lösungswege nachvollziehen und die Ergebnisse interpretieren und bewerten. Sie besitzen die Fähigkeit, eine thematisch und zeitlich eng umgrenzte chemische Fragestellung unter Anleitung mit den erlernten Methoden und unter wissenschaftlich-analytischer Vorgehensweise weitgehend eigenständig zu bearbeiten, die gewonnenen Daten zu analysieren, zusammenzufassen und einem Fachpublikum zu präsentieren. Diese Fähigkeiten werden in Seminaren während des Studiums und vor allem im Rahmen der Vorbereitung und Anfertigung der Bachelorarbeit sowie eines Seminarvortrags vermittelt und überprüft.

Befähigung zur Aufnahme einer Erwerbstätigkeit

- Die Absolvent/innen besitzen Abstraktionsvermögen, Problemlösungskompetenz und die Fähigkeit, komplexe Zusammenhänge in analytischer Herangehensweise zu strukturieren. Die Grundlagen hierfür werden in Vorlesungen und Übungen der Chemie vermittelt und durch Klausuren überprüft.
- Die Absolvent/innen sind in der Lage, ihr theoretisches Wissen in der Praxis anzuwenden und können mit den erlernten wissenschaftlichen Methoden auch unbekannte Probleme aus unterschiedlichen fachlichen Perspektiven analysieren und bearbeiten. Sie sind es dabei gewohnt, in einem Team aus Kommiliton/innen, Kolleg/innen und/oder Wissenschaftler/innen konstruktiv und zielorientiert zusammenzuarbeiten. Der Praxisbezug ist durch einen hohen Anteil an Laborpraktika - sowohl Kurspraktika, als auch individuelle Forschungspraktika - und nicht zuletzt der Bachelor-Arbeit gegeben, deren erfolgreiche Absolvierung durch Protokolle bzw. die Bachelor-Thesis überprüft wird.
- Die Absolvent/innen können unterschiedliche Aufgaben parallel und unter Zeit- und Erfolgsdruck auch unter schwierigen Rahmenbedingungen erfolgreich bearbeiten. Diese Fähigkeit wird durch die Prüfungsdichte am Ende der Vorlesungszeit erlernt und befähigt die Absolvent/innen auch im stressigen Berufsalltag Aufgaben erfolgreich zu bearbeiten.
- Die Absolvent/innen sind in der Lage, konstruktiv und zielorientiert in einem heterogenen Team zusammenzuarbeiten, unterschiedliche und abweichende Ansichten produktiv zur Zielerreichung zu nutzen und auftretende Konflikte zu lösen. Diese Teamfähigkeit und Konfliktkompetenz erlernen die Studierenden in der Zusammenarbeit während Laborpraktika sowie in Arbeitskreisen während der Anfertigung ihrer Bachelorarbeit.
- Diese solide Wissensbasis und Methodenkompetenz sowie die eingeübte Teamfähigkeit können die Absolvent/innen gewinnbringend in ihrer Berufspraxis einsetzen.

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Persönlichkeitsentwicklung

- Die Absolvent/innen kennen die Regeln guter wissenschaftlicher Praxis und beachten sie. Die Lehrenden fördern zudem die Selbstverantwortung für den Wissenserwerb sowie ein an wissenschaftlichen Werten orientiertes Denken und Handeln. Dies beinhaltet das Streben nach Erkenntnis und Wahrheit, Eindeutigkeit, Transparenz, Objektivität, Wertefreiheit, überpersönliche Gültigkeit, Überprüfbarkeit, Verlässlichkeit, Offenheit, Selbstreflexion und Redlichkeit sowie Neuigkeit. Insbesondere die Laborarbeit und das Erstellen von Protokollen sowie deren anschließende Korrektur stellt die Vermittlung guter wissenschaftlicher Praxis sicher.
- Die Absolvent/innen lernen, mit in der Forschung unvermeidbaren Rückschlägen umzugehen und ihre Zielsetzungen neu anzupassen.

Befähigung zum gesellschaftlichen Engagement

• Die Absolvent/innen haben ihr Wissen bezüglich naturwissenschaftlicher Fragen erweitert und erkennen deren wirtschaftliche, rechtliche und gesellschaftliche Implikationen und können begründet Position beziehen. Durch die Behandlung aktueller Forschungsthemen in den Lehrveranstaltungen und den Besuch von Vorlesungen zu Toxikologie und Rechtskunde werden Bezüge zu wirtschaftlichen, rechtlichen und gesellschaftlichen Fragestellungen hergestellt. Im Rahmen der Bachelorarbeit befassen sich die Studierenden ebenfalls mit aktuellen gesellschaftlich und wirtschaftlich relevanten chemischen Fragen.

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Abbreviations used

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

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

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

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

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

Conventions

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

Notes

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

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

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

In accordance with

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

ASPO2015

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

22-Jul-2015 (2015-34)

??-???-2024 (2024-??)

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.

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The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (150	ECTS credits)			
Subfield General and In	organic Chemistry (47 ECTS credits)			
08-AC1-152-m01	Principles of Inorganic Chemistry	8	NUM	9
08-ACP1-152-m01	Inorganic Chemistry 1 (lab)	10	B/NB	13
08-AS1-152-m01	Inorganic Chemistry of the Elements	6	NUM	16
08-ANP-152-m01	Analytical Chemistry (lab)	6	B/NB	15
08-ACP2-152-m01	Inorganic Chemistry 2 (lab)	5	B/NB	14
08-AC-FSE-152-m01	Solid State Chemistry, Spectroscopic Methods, Organoelement Chemistry	12	NUM	12
Subfield Organic Chemi	stry (40 ECTS credits)			
08-0C1-152-m01	Organic Chemistry 1	5	NUM	32
08-0C2-152-m01	Organic Chemistry 2 and analytical methods in organic che- mistry	9	NUM	37
08-0CP1-152-m01	Organic Chemistry - lab 1	8	B/NB	41
08-0CP2-152-m01	Organic Chemistry - advanced laboratory course for students of chemistry	5	B/NB	42
08-0C3+4-152-m01	Organic Chemistry 3 & 4	13	NUM	39
Subfield Physical and T	heoretical Chemistry (40 ECTS credits)			
08-PC-QMS-152-m01	Principles of quantum mechanics and spectroscopy	10	NUM	45
08-PC-TKE-152-m01	Thermodynamics, Kinetics, Electrochemistry	9	NUM	48
08-PCP-152-m01	Physical Chemistry (lab)	9	B/NB	44
08-TC-152-m01	Quantum Chemistry	3	NUM	52
08-PC-SBL-152-m01	Symmetry, chemical bonding and light	9	NUM	46
Subfield Basics of Natu	ral Sciences (23 ECTS credits)			
08-BC1-152-m01	Biochemistry 1	5	NUM	19
10-M-MCB-152-m01	Mathematics for students in Chemistry and Biology	5	NUM	57
11-EFNF-152-m01	Introduction to Physics for Students of other Disciplines	7	NUM	59
11-PFNF-152-m01	Laboratory Course Physics for Students of other Disciplines	3	B/NB	65
03-TR-152-m01	Toxicology and legal studies	3	NUM	7
Key Skills Area (20 ECTS	credits)			
	dules offered as part of the pool of general transferable skills (AS	Q) of JMU.		
Subject-specific Key Sk				
	kills, Compulsory Courses (5 ECTS credits)			
08-VP-152-m01	Advanced laboratory course	5	B/NB	54
	kills, Compulsory Electives (10 ECTS credits)			·
08-BC2-152-m01	Biochemistry 2	5	NUM	21
08-BCP-152-m01	Practical course of Biochemistry	5	B/NB	23
08-PS3-152-m01	Applied Spectroscopy 3	5	NUM	51
08-PKC-152-m01	Programming and numerical methods	5	B/NB	50
08-0P-152-m01	Advanced chemical practical course	5	B/NB	43
08-GC-242-m01	Green and sustainable (organic) chemistry	5	NUM	24
Thesis (10 ECTS credits)				
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08-BA-152-m01	Bachelor Thesis	10	NUM	18
	endix DA (170 ECTS credits)	I		I
	rganic Chemistry (35 ECTS credits)			
08-AC1-152-m01	Principles of Inorganic Chemistry	8	NUM	9
08-ACP1-152-m01	Inorganic Chemistry 1 (lab)	10	B/NB	13
08-AS1-152-m01	Inorganic Chemistry of the Elements	6	NUM	16
08-ANP-152-m01	Analytical Chemistry (lab)	6	B/NB	15
08-AC-FS-DA-152-m01	Solid State Chemistry, Spectroscopic Methods (DD)	5	NUM	11
Subfield Organic Chemist	try (28 ECTS credits)			
08-0C1-152-m01	Organic Chemistry 1	5	NUM	32
08-0C2-152-m01	Organic Chemistry 2 and analytical methods in organic che- mistry	9	NUM	37
08-0CP1-152-m01	Organic Chemistry - lab 1	8	B/NB	41
08-0C-0C3-DA-152-m01	Organic Chemistry 3 (DD)	6	NUM	40
Subfield Physical and The	eoretical Chemistry (37 ECTS credits)	•		
08-PC-QMS-152-m01	Principles of quantum mechanics and spectroscopy	10	NUM	45
08-PC-TKE-152-m01	Thermodynamics, Kinetics, Electrochemistry	9	NUM	48
08-PCP-152-m01	Physical Chemistry (lab)	9	B/NB	44
08-TC-152-m01	Quantum Chemistry	3	NUM	52
08-PC-SBL-DA-152-m01	Symmetry, chemical bonding and light (DD)	6	NUM	47
Subfield Basics of Natura	l Sciences (20 ECTS credits)			_
08-BC1-152-m01	Biochemistry 1	5	NUM	19
10-M-MCB-152-m01	Mathematics for students in Chemistry and Biology	5	NUM	57
11-EFNF-152-m01	Introduction to Physics for Students of other Disciplines	7	NUM	59
11-PFNF-152-m01	Laboratory Course Physics for Students of other Disciplines	3	B/NB	65
Subfield Competences fro	om foreign university (50 ECTS credits)			
08-VPUB1-152-m01	Qualifications - Partner University 1	25	B/NB	55
08-VPUB2-152-m01	Qualifications - Partner University 2	25	NUM	56
Thesis (10 ECTS credits)				
08-BA-152-m01	Bachelor Thesis	10	NUM	18

Modul	e title				Abbreviation	
Toxico	logy an	d legal studies			03-TR-152-m01	
Modul	e coord	inator		Module offered by		
lecture	er of lect	ure "Toxikologie und R	echtskunde"	Faculty of Medicine		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
3	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	nts					
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Intend	ed learı	ning outcomes				
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First st	ate exa	mination for the teachi	ng degree Mittelschule	Didactics in Chemis	try (Middle School)	(2015)
Maste	r's degre	ee (1 major) Chemistry	(2016)			
		gree (1 major) Food Che	-			
		gree (1 major) Biochem				
Bache	lor's de	gree (1 major) Chemistr	y (2017)			
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Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Master's degree (1 major) Chemistry (2018)

Bachelor's degree (1 major) Food Chemistry (2019)

First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

Bachelor's degree (1 major) Food Chemistry (2021)

Bachelor's degree (1 major) Biochemistry (2022)

Master's degree (1 major) Chemistry (2024)

Bachelor's degree (1 major) Food Chemistry (2025)

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	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module	e title				Abbreviation
Princip	oles of	Inorganic Chemistry			08-AC1-152-m01
Modul	e coord	linator		Module offered by	
lecture Chemis		ture "Experimentalchemi	e" (Experimental	Institute of Inorgani	ic Chemistry
ECTS	1	od of grading	Only after succ. con	pl. of module(s)	
8	1	erical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conten	nts	•			
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Intend	ed lear	ning outcomes			
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First state examination for the teaching degree Gymnasium Chemistry (2015)

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Mittelschule Chemistry (2015)

First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2015) Bachelor's degree (1 major) Biochemistry (2017)

Bachelor's degree (1 major) Chemistry (2017)

First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

Bachelor's degree (1 major) Food Chemistry (2021)

Bachelor's degree (1 major) Biochemistry (2022)

Bachelor's degree (1 major) Food Chemistry (2025)

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	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module	e title				Abbreviation
Solid S	tate Ch	nemistry, Spectroscopic I	Methods (DD)		08-AC-FS-DA-152-m01
Module	coord	inator		Module offered by	<u> </u>
		ture "Festkörperchemie"	(Solid State Che-	Institute of Inorgan	ic Chemistry
mistry)		F			,
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	I	rical grade			
Duratio		Module level	Other prerequisites		
1 semes		undergraduate	<u> </u>		
Content				- for the land line and	l - 1:
		equips students with an a cures and properties, spe			d saline compounds. It focuses nical processes.
		ning outcomes			
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	e title				Abbreviation
Solid S	State Cl	nemistry, Spectroscopic	Methods, Organoele	ment Chemistry	08-AC-FSE-152-m01
Modul	e coord	inator		Module offered by	
mistry)		cture "Festkörperchemie Elementorganische Chem)		Institute of Inorgar	nic Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
12	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
2 seme	ester	undergraduate			
Conter	nts				
					aline compounds and organome- eactivity and technical processes.
Intend	ed lear	ning outcomes			
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Inorga	e title				Abbreviation
	nic Che	emistry 1 (lab)			08-ACP1-152-m01
Modul	e coord	linator		Module offered by	
holder	ofthe	Chair of Anorganic Chemi	istrv	Institute of Inorgan	ic Chemistry
ECTS	1	od of grading	Only after succ. con		
10		successfully completed			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Conten	nts				
lated le course	ecture(focuse	s). After a safety briefing,	the students autono	mously conduct exp	they have gained through the re- eriments in the laboratory. The nple substances and analyses of
Intend	ed lear	ning outcomes			
have d cesses	evelop in an a	ed the ability to perform appropriate manner, both	the necessary stoichi in written and oral fo	iometric calculations orm.	xperiments to solve them. They and describe the chemical pro-
		, number of weekly conta	act hours, language –	– if other than Germa	an)
P (12) +	+ S (2)				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme
(63) 01		evamination in groups of			
20 pag nation (2 to 4 Langua	ges) or (talks a randor age of a	e) presentation (approx.	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English	approx. 15 minutes testate/Nachtestate	per candidate) or d) log (approx.
20 pag nation (2 to 4 Langua Assess	ges) or talks a randor age of a sment o	e) presentation (approx. pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English	approx. 15 minutes testate/Nachtestate	per candidate) or d) log (approx. (pre and post-experiment exami
20 pag nation (2 to 4 Langua Assess	ges) or talks a randor age of a sment o	e) presentation (approx. pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English	approx. 15 minutes testate/Nachtestate	per candidate) or d) log (approx. (pre and post-experiment exami
20 pag nation (2 to 4 Langua Assess Allocat	ges) or o talks a randor age of a sment o tion of	e) presentation (approx. pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English	approx. 15 minutes testate/Nachtestate	per candidate) or d) log (approx. (pre and post-experiment exami
20 pag nation (2 to 4 Langua Assess Allocat Additic accord	ges) or of talks a randor age of a sment of tion of onal inf	e) presentation (approx. <u>a</u> pprox. <u>15</u> minutes each, m examinations) assessment: German and offered: Once a year, wint places	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English er semester	(approx. 15 minutes testate/Nachtestate ages each) and asse	per candidate) or d) log (approx. (pre and post-experiment exami
20 pag nation (2 to 4 Langua Assess Allocat Additic accord	ses) or of talks a randor age of a sment of tion of onal inf ling to s	e) presentation (approx. a pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English er semester	(approx. 15 minutes testate/Nachtestate ages each) and asse	(pre and post-experiment exami ssment of practical assignments
20 pag nation (2 to 4 Langua Assess Allocat Additic accord and No Worklo	ses) or of talks a randor age of a sment of tion of onal inf ling to s	e) presentation (approx. a pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English er semester	(approx. 15 minutes testate/Nachtestate ages each) and asse	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments
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20 pag nation (2 to 4 Langua Assess Allocat Additic accord and No Worklo 300 h Teachi 	ses) or of talks a randor age of a sment of tion of bing to so to a of a bad	e) presentation (approx. 2 pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP nnex 2 to the APOLmCh	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English er semester OLmCh in conjunctio	(approx. 15 minutes testate/Nachtestate ages each) and asses n with No. I 1st letter	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments a) of annex 1 to the APOLmCh
20 pag nation (2 to 4 Langua Assess Allocat Additic accord and Nc Worklo 300 h Teachi Referre	ses) or of talks a randor age of a sment of tion of onal inf bing to s b. 1 of a bad ng cycl ed to in	e) presentation (approx. 2 pprox. 15 minutes each, i n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP nnex 2 to the APOLmCh	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English er semester OLmCh in conjunctio	(approx. 15 minutes testate/Nachtestate ages each) and asses n with No. I 1st letter	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments r a) of annex 1 to the APOLmCh
20 pag nation (2 to 4 Langua Assess Allocat Additic accord and No Worklo 300 h Teachi Referre	ses) or (talks a randor age of a sment of tion of onal inf b, 1 of a oad age of a sment of tion of age of a sment of age	e) presentation (approx. 2 pprox. 15 minutes each, 1 m examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP mnex 2 to the APOLmCh	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English eer semester OLmCh in conjunctio	(approx. 15 minutes testate/Nachtestate ages each) and asses n with No. I 1st letter	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments r a) of annex 1 to the APOLmCh
20 pag nation (2 to 4 Langua Assess Allocat Additic accord and No Worklo 300 h Teachi Referre Bachel	eed to in eappea	e) presentation (approx. 2 pprox. 15 minutes each, i n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP nnex 2 to the APOLmCh	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English eer semester OLmCh in conjunctio ulations for teaching-o (2015)	(approx. 15 minutes testate/Nachtestate ages each) and asses n with No. I 1st letter	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments r a) of annex 1 to the APOLmCh
20 pag nation (2 to 4 Langua Assess Allocat Additic accord and Nc Worklo 300 h Teachi Referre Bachel Bachel Bachel	ses) or of talks a randor age of a sment of tion of onal inf bing to § b. 1 of a bad ng cycl ed to in e appee lor's de lor's de	e) presentation (approx. 2 pprox. 15 minutes each, n examinations) assessment: German and offered: Once a year, wint places formation § 2 para. 2 sentence 2 AP nnex 2 to the APOLmCh le LPO I (examination regu ars in gree (1 major) Chemistry	f up to 3 candidates (30 minutes)] and Vort log approx. 5 to 10 pa /or English eer semester OLmCh in conjunctio ulations for teaching-((2015) (2017)	(approx. 15 minutes testate/Nachtestate ages each) and asses n with No. I 1st letter	per candidate) or d) log (approx. (pre and post-experiment exami ssment of practical assignments r a) of annex 1 to the APOLmCh

Module	e title				Abbreviation
Inorga	nic Che	mistry 2 (lab)			08-ACP2-152-m01
Module	e coord	inator		Module offered by	
holder	holder of the Chair of Anorganic Chemistry			Institute of Inorganic Chemistry	
ECTS					
5	(not)	successfully completed	(08-ACP1 or 08-ACP1	P1-BC) and o8-AC1 and o8-AS1	
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
synthe	ses. Th		nandling of organome	etallic compounds, t	nd plan and conduct complex heir synthesis and working with tion of products.
Intend	ed lear	ning outcomes			
are abl	e to de	scribe the technical princ	iples in oral and writ	ten form using appro	solve complex problems. They opriate scientific terminology. using advanced lab techniques.
Course	s (type	, number of weekly conta	ict hours, language —	if other than Germa	n)
P (12)					
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
pages	each) a	chtestate (pre and post- nd assessment of practions ssessment: German and	cal performance (2 to		minutes each, log approx. 5 to 10 ons)
Allocat					
Additio	onal inf	ormation			
	ad				
Worklo					
150 h		e			
		e			
150 h Teachi 	ng cycl		lations for teaching-c	legree programmes)	
150 h Teachi 	ng cycl	e LPOI (examination regu	lations for teaching-c	legree programmes)	
150 h Teachin Referre	ng cycl ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
150 h Teachin Referre Module	ng cycl ed to in e appea	LPOI (examination regu		legree programmes)	
150 h Teachin Referre Module Bachel	ng cycl ed to in e appea or's de	LPOI (examination regu	try (2015)	legree programmes)	

Analvti	e title				Abbreviation	
	ical Che	emistry (lab)			08-ANP-152-m01	
Module	e coord	inator		Module offered by	<u> </u>	
holder of the Chair of Anorganic Chemistry			strv	Institute of Inorgan	ic Chemistry	
ECTS	1	od of grading	Only after succ. con			
6		successfully completed				
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i		
1 seme	ster	undergraduate				
Conten	Its					
lated le	ecture(s		the students autono	mously conduct exp	hey have gained through the re- eriments in the laboratory. These s.	
Intende	ed lear	ning outcomes				
		able to use different metl e mixtures.	nods to analyse unkn	own substances. In	addition, they are able to separa-	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	in)	
P (12) +	+ S (1)					
Vortest pages e Langua	tate/Na each) a age of a	on on whether module c chtestate (pre and post- nd assessment of practions ssessment: German and ffered: Once a year, sum	experiment examinat cal performance (2 to /or English	ion talks approx. 15	minutes each, log approx. 5 to 10 ions)	
Allocat	ion of _l	olaces				
Additic	onal inf	ormation				
). 1 of a	2 para. 2 sentence 2 AP nnex 2 to the APOLmCh	OLmCh in conjunctio	n with No. I 1st letter	a) of annex 1 to the APOLmCh	
			OLmCh in conjunction	n with No. I 1st letter	a) of annex 1 to the APOLmCh	
and No			OLmCh in conjunctio	n with No. I 1st letter	a) of annex 1 to the APOLmCh	
and No Worklo	ad	nnex 2 to the APOLmCh	OLmCh in conjunction	n with No. I 1st letter	a) of annex 1 to the APOLmCh	
and No Worklo 180 h	ad	nnex 2 to the APOLmCh	OLmCh in conjunction	n with No. I 1st letter	a) of annex 1 to the APOLmCh	
and No Worklo 180 h Teachin	oad ng cycl	nnex 2 to the APOLmCh				
and No Worklo 180 h Teachin	oad ng cycl	nnex 2 to the APOLmCh				
and No Worklo 180 h Teachin	ng cycl ed to in	nnex 2 to the APOLmCh e LPOI (examination regu				
and No Worklo 180 h Teachin Referre Module	oad ng cycl ed to in e appea	nnex 2 to the APOLmCh e LPOI (examination regu	lations for teaching-o			
and No Worklo 180 h Teachin Referre Bachel Bachel	ng cycl ed to in e appea or's de or's de	nnex 2 to the APOLmCh e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Chemistry	lations for teaching-o try (2015) (2015)			
and No Worklo 180 h Teachin Referre Bachel Bachel Bachel	ng cycl ed to in e appea or's de or's de or's de	e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Biochemistry gree (1 major) Biochemistry	lations for teaching-0 try (2015) (2015) try (2017)			
and No Worklo 180 h Teachin Referre Bachele Bachele Bachele Bachele	ed to in ed to in e appea or's de or's de or's de or's de or's de	e LPOI (examination regu ars in gree (1 major) Biochemis gree (1 major) Chemistry gree (1 major) Chemistry gree (1 major) Chemistry	lations for teaching-o try (2015) (2015) try (2017) (2017)			
and No Worklo 180 h Teachin Referre Bachel Bachel Bachel Bachel Bachel	ed to in ed to in e appea or's de or's de or's de or's de or's de or's de	e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Biochemistry gree (1 major) Biochemistry	llations for teaching-o try (2015) (2015) try (2017) (2017) istry (2021)			

Module	e title				Abbreviation		
Inorga	nic Che	mistry of the Elements			08-AS1-152-m01		
Module	e coord	inator		Module offered by			
lecture	r of lect	ture "Chemie der Hauptgr	ruppenelemen-	Institute of Inorgan	ic Chemistry		
te" (Ch	· · ·	of Main-group Elements					
ECTS		od of grading	Only after succ. compl. of module(s)				
6							
Duratio		Module level	Other prerequisites				
1 semester undergraduate							
Conten	-						
	This module equips students with an advanced knowledge of the periodic table and selected elements. It focuses on bonding conditions, trends in the periodic table and the description and structure of elements. In additi-						
on, it ir	ntroduc	es students to elementar	y organic chemistry,	coordination chemis	stry and complex chemistry.		
Intende	ed learr	ning outcomes					
reactiv	ity and		e to identify the coord	lination of the atoms	ments in terms of their structure, s. In addition, they have learned		
Course	s (type,	, number of weekly conta	ct hours, language —	- if other than Germa	in)		
V (2) +	V (2)						
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-		
d) log (e) pres	approx entatio age of a	ation in groups of up to 3 . 20 pages) or n (approx. 30 minutes) ssessment: German and, blaces					
Additio	onal info	ormation					
	•	2 para. 2 sentence 2 AP nnex 2 to the APOLmCh	OLmCh in conjunctio	n with No. I 2nd lette	er a) of annex 1 to the APOLmCh		
Worklo	ad						
180 h							
Teachi	ng cycl	e					
Referre	ed to in	LPO I (examination regu	lations for teaching-o	legree programmes)			
§ 62 N							
	e appea	irs in					
		gree (1 major) Biochemis	try (2015)				
Bachelor's degree (1 major) Chemistry (2015)							
Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Computational Mathematics (2015)							
		gree (1 major) Computation mination for the teaching		-			
		gree (1 major) Biochemist		Chemistry (2015)			
Bachel	or's de	gree (1 major) Chemistry es (Bachelor) Chemistry (:	(2017)				

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 16 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Food Chemistry (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 17 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module title Abbreviation						
Bache	lor Thes	is		·	08-BA-152-m01	
Modul	e coord	inator		Module offered by		
		search group offering the	e module	Faculty of Chemistr	y and Pharmacy	
ECTS		od of grading	Dnly after succ. compl. of module(s)		,	
10	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate			l completion of certain modu- opic a prerequisite for the assign-	
Conter	nts					
		ives students the opport scientific methods they l			problem within a given time frame	
Intend	ed learı	ning outcomes				
		able to conduct research to present the results of t			the principles of good scientific	
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)	
Νο cou	urses as	signed to module				
		s essment (type, scope, la on on whether module ca			ition offered — if not every seme-	
		esis (approx. 40 pages) ssessment: German and	/or English			
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Time to	o compl	ete: 8 weeks.				
Worklo	oad					
300 h						
Teachi	ing cycl	e				
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appea	irs in				
		gree (1 major) Chemistry	(2015)			
Bache	lor's de	gree (1 major) Chemistry	(2017)			

Module title Abbreviation							
Bioche	emistry 1			08-BC1-152-m01			
Modul	e coordinator		Module offered by				
holder	of the Chair of Biochemistry		Chair of Biochemist	ry			
ECTS	Method of grading	Only after succ. con	ly after succ. compl. of module(s)				
5	numerical grade						
Durati		Other prerequisites	Other prerequisites				
1 seme							
Conter							
mistry tertian sis, glu tion, fa discus	Comprising lectures and exercises, this module acquaints students with the fundamental principles of bioche- mistry. A particular focus is on the biochemistry of proteins (amino acids, peptide bonds, primary, secondary, tertiary and quaternary structures), catalytic strategies and enzyme kinetics, carbohydrate metabolism (glycoly- sis, gluconeogenesis, citric acid cycle, cellular respiration, photosynthesis), fatty acid metabolism (beta oxida- tion, fatty acid synthesis), nucleotide metabolism, the urea cycle and amino acid metabolism. The module also discusses the structure of the DNA and the central dogma of molecular biology.						
	ed learning outcomes						
	nts have become familiar with the module. They are able to a				ere discus-		
Course	es (type, number of weekly co	ntact hours, language –	- if other than Germa	n)			
V (2) +	Ü (1)						
ster, ir writter	d of assessment (type, scope formation on whether module examination (approx. 60 to g tion of places	e can be chosen to earn		tion offered — if not	every seme-		
Additi	onal information						
	ling to § 2 para. 2 sentence 2 / o the APOLmCh and No. 3 of a			er e) and No. II 1st le	tter c) of an-		
Workle							
150 h							
	ng cycle						
Referre	ed to in LPO I (examination re	gulations for teaching-	degree programmes)				
§ 42 § 62							
Modul	e appears in						
Bache Bache Bache First st First st First st First st Bache	Module appears in Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Biology (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Functional Materials (2015) First state examination for the teaching degree Grundschule Chemistry (2015) First state examination for the teaching degree Realschule Chemistry (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Mittelschule Chemistry (2015) First state examination for the teaching degree Mittelschule Chemistry (2015) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major) Biology (2017)						
Bachelor's	with 1 major Chemistry (2015)		urg • generated 18-Apr-2025 • ord Bachelor (180 ECTS) Cherr		page 19 / 70		



Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Module studies (Bachelor) Chemistry (2019) Bachelor's degree (1 major) Food Chemistry (2019) Module studies (Bachelor) Orientierungsstudien (2020) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Biology (2021) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Food Chemistry (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Functional Materials (2025)

Bachelor's degree (1 major) Food Chemistry (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 20 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	1

	e title				Abbreviation	
Bioche	emistry 2				08-BC2-152-m01	
Modul	e coordinator			Module offered by		
	of the Chair of E		Chair of Biochemistry Only after succ. compl. of module(s)			
ECTS	Method of gra	-	Only after succ. con	ipi. of module(s)		
5	· · · · ·		L			
Duratio			Other prerequisites			
1 seme		raduate	<u> </u>			
Conter						
mistry. tional	A particular foc regulation, prote	us is on replicat ein targeting, nu	s module acquaints s tion, DNA repair, trans clear transport and p tal transduction.	scription, mRNA mat	uration, translation a	and transla-
Intend	ed learning out	comes				
			ne fundamental princi scribe the key bioche			ere discus-
Course	es (type, numbe	r of weekly conta	act hours, language –	- if other than Germa	n)	
V (2) +	Ü (1)					
			anguage — if other th an be chosen to earn		tion offered — if not	every seme-
writter	examination (a	pprox. 60 to 90	minutes)			
	tion of places					
Allocu						
	onal information					
			·			
Pursua prüfter state-c	ant to Section 2 n Lebensmittelc certified food ch	Subsection 2 Se hemikerinnen ur emists, APOLmC	ntence 2 Verordnung nd Lebensmittelchem h) in conjunction wit	iker (Regulation on t	he training and exar	nination of
Pursua prüfter state-c APOLm	ant to Section 2 n Lebensmittelc certified food ch nCh and No. 3 of	Subsection 2 Se hemikerinnen ui	nd Lebensmittelchem Th) in conjunction with	iker (Regulation on t	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo	ant to Section 2 n Lebensmittelc certified food ch nCh and No. 3 of	Subsection 2 Se hemikerinnen ur emists, APOLmC	nd Lebensmittelchem Th) in conjunction with	iker (Regulation on t	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h	ant to Section 2 n Lebensmittelc certified food ch nCh and No. 3 of Dad	Subsection 2 Se hemikerinnen ur emists, APOLmC	nd Lebensmittelchem Th) in conjunction with	iker (Regulation on t	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h	ant to Section 2 n Lebensmittelc certified food ch nCh and No. 3 of	Subsection 2 Se hemikerinnen ur emists, APOLmC	nd Lebensmittelchem Th) in conjunction with	iker (Regulation on t	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h Teachi	ant to Section 2 In Lebensmittelc certified food ch InCh and No. 3 of Dad ng cycle	Subsection 2 Se hemikerinnen ur emists, APOLmC f Annex 3 of APO	nd Lebensmittelchem Th) in conjunction with	iker (Regulation on t n No. II 2. Letter e) ar	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h Teachi Referro Modul	ant to Section 2 h Lebensmittelc certified food ch hCh and No. 3 of bad ing cycle ed to in LPO I (e e appears in	Subsection 2 Se hemikerinnen ur emists, APOLmC f Annex 3 of APO	nd Lebensmittelchem h) in conjunction with LmCh.	iker (Regulation on t n No. II 2. Letter e) ar	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h Teachi Referro Bache	ant to Section 2 h Lebensmittelcl certified food ch hCh and No. 3 of bad ing cycle ed to in LPO I (e e appears in lor's degree (1 m	Subsection 2 Se hemikerinnen ur emists, APOLmC f Annex 3 of APO examination regu	nd Lebensmittelchem Ch) in conjunction with LmCh. ulations for teaching-o	iker (Regulation on t n No. II 2. Letter e) ar	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h Teachi Referro Modulo Bachel Bachel	ant to Section 2 h Lebensmittelcl certified food ch hCh and No. 3 of bad ng cycle ed to in LPO I (e e appears in lor's degree (1 m lor's degree (1 m	Subsection 2 Se hemikerinnen ur emists, APOLmC f Annex 3 of APO examination regu najor) Biochemis najor) Biology (2	nd Lebensmittelchem h) in conjunction with LmCh. ulations for teaching- stry (2015) 015)	iker (Regulation on t n No. II 2. Letter e) ar	he training and exar	nination of
Pursua prüfter state-c APOLm Worklo 150 h Teachi Referro Bachel Bachel Bachel	ant to Section 2 h Lebensmittelcl certified food ch h Ch and No. 3 of bad ng cycle ed to in LPO I (effective e appears in lor's degree (1 m lor's degree (1 m lor's degree (1 m)	Subsection 2 Se hemikerinnen ur emists, APOLmC f Annex 3 of APO examination regu najor) Biochemis najor) Biochemis najor) Biology (2 najor) Chemistry	nd Lebensmittelchem ch) in conjunction with LmCh. ulations for teaching- stry (2015) (2015)	iker (Regulation on t n No. II 2. Letter e) ar	he training and exar	nination of
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Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Food Chemistry (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 22 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module	e title				Abbreviation
Practic	al cour	se of Biochemistry			08-BCP-152-m01
Module		lastar		Modulo offered by	
				Module offered by	
holder of the Chair of Biochemistry				Chair of Biochemist	try
ECTS		od of grading successfully completed	Only after succ. com 08-BC1	compl. of module(s)	
5	<u> </u>				
Duratio		Module level	Other prerequisites		
1 semester undergraduate					
Conten					
Practica experin		ises give students the o	oportunity to learn th	e fundamental princ	iples of conducting biochemical
Intende	ed learr	ning outcomes			
Studen	ts have	e become proficient in es	sential methods in bi	ochemistry.	
Course	s (type.	, number of weekly conta	ct hours, language —	if other than Germa	in)
P (6)		,			
Method		essment (type, scope, la on on whether module ca	5 5		tion offered — if not every seme-
Log (ap	prox. 3	o pages) ffered: Once a year, sum		,	
Allocat					
regard Studen ces will subject	to avail ts of th l be allo t semes	able places. e Bachelor's degree prog ocated according to the n	ramme Chemie (Che umber of subject ser	mistry, 180 ECTS cre nesters, among appl	TS credits): no restrictions with dits): no more than 6 places; pla- licants with the same number of ed and places re-allocated by lot
Additio	nal info	ormation			
Worklo	ad				
150 h					
Teachi	ng cycl	9			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
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Module	appea	irs in			
Module appears in Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major) Biochemistry (2022)					

Module	Module title Abbreviation						
Green	and sus	stainable (organic) chei	nistry		08-GC-242-m01		
Modul	e coord	inator		Module offered by			
lecture	r of lec	ture "Grüne und nachha	ultige (organische)	Institute of Organic	nic Chemistry		
Chemie					,		
ECTS	Metho	od of grading	Only after succ. compl. of module(s)				
5	nume	rical grade		· · · · · · · · · · · · · · · · · · ·			
Duration Module level Other prerequisites							
1 semester undergraduate							
Conten	Its						
be on t enviror	he twe nmenta	rovides an overview of t lve principles of green c l topics. Furthermore, li ones will be discussed	hemistry with example fe cycle assessment a	es from organic chen	nistry complemented	l by current	
Intend	ed lear	ning outcomes					
damen sessm	t to crit ents an	nderstands the principl ically assess chemical d is aware of sustainab area and analyze this ir	reactions and process ility aspects beyond c	es. He/She acquired	basic knowledge in	life cycle as-	
Course	s (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)		
V (2) +	Ü (1)	t in: German or English					
		sessment (type, scope, ion on whether module			tion offered — if not	every seme-	
b) writt Langua	ten exa age of a	pprox. approx. 40 hours mination (approx. 60 to ssessment: German an ffered: Once a year, wir	90 minutes) d/or English				
Allocat	ion of _l	olaces	_				
 Additio	onal inf	ormation					
Worklo	ad						
150 h							
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Teachi			mastar				
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Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)			
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Bachelor's	with 1 ma	jor Chemistry (2015)		urg • generated 18-Apr-2025 • ord Bachelor (180 ECTS) Chen		page 24 / 70	

First state examination for the teaching degree Grundschule Catholic Theology (2009) First state examination for the teaching degree Grundschule Mathematics (2009) First state examination for the teaching degree Grundschule Music (2009) First state examination for the teaching degree Grundschule Physics (2009) First state examination for the teaching degree Grundschule Social Science (2009) First state examination for the teaching degree Grundschule Science of Sport (2009) First state examination for the teaching degree Hauptschule English (2009) First state examination for the teaching degree Hauptschule Biology (2009) First state examination for the teaching degree Hauptschule Chemistry (2009) First state examination for the teaching degree Hauptschule Geography (2009) First state examination for the teaching degree Hauptschule Protestant Theology (2009) First state examination for the teaching degree Hauptschule German (2009) First state examination for the teaching degree Hauptschule History (2009) First state examination for the teaching degree Hauptschule Catholic Theology (2009) First state examination for the teaching degree Hauptschule Mathematics (2009) First state examination for the teaching degree Hauptschule Music (2009) First state examination for the teaching degree Hauptschule Physics (2009) First state examination for the teaching degree Hauptschule Social Science (2009) First state examination for the teaching degree Hauptschule Science of Sport (2009) First state examination for the teaching degree Realschule English (2009) First state examination for the teaching degree Realschule Biology (2009) First state examination for the teaching degree Realschule Chemistry (2009) First state examination for the teaching degree Realschule Geography (2009) First state examination for the teaching degree Realschule Protestant Theology (2009) First state examination for the teaching degree Realschule French Studies (2009) First state examination for the teaching degree Realschule German (2009) First state examination for the teaching degree Realschule History (2009) First state examination for the teaching degree Realschule Computer Science (2012) First state examination for the teaching degree Realschule Catholic Theology (2009) First state examination for the teaching degree Realschule Mathematics (2009) First state examination for the teaching degree Realschule Music (2009) First state examination for the teaching degree Realschule Physics (2009) First state examination for the teaching degree Realschule Science of Sport (2009) First state examination for the teaching degree Gymnasium English (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Gymnasium Chemistry (2009) First state examination for the teaching degree Gymnasium Geography (2009) First state examination for the teaching degree Gymnasium French Studies (2009) First state examination for the teaching degree Gymnasium German (2009) First state examination for the teaching degree Gymnasium History (2009) First state examination for the teaching degree Gymnasium Greek Philology (2009) First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015)

reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) First state examination for the teaching degree Sonderpädagogik Pedagogy of Secondary Education (2009) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2009) First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2013) First state examination for the teaching degree Mittelschule English (2013) First state examination for the teaching degree Mittelschule Biology (2013) First state examination for the teaching degree Mittelschule Chemistry (2013) First state examination for the teaching degree Mittelschule Geography (2013) First state examination for the teaching degree Mittelschule Protestant Theology (2013) First state examination for the teaching degree Mittelschule German (2013) First state examination for the teaching degree Mittelschule History (2013) First state examination for the teaching degree Mittelschule Catholic Theology (2013) First state examination for the teaching degree Mittelschule Mathematics (2013) First state examination for the teaching degree Mittelschule Physics (2013) First state examination for the teaching degree Mittelschule Social Science (2013) First state examination for the teaching degree Mittelschule Science of Sport (2013) Bachelor's degree (1 major) Chemistry (2015) First state examination for the teaching degree Grundschule English (2015) First state examination for the teaching degree Grundschule Biology (2015) First state examination for the teaching degree Grundschule Chemistry (2015) First state examination for the teaching degree Grundschule Geography (2015) First state examination for the teaching degree Grundschule German (2015) First state examination for the teaching degree Grundschule Catholic Theology (2015) First state examination for the teaching degree Grundschule Mathematics (2015) First state examination for the teaching degree Grundschule Pedagogy of Primary Education (2015) First state examination for the teaching degree Grundschule Physics (2015) First state examination for the teaching degree Grundschule Social Science (2015) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Biology (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Chemistry (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Geography (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in German (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in History (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Catholic Theology (Primary School) (2015) First state examination for the teaching degree Grundschule Art Education in Primary School (2015) First state examination for the teaching degree Grundschule Didactics in Science of Sport (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Mathematics (Primary School) (2015) First state examination for the teaching degree Grundschule Music Education in Primary School (2015) First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2015) First state examination for the teaching degree Grundschule Didactics in Social Science (Primary School) (2015) First state examination for the teaching degree Grundschule Science of Sport (2015) First state examination for the teaching degree Realschule English (2015) First state examination for the teaching degree Realschule Biology (2015) First state examination for the teaching degree Realschule Chemistry (2015) First state examination for the teaching degree Realschule Geography (2015) First state examination for the teaching degree Realschule Protestant Theology (2015) First state examination for the teaching degree Realschule French Studies (2015) First state examination for the teaching degree Realschule German (2015) First state examination for the teaching degree Realschule History (2015) First state examination for the teaching degree Realschule Computer Science (2015) First state examination for the teaching degree Realschule Catholic Theology (2015) First state examination for the teaching degree Realschule Mathematics (2015) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 26 / 70

reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Realschule Physics (2015) First state examination for the teaching degree Realschule Science of Sport (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2015) First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Primary School) (2015) First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2015)

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First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Geography (Middle School) (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Middle School) (2015)

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First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2015) First state examination for the teaching degree Mittelschule English (2015)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 27 / 70
reg. data record Bachelor (180 ECTS) Chemie - 2015		

Subdivided Module Catalogue for the Subject Chemistry Bachelor's with 1 major, 180 ECTS credits

First state examination for the teaching degree Mittelschule Biology (2015) First state examination for the teaching degree Mittelschule Chemistry (2015) First state examination for the teaching degree Mittelschule Geography (2015) First state examination for the teaching degree Mittelschule Protestant Theology (2015) First state examination for the teaching degree Mittelschule German (2015) First state examination for the teaching degree Mittelschule History (2015) First state examination for the teaching degree Mittelschule Catholic Theology (2015) First state examination for the teaching degree Mittelschule Mathematics (2015) First state examination for the teaching degree Mittelschule Physics (2015) First state examination for the teaching degree Mittelschule Social Science (2015) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2015) First state examination for the teaching degree Mittelschule Ergonomics (Teaching at the German Mittelschule) (2015)First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Geography (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Protestant Theology (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Catholic Theology (Middle School) (2015) First state examination for the teaching degree Mittelschule Art Education in Middle School (2015) First state examination for the teaching degree Mittelschule Didactics in Science of Sport (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2015) First state examination for the teaching degree Mittelschule Music Education in Middle School (2015) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2015) First state examination for the teaching degree Mittelschule Didactics in Social Science (Middle School) (2015) First state examination for the teaching degree Mittelschule Science of Sport (2015) First state examination for the teaching degree Mittelschule Teaching at the German Mittelschule (2015) First state examination for the teaching degree Grundschule Protestant Theology (2015) First state examination for the teaching degree Grundschule Music (2015) First state examination for the teaching degree Grundschule Didactics in Protestant Theology (Primary School) (2015) First state examination for the teaching degree Realschule Music (2015) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Primary School) (2015) First state examination for the teaching degree Mittelschule Music (2015) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) First state examination for the teaching degree Realschule French Studies (2016) First state examination for the teaching degree Grundschule English (2016) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2016) First state examination for the teaching degree Realschule English (2016) First state examination for the teaching degree Gymnasium English (2016) First state examination for the teaching degree Mittelschule English (2016) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2016) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2016) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 28 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	1

First state examination for the teaching degree Gymnasium Greek Philology (2018) First state examination for the teaching degree Grundschule Physics (2018) First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2018) First state examination for the teaching degree Realschule Physics (2018) First state examination for the teaching degree Gymnasium Physics (2018) First state examination for the teaching degree Mittelschule Physics (2018) First state examination for the teaching degree Sonderpädagogik Didactics in Physics (Middle School) (2018) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2018) First state examination for the teaching degree Gymnasium Mathematics (2019) First state examination for the teaching degree Mittelschule Biology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Sonderpädagogik Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Biology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule German (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule English (2020 (Prüfungsordnungsversion 2016)) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2020 (Prüfungsordnungsversion 2016)) First state examination for the teaching degree Mittelschule Protestant Theology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Protestant Theology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Geography (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Geography (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule History (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Catholic Theology (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Catholic Theology (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Mathematics (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Art Education in Middle School (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Science of Sport (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Didactics in Science of Sport (Middle School) (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Music (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Music Education in Middle School (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Mittelschule Teaching at the German Mittelschule (2020 (Prüfungsordnungsversion 2015)) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2020 (Prüfungsordnungsversion 2016))

First state examination for the teaching degree Sonderpädagogik Didactics in Chemistry (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Geography (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in German (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in History (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Art Education in Middle School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Middle School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Music Education in Middle School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Teaching at the German Mittelschule (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Music Education in Primary School (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Science of Sport (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Mathematics (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Protestant Theology (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Sonderpädagogik Didactics in Catholic Theology (Primary School) (2020 (Prüfungsordnungsversion 2015))

First state examination for the teaching degree Grundschule Didactics in Physics (Primary School) (2020) First state examination for the teaching degree Grundschule Physics (2020)

First state examination for the teaching degree Gymnasium Physics (2020)

First state examination for the teaching degree Realschule Physics (2020)

First state examination for the teaching degree Sonderpädagogik Didactics in Physics (Middle School) (2020) First state examination for the teaching degree Mittelschule Didactics in Physics (Middle School) (2020)

First state examination for the teaching degree Mittelschule Physics (2020)

First state examination for the teaching degree Grundschule Political and Social Studies (2020)

First state examination for the teaching degree Grundschule Didactics in Political and Social Studies (Primary School) (2020)

First state examination for the teaching degree Sonderpädagogik MS-Didaktik Career and Economics (2020) First state examination for the teaching degree Sonderpädagogik Didactics in Political and Social Studies (Secondary School) (2020)

First state examination for the teaching degree Mittelschule MS-Didaktik Career and Economics (2020) First state examination for the teaching degree Mittelschule Didactics in Political and Social Studies (Secondary School) (2020)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 30 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

First state examination for the teaching degree Mittelschule Political and Social Studies (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) First state examination for the teaching degree Grundschule History (2021) First state examination for the teaching degree Gymnasium History (2021) First state examination for the teaching degree Realschule History (2021) First state examination for the teaching degree Mittelschule History (2021) First state examination for the teaching degree Grundschule Pedagogy of Primary Education (2021) First state examination for the teaching degree Gymnasium English (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) First state examination for the teaching degree Sonderpädagogik Pedagogy of Primary Education (2021) Bachelor's degree (1 major) Biochemistry (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Realschule English (2023) First state examination for the teaching degree Grundschule English (2023) First state examination for the teaching degree Grundschule Didactics in English (Primary School) (2023) First state examination for the teaching degree Mittelschule English (2023) First state examination for the teaching degree Mittelschule Didactics in English (Middle School) (2023) First state examination for the teaching degree Sonderpädagogik Didactics in English (Middle School) (2023) First state examination for the teaching degree Gymnasium Geography (2023) First state examination for the teaching degree Realschule Geography (2023) First state examination for the teaching degree Grundschule Geography (2023) First state examination for the teaching degree Mittelschule Geography (2023) First state examination for the teaching degree Grundschule German (2024) First state examination for the teaching degree Gymnasium German (2024) First state examination for the teaching degree Realschule German (2024) First state examination for the teaching degree Sonderpädagogik Didactics in German (Middle School) (2024) First state examination for the teaching degree Mittelschule Didactics in German (Middle School) (2024) First state examination for the teaching degree Grundschule Didactics in German (Primary School) (2024) First state examination for the teaching degree Sonderpädagogik Didactics in German (Primary School) (2024) First state examination for the teaching degree Mittelschule German (2024) First state examination for the teaching degree Grundschule Music Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Music Education in Primary School (2024) First state examination for the teaching degree Mittelschule Music Education in Middle School (2024) First state examination for the teaching degree Sonderpädagogik Music Education in Middle School (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Mittelschule MS-Didaktik Career and Economics (2024) First state examination for the teaching degree Sonderpädagogik MS-Didaktik Career and Economics (2024) First state examination for the teaching degree Grundschule History (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Realschule History (2024) First state examination for the teaching degree Mittelschule History (2024) First state examination for the teaching degree Mittelschule Didactics in History (Middle School) (2024) First state examination for the teaching degree Sonderpädagogik Didactics in History (Middle School) (2024) First state examination for the teaching degree Grundschule Didactics in History (Primary School) (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) First state examination for the teaching degree Grundschule Art Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Art Education in Primary School (2024) First state examination for the teaching degree Sonderpädagogik Art Education in Middle School (2024) First state examination for the teaching degree Mittelschule Art Education in Middle School (2024) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015) page 31 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Module title			Abbreviation			
Organic Chemistry 1			08-0C1-152-m01			
Module coordinator				Module offered by		
			a Chamistry	-	Chamistry	
ECTS	1	Professorship of Organi		Institute of Organic	Chemistry	
		od of grading rical grade	Only after succ. con	npl. of module(s)		
5		-				
Duration 1 seme		Module level undergraduate	Other prerequisites			
Conter		undergraduate				
	-	rovides students with a		lamental principles (of organic chemistry	lt examines
		ituation of carbon and				
		ounds. The module also				
dition	and elir	nination reactions as w	ell as synthesis planni	ng.		
Intend	ed lear	ning outcomes				
		w important categories				
		ire to determine simple				
		are able to describe and				
synthe		they can analyse and c	ategorise the characte	ristic reaction condit	ions and can use the	em for simple
		, number of weekly con	tact hours, language –	- if other than Germa	ın)	
V (3) +		, , , , , , , , , , , , , , , , , , , ,	, , , ,		,	
Metho	d of ass	sessment (type, scope,	language — if other th	an German, examina	tion offered — if not	everv seme-
		on on whether module				,
a) writt	en exai	mination (approx. 90 to	180 minutes) or			
		ation of one candidate				
		ation in groups of up to	o 3 candidates (approx	. 15 minutes per can	didate) or	
		. 20 pages) or n (approx. 30 minutes)				
		ssessment: German an				
	tion of p	-				
Additic	nal inf	ormation				
	_		 POI mCh in conjunctio	n with No. 1 and lette	er b) of annex 1 to the	APOL mCh
according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter b) of annex 1 to the APOLmCh and No. 2 of annex 2 to the APOLmCh						
Worklo	oad					
150 h						
Teachi	ng cycl	e				
Teaching cycle: every year, summer semester						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
§ 62 Nr. 2						
Module appears in						
Bachelor's degree (1 major) Biology (2011)						
Bachelor's degree (1 major) Chemistry (2010)						
Bachelor's degree (1 major) Psychology (2010) Bachelor's degree (1 major, 1 minor) Pedagogy (2013)						
		gree (1 major, 1 minor)				
		gree (1 major, 1 minor)		Culture (2008)		
	Bachelor's degree (2 majors) Special Education (2009) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 32 / 70					
Bachelor's	with 1 ma	or criemistry (2015)		urg • generated 18-Apr-2025 • ord Bachelor (180 ECTS) Chem		page 32 / 70

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Magister Theologiae Catholic Theology (2013) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) Bachelor's degree (1 major) Computer Science (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's degree (2 majors) Pedagogy (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 35 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Music Education (2024) Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

Module title				Abbreviation	
Organic Che	mistry 2 and analytical r	nethods in organic che	emistry	08-0C2-152-m01	
Module coor	dinator		Module offered by		
holder of the Chair of Physically Organi		uie Chamieter		Chamistan	
			Institute of Organic	Chemistry	
i	hod of grading	Only after succ. cor	npl. of module(s)		
·	erical grade				
Duration	Module level	Other prerequisites	i		
1 semester	undergraduate				
Contents					
the example on reactions well as rearr	introduces students to t of carbonyl compounds, to complex reaction med angement. In addition, it ectrometry and NMR spec	it extends the studen chanisms. The course a introduces students to	ts' knowledge of sub also focuses on oxid	stitution, elimination ation and reduction	n and additi- reactions as
	rning outcomes				
bonyl compo they can pla unknown rea to draw cono	ve become familiar with to bunds. They are able to d n and formulate multi-sta actions. Students are abl clusions regarding the mo	escribe specific reaction age syntheses with cor e to describe importan plecular structure.	ons of carbonyls and nplex reaction mech It spectroscopic met	aromatics. For that anisms and can tran hods, to evaluate a s	purpose, sfer them to
	e, number of weekly con	tact nours, language –	– If other than Germa	in)	
V (3) + Ü (1)					
	ssessment (type, scope, ation on whether module			ition offered — if not	every seme-
c) oral examd) log (approe) presentat	ination of one candidate ination in groups of up to ox. 20 pages) or ion (approx. 30 minutes) assessment: German an	9 3 candidates (approx	-	didate) or	
Allocation o	fplaces				
Additional in	nformation				
Workload		_			
270 h					
Teaching cy	LIE				
Referred to i	n LPO I (examination reg	gulations for teaching-	degree programmes)		
Module app					
	egree (1 major) Biochem				
	egree (1 major) Chemistr				
	egree (1 major) Mathema)		
	egree (1 major) Computa		015)		
	egree (1 major) Biochem	•			
	egree (1 major) Chemistr egree (1 major) Function				
	najor Chemistry (2015)		urg • generated 18-Apr-2025	• exam.	page 37 / 70
			ord Bachelor (180 ECTS) Chen		1 3. 51 1 3



Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Functional Materials (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 38 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module title				Abbreviation	
Organi	c Chem	iistry 3 & 4			08-0C3+4-152-m01
Modul	e coord	inator		Module offered by	
holder	of the l	Professorship of Organic	Chemistry	Institute of Organic	Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
13	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
2 seme	ester	undergraduate			
Conter	nts				
radical tallic c	This module focuses on polar rearrangements, olefination reactions, pericyclic reactions, carbenes, nitriles and radicals. It discusses the fundamental principles of stereoselective synthesis, asymmetric catalysis, organome-tallic chemistry and retrosynthesis. The module also explores heterocyclic compounds, dyes, naturally occurring substances, biopolymers and protecting group techniques.				
Intend	ed lear	ning outcomes			
asymm thetic a and sy and se tes, fat	Students are able to formulate olefination reactions. They are able to develop stereoselective syntheses and asymmetric catalyses. Students are able to describe organometallic reactions. They are able to conduct retrosynthetic analyses of molecules. They are able to name important heteroaromatics and to formulate their reactions and syntheses. They are able to characterise and categorise dyes. Students are able to describe the structure and selective synthesis of proteins. In addition, they are able to describe the structure of the DNA, carbohydrates, fats, terpenes and steroids.				
		, number of weekly conta	ct nours, language –	- If other than Germa	n)
		$V(2) + \ddot{U}(2) + S(1)$			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
b) oral c) oral d) log e) pres	 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 				
Allocat	tion of _l	olaces			
Additio	onal inf	ormation			
Worklo	ad				
390 h					
Teachi	Teaching cycle				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Modul	e appea	ars in			
		gree (1 major) Chemistry			
Bachel	or's de	gree (1 major) Chemistry	(2017)		

Module title Abbreviation				Abbreviation	
Organic Chemistry 3 (DD)					08-0C-0C3-DA-152-m01
Module coordinator				Module offered by	· · · · · · · · · · · · · · · · · · ·
holder o	of the F	Professorship of Organic	Chemistry	Institute of Organic	Chemistry
		od of grading	Only after succ. com	pl. of module(s)	
6	nume	rical grade			
Duratio		Module level	Other prerequisites		
1 semes	ster	undergraduate			
Content	ts				
radicals	s. It dis				eactions, carbenes, nitriles and symmetric catalysis, organome-
Intende	d learr	ning outcomes			
asymme	etric ca				tereoselective syntheses and They are able to conduct retrosyn-
Courses	s (type,	, number of weekly conta	ct hours, language —	if other than Germa	in)
V (2) + Ü	Ü (2)				
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
b) oral e c) oral e d) log (a e) prese	examin examin approx entatio	nination (approx. 90 to 1 ation of one candidate e ation in groups of up to 3 . 20 pages) or n (approx. 30 minutes) ssessment: German and,	ach (20 to 30 minute) candidates (approx.		didate) or
Allocati	ion of p	olaces			
Additio	nal info	ormation			
Workloa	ad				
180 h					
Teachin	ig cycle	9			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
			5		
Module	appea	rs in			
Bachelo	or's deg	gree (1 major) Chemistry gree (1 major) Chemistry			
	(

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 40 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module coordinator Module offered by holder of the Chair of Organic Chemistry II Institute of Organic Chemistry ECTS Method of grading Only after succ. compl. of module(s) 8 (not) successfully completed 08-0C1 and 08-ACP1 Duration Module level Other prerequisites 1 semester undergraduate Contents This module gives students the opportunity to apply in practice the knowledge they have gained through the related lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write labe reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry. Simple to multi-level syntheses and the analysis of the products. Intended learning outcomes Students know how to safely handle hazardous substances. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. Courses (type, number of weekly contact hours, language — if other than German) P P (ta)	Module title Abbreviation					Abbreviation
holder of the Chair of Organic Chemistry II Institute of Organic Chemistry ECTS Method of grading Only after succ. compl. of module(s) 8 (not) successfully completed 08-OC1 and 08-ACP1 Duration Module level Other prerequisites 1 semester undergraduate Contents Contents This module gives students the opportunity to apply in practice the knowledge they have gained through the related lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write lab reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry, simple to multi-level syntheses and the analysis of the products. Intended learning outcomes Students know how to safely handle hazardous substances. They are able to conduct simple experimental operations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. Courses (type, number of weekly contact hours, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) Vortestact/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practica	Organi	Organic Chemistry - lab 1				08-0CP1-152-m01
ECTS Method of grading Only after succ. compl. of module(s) 8 [not) successfully completed o8-OC1 and o8-ACP1 Duration Module level Other prerequisites 1 semester undergraduate	Module	e coord	inator		Module offered by	<u> </u>
8 (not) ⇒uccessfully completed 08-0C1 and 08-ACP1 Duration Module level 0- Contents Contents Contents This module gives students the opport inty to apply in practice the knowledge they have gained through the replated lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In addition to those experiments, students will be expected to take oral tests and write laber persts to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental operations organic chemistry, simple to multi-level syntheses and the analysis of the products. Intendel learing outcomes Students know how to safely handle hazardous substances. They are able to conduct simple experimental operations or organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the weekly contact hours, language - if other than German) P (ta)	holder	of the (Chair of Organic Chemist	y II	Institute of Organic	Chemistry
Duration Module level Other prerequisites 1 semester undergraduate	ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
1 semester undergraduate	8	(not) s	successfully completed	08-OC1 and 08-ACP	1	
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This module gives students the opportunity to apply in practice the knowledge they have gained through the re- lated lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In ad- dition to those experiments, students will be expected to take oral tests and write lab reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry, simple to multi-level syntheses and the analysis of the products. Intended learning outcomes Students know how to safely handle hazardous substances. They are able to conduct simple experimental ope- rations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. Courses (type, number of weekly contact hours, language — if other than German) P (14) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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) Language of assessment: German and/or English Allocation of places 	1 seme	ster	undergraduate			
lated lecture(s). After a safety briefing, the students autonomously conduct experiments in the laboratory. In ad- dition to those experiments, students will be expected to take oral tests and write lab reports to demonstrate their knowledge. The course focuses on the safe handling of hazardous substances, simple experimental unit operations of organic chemistry, simple to multi-level syntheses and the analysis of the products. Intended learning outcomes Students know how to safely handle hazardous substances. They are able to conduct simple experimental ope- rations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. Courses (type, number of weekly contact hours, language — if other than German) P (14) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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) Language of assessment: German and/or English Allocation of places 	Conten	ts				
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rations of organic chemistry. They are able to analyse the yield and purity of the products and identify possible error sources. They are able to connect the theoretical aspects covered in the lecture with practical experiments in the laboratory. Courses (type, number of weekly contact hours, language — if other than German) P (14) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) 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) Language of assessment: German and/or English Allocation of places Additional information Workload 240 h Teaching cycle Referred to in LPO 1 (examination regulations for teaching-degree programmes) Module appears in					They are able to a	nduat aimpla avparimental area
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ster, information on whether module can be chosen to earn a bonus) 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) Language of assessment: German and/or English Allocation of places Additional information Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in			(t	······	<u> </u>	tion of 6 and 1 if and a surrow of a surrow of 6
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Workload 240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in						
240 h Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Additio	nal inf	ormation			
240 h 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	Worklo	ad				
 Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	240 h					
	Teaching cycle					
	Referre	ed to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Bachelor's degree (1 major) Chemistry (2015)	Module	e appea	ars in			
	Bachel	or's de	gree (1 major) Chemistry	(2015)		

Module	Module title Abbreviation				
Organic Chemistry - advanced laboratory course for stude			ory course for studen	ts of chemistry	08-0CP2-152-m01
Modula	Module coordinator			Module offered by	<u> </u>
holder of the Chair of Organic Chemistry II		v II	Institute of Organic	 Chemistry	
ECTS		od of grading	Only after succ. com		Chemistry
5		successfully completed	08-0C2 and (08-0Cl		
Duratio		Module level	Other prerequisites	,	
1 seme		undergraduate			
Conten	ts				
dous si	ubstan		ng and synthesis tec		s by working with special hazar- extensive purification methods
Intende	ed lear	ning outcomes			
	ex syntł				nces. They are able to perform to use specialist literature to plan
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	an)
P (11)					
Vortest pages e	ate/Na each) a	on on whether module ca chtestate (pre and post-e nd assessment of practic ssessment: German and,	experiment examinati al performance (2 to	on talks approx. 15	minutes each, log approx. 5 to 10 ions)
Allocat					
Additio	nal inf	ormation			
Worklo	ad				
150 h					
Teachi	ng cvcl	e			
<u></u>					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	irs in			
		gree (1 major) Biochemis	try (2015)		
	Bachelor's degree (1 major) Chemistry (2015)				
		gree (1 major) Biochemis			
Bachelor's degree (1 major) Chemistry (2017)					
		gree (1 major) Chemistry gree (1 major) Biochemis			

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 42 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module title Abbreviation					
Advanc	ed che	mical practical course			08-0P-152-m01
Module	Module coordinator			Module offered by	<u> </u>
head o	f the re	search group offering the	module	Faculty of Chemistr	y and Pharmacy
ECTS	·	od of grading	Only after succ. con	npl. of module(s)	
5	(not)	successfully completed			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
	-	ives students the opport ne in question.	unity to explore a res	earch topic and app	ly the methods commonly used
Intende	ed lear	ning outcomes			
Studen oral pre			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	n)
P (10)	_				
ster, in a) talk b) log (format (approx approx	x. 15 minutes) or 10 to 20 pages) 2 sessment: German and	an be chosen to earn		tion offered — if not every seme-
Allocat	. –	·			
Additio	nal inf	ormation			
Additio 20 days		ormation on module dura	tion: block placeme	nt / block taught pra	ctical course with a duration of
Worklo					
150 h					
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
			-		
Module	e appea	ars in			
Bachel Bachel	or's de or's de	gree (1 major) Chemistry gree (1 major) Chemistry es (Bachelor) Chemistry (:	(2017)		

Module title					Abbreviation
Physic	al Cher	nistry (lab)			08-PCP-152-m01
Modul	e coord	linator		Module offered by	<u> </u>
lecture mie"	er of lec	ture "Thermodynamik, Ki	netik, Elektroche-	Institute of Physica	l and Theoretical Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
9	(not)	successfully completed	o8-PC-QMS or o8-P	C-TKE	
Durati	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate			
Conter	nts				
dition their k	to thos nowled	e experiments, students			eriments in the laboratory. In ad- ite lab reports to demonstrate
		able to connect the theor practical laboratory expe			tics, electrochemistry and spec- ulting measurements.
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	in)
P (6)					
ster, in	nformat	ion on whether module c	an be chosen to earn		tion offered — if not every seme-
	tate/Na	abtactata (nra and nact			
	each) a	active (pre and post- and assessment of practions assessment: German and	cal performance (2 to		
Langua	each) a	and assessment of practions and assessment: German and	cal performance (2 to		
Langua	each) a age of a	and assessment of practions and assessment: German and	cal performance (2 to		
Langua Allocat	each) a age of a tion of	and assessment of practions and assessment: German and	cal performance (2 to		
Langua Allocat	each) a age of a tion of	and assessment of practionssessment: German and places	cal performance (2 to		
Langua Allocat	each) a age of a tion of onal inf	and assessment of practionssessment: German and places	cal performance (2 to		
Langua Allocat Additio	each) a age of a tion of onal inf	and assessment of practionssessment: German and places	cal performance (2 to		
Langua Allocat Additio Worklo 270 h	each) a age of a tion of onal inf	and assessment of practic assessment: German and places formation	cal performance (2 to		
Langua Allocat Additio Worklo 270 h	each) a age of a tion of onal inf	and assessment of practic assessment: German and places formation	cal performance (2 to		
Langua Allocat Additio 270 h Teachi 	each) a age of a tion of onal inf oad	and assessment of practic assessment: German and places formation	cal performance (2 to /or English	4 random examinat	
Langua Allocat Additio 270 h Teachi 	each) a age of a tion of onal inf oad	ind assessment of practic issessment: German and places formation	cal performance (2 to /or English	4 random examinat	ions)
Langua Allocat Additio 270 h Teachi Referro 	each) a age of a tion of onal inf oad	e LPOI (examination regu	cal performance (2 to /or English	4 random examinat	ions)
Langua Allocat Additio Worklo 270 h Teachi Referro Modul	each) a age of a tion of onal inf oad ing cycl	e LPOI (examination regu	cal performance (2 to /or English 	4 random examinat	ions)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015	page 44 / 70	
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Module title					Abbreviation
Princi	Principles of quantum mechanics and spectroscopy				08-PC-QMS-152-m01
Modul	Module coordinator			Module offered by	
lecture	er of lec	ture "Grundlagen der	Quantenmechanik and		al and Theoretical Chemistry
Spekti	roskopi	e" (Principles of Quar			
-	roscopy		Only offer avec as		
ECTS 10		od of grading erical grade	Only after succ. con	npt. of module(s)	
Durati		Module level	Other prerequisites		
1 seme		undergraduate		•	
Conte					
the mo UV-VIS	odule fo 5 spectr , differe	ocuses on vibrational oscopy. In addition, t	spectroscopy, angular m he module discusses lin	omentum quantisat ear operators, eiger	id rotor. As regards spectroscopy tion, microwave spectroscopy an avalue problems, matrix represen athematical bases of the topics li
Intend	led lear	ning outcomes			
to des	cribe di				nem to molecules. They are able to apply the mathematical bases of
Course	es (type	e, number of weekly co	ontact hours, language –	- if other than Germ	an)
V (4) +	· Ü (2) +	V (2)			
			e, language — if other th le can be chosen to earn		ation offered — if not every seme
 b) oral c) oral d) log e) pres Langus 	l examin examin (approx sentatio	nation in groups of up k. 20 pages) or on (approx. 30 minute assessment: German	te each (20 to 30 minute to 3 candidates (approx s)	-	ndidate) or
Alloca	tion of	places			
Additi	onal inf	formation			
Workl	oad				
300 h					
Teachi	ing cyc	le			
Referr	ed to in	LPOI (examination	regulations for teaching-	degree programmes)
Modul	le appe	ars in			
mouut					
	lor's de	gree (1 major) Chemis	stry (2015)		

Summe	e title		Abbreviation		
Symme	etry, ch	emical bonding and ligh	t		08-PC-SBL-152-m01
Module	<u>a coord</u>	inator		Module offered by	
	Module coordinator				
lecture Licht"	lecturer of lecture "Symmetrie, chemische Bindung ar Licht"			Institute of Physica	l and Theoretical Chemistry
ECTS		od of grading	Only after succ. cor	npl. of module(s)	
9 numerical grade					
Duratio	on	Module level	Other prerequisites	6	
2 seme	ester	undergraduate			
Conten	nts				
tions, p qualita	point gr tive M(oups, character tables a D theory and gives an int	nd selection rules. Th roduction to the fund	ne module deals with amentals of comput	on group theory, symmetry opera a the chemical bond based on the ational chemistry. It also gives cal bonding and light in detail.
Intende	ed lear	ning outcomes			
		able to analyse the symmes of a particular molecu			conclusions about the spectros-
	•	, number of weekly conta	· · ·	•	n)
		V (2) + Ü (2)		n other than oenne	
				C	
		ion on whether module c			tion offered — if not every seme-
c) oral		ation in groups of up to	each (20 to 30 minute 3 candidates (approx	-	didate) or
c) oral d) log (e) pres Langua	(approx entatio age of a	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and	3 candidates (approx	-	didate) or
c) oral d) log (e) pres	(approx entatio age of a	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres Langua Allocat	(approx entatio age of a t ion of j	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and blaces	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres Langua Allocat	(approx entatio age of a t ion of j	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres Langua Allocat	(approx entatio age of a t ion of j	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and blaces	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres Langua Allocat	(approx entatio age of a tion of p	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and blaces	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres- Langua Allocat Additio	(approx entatio age of a tion of p	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and blaces	3 candidates (approx	-	didate) or
c) oral (d) log (e) pres Langua Allocat Additio Worklo 270 h	(approx eentatio age of a tion of p onal inf	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation	3 candidates (approx	-	didate) or
c) oral d d) log (e) pres Langua Allocat Additio Worklo	(approx eentatio age of a tion of p onal inf	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation	3 candidates (approx	-	didate) or
c) oral d d) log (e) press Langua Allocat Morklo 270 h Teachin 	(approx eentatio age of a tion of p onal inf pad	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation	3 candidates (approx /or English	. 15 minutes per can	
c) oral d d) log (e) press Langua Allocat Morklo 270 h Teachin 	(approx eentatio age of a tion of p onal inf pad	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation	3 candidates (approx /or English	. 15 minutes per can	
c) oral d d) log (e) pres Langua Allocat Worklo 270 h Teachin Referre	(approx eentatio age of a tion of p onal inf oad ng cycl ed to in	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation e LPOI (examination regu	3 candidates (approx /or English	. 15 minutes per can	
c) oral d d) log (e) pres Langua Allocat Additio 270 h Teachin Referre Module	(approx entatio age of a tion of p onal inf oad ng cycl ed to in e appea	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and olaces ormation e LPO I (examination regu	3 candidates (approx /or English 	. 15 minutes per can	
c) oral d d) log (e) press Langua Allocat Worklo 270 h Teachin Referre Bachel	(approx entatio age of a tion of p onal inf onal inf oad ng cycl ed to in e appea or's de	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation e LPO I (examination regu ars in gree (1 major) Biochemis	3 candidates (approx /or English 	. 15 minutes per can	
c) oral d d) log (e) pres Langua Allocat Morklo 270 h Teachin Referre Bachel Bachel	(approx eentatio age of a tion of p onal inf onal inf oad ng cycl ed to in e appea or's de or's de	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation e LPO I (examination regunation regunation gree (1 major) Biochemis gree (1 major) Chemistry	3 candidates (approx /or English 	. 15 minutes per can	
c) oral d d) log (e) pres Langua Allocat Additio 270 h Teachin Referre Bachel Bachel Bachel	(approx eentatio age of a tion of p onal inf oad ng cycl ed to in e appea or's de or's de or's de	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and olaces ormation e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Chemistry gree (1 major) Mathemat	3 candidates (approx /or English 	degree programmes)	
c) oral d d) log (e) pres Langua Allocat Additio 270 h Teachin Referre Bachel Bachel Bachel Bachel	(approx entatio age of a tion of p onal inf oad ng cycl ed to in e appea or's de or's de or's de	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and olaces ormation e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Mathemat gree (1 major) Computati	3 candidates (approx /or English 	degree programmes)	
c) oral d d) log (e) press Langua Allocat Worklo 270 h Teachin Referre Bachel Bachel Bachel Bachel Bachel	(approx entatio age of a tion of p onal inf onal inf oad ad ad ad ad ad ad ad ad ad ad ad ad a	ation in groups of up to g . 20 pages) or n (approx. 30 minutes) ssessment: German and places ormation e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Computati gree (1 major) Computati gree (1 major) Biochemis	3 candidates (approx /or English 	degree programmes)	
c) oral d d) log (e) pres Langua Allocat Worklo 270 h Teachin Referre Bachel Bachel Bachel Bachel Bachel Bachel	(approx eentatio age of a tion of p onal inf oad ng cycl ed to in e appea or's de or's de or's de or's de or's de	ation in groups of up to . 20 pages) or n (approx. 30 minutes) ssessment: German and olaces ormation e LPO I (examination regu ars in gree (1 major) Biochemis gree (1 major) Mathemat gree (1 major) Computati	3 candidates (approx /or English 	degree programmes)	

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 46 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module titl	e			Abbreviation		
Symmetry,	chemical bonding and ligh	nt (DD)		08-PC-SBL-DA-152-m01		
Module co	ordinator		Module offered by			
lecturer of lecture "Symmetrie, chemische Bindung and Licht"			Institute of Physica	l and Theoretical Chemistry		
ECTS Me	thod of grading	Only after succ. con	npl. of module(s)			
6 nu	nerical grade					
Duration	Module level	Other prerequisites	i			
1 semester	undergraduate					
Contents						
tions, poin		and selection rules. Th	e module deals with	on group theory, symmetry opera- the chemical bond based on the ational chemistry.		
Intended le	arning outcomes					
	re able to analyse the symr erties of a particular molect			conclusions about the spectros-		
Courses (ty	pe, number of weekly cont	act hours, language –	- if other than Germa	in)		
V (3) + Ü (2)					
	assessment (type, scope, l ation on whether module o			tion offered — if not every seme-		
b) oral examplec) oral exampled) log (apple) presentation	xamination (approx. 90 to nination of one candidate nination in groups of up to rox. 20 pages) or tion (approx. 30 minutes) of assessment: German and	each (20 to 30 minute 3 candidates (approx	-	didate) or		
Allocation	of places					
Additional	information					
Workload						
180 h						
Teaching c	ycle					
Referred to	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module ap	pears in					
Bachelor's	degree (1 major) Chemistry					
Bachelor's degree (1 major) Chemistry (2017)						

Modul	Module title Abbreviation						
Therm	odynam	nics, Kinetics, Electroche	mistry		08-PC-TKE-152-m01	_	
Modul	e coord	inator		Module offered by			
		ture "Thermodynamik, Ki	netik Elektroche-		l and Theoretical Ch	omistry	
mie"	r	· ·				ennstry	
ECTS		od of grading	Only after succ. compl. of module(s)				
9	·	rical grade					
Duratio		Module level	Other prerequisites				
1 seme	ster	undergraduate					
Contents							
chemio dynam	al equi ic proce	ntroduces students to the libria, ideal and real gass esses, it discusses the fu	ses/solutions/mixed	phases and electroc			
Intend	ed learı	ning outcomes					
solutio	ns, gas	able to explain the laws o es, mixed phases and ele actions.					
Course	Courses (type, number of weekly contact hours, language — if other than German)						
V (4) +	Ü (2)						
		s essment (type, scope, la on on whether module ca			tion offered — if not	every seme-	
d) log (e) pres Langua	(approx entatio	ation in groups of up to 3 . 20 pages) or n (approx. 30 minutes) ssessment: German and, bonus		. 15 minutes per cano	iluale) oi		
Allocat	ion of p	olaces					
Additio	onal inf	ormation					
Worklo	ad						
270 h							
	ng cycl	e					
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)			
§6211	Vr. 1						
Modul	Module appears in						
Bachel	or's de	gree (1 major) Biochemis	try (2015)				
Bachelor's degree (1 major) Chemistry (2015)							
Bachelor's degree (1 major) Mathematics (2015)							
	Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Functional Materials (2015)						
			-	Chomistry (2015)			
Bachel	or's de	mination for the teaching gree (1 major) Biochemist	try (2017)	Chemisuy (2015)			
Bachel	or's de	gree (1 major) Chemistry	(2017)				
inchalar's with a major Chamistry (2015)							

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Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Functional Materials (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 49 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Modul	Module title Abbreviation					
Progra	mming	and numerical methods			08-PKC-152-m01	
Module	e coord	inator		Module offered by		
lecture	r of lec	ture "Programmierkurs fü	r Chemiker"	Institute of Physica	l and Theoretical Chemistry	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
5	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
		rovides an introduction t d to problems in chemist		of a programming lar	nguage and discusses how they	
Intend	ed lear	ning outcomes				
Studer chemis		able to describe the fund	amentals of the prog	ramming language a	nd to apply them to problems in	
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	an)	
S (2) +	Ü (2)					
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-	
d) log (e) pres Langua	approx entatio ige of a	ation in groups of up to 3 . 20 pages) or n (approx. 30 minutes) ssessment: German and, ffered: Once a year, sum	or English			
Allocat	ion of j	olaces				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teachi	ng cycl	e				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Modul	e appea	ars in				
	Bachelor's degree (1 major) Chemistry (2015)					
Bachel	or's de	gree (1 major) Functional	Materials (2015)			
		gree (1 major) Chemistry				
		gree (1 major) Functional				
Bachel	or's de	gree (1 major) Functional	Materials (2025)			

Module tit	le		Abbreviation				
Applied Sp	pectroscopy 3			08-PS3-152-m01			
Module co	ordinator		Module offered by				
lecturer of lecture "Praktische Spektroskopie 3"				l and Theoretical Chemistry			
	ethod of grading	Only after succ. com					
	imerical grade						
Duration	Module level	Other prerequisites					
1 semeste	r undergraduate						
Contents							
practice ar		aphs. We will record		e of spectroscopic methods in fluorescence and vibration spec-			
Intended l	earning outcomes						
	are able to work with differen rror discussions.	t spectrometers and	to interpret the resu	lting spectra. They are able to			
Courses (t	ype, number of weekly conta	ct hours, language —	· if other than Germa	ın)			
V (3)							
Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- 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 (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							
Language	ation (approx. 30 minutes) of assessment: German and/	or English					
Allocation	of places						
Additional	information						
Workload							
150 h							
Teaching o	cycle						
Referred to	o in LPO I (examination regu	lations for teaching-o	legree programmes)				
Module ap	Module appears in						
Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Functional Materials (2015) Master's degree (1 major) Functional Materials (2016) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Functional Materials (2021)							
Bachelor's	degree (1 major) Functional	Materials (2025)					

Module title				Abbreviation		
Quantum C	Quantum Chemistry 08-TC-152-m01					
Module coordinator			Module offered by			
lecturer of lecture "Quantenchemie"			Institute of Physical	l and Theoretical Chemistry		
ECTS Me	thod of grading	Only after succ. com	pl. of module(s)			
3 nu	merical grade					
Duration	Module level	Other prerequisites				
1 semester	undergraduate					
Contents						
spin, the Pa		inants, the Hartree-Fo	ock method, correlati	antum chemistry. It focuses on ion energy, configuration interac- dels of H2+.		
Intended le	earning outcomes					
Students a	re able to describe excited s	tates of molecules w	ith the help of key co	oncepts and models.		
Courses (ty	pe, number of weekly conta	ct hours, language –	· if other than Germa	n)		
V (2) + Ü (1))					
	assessment (type, scope, la nation on whether module ca	5 5		tion offered — if not every seme-		
b) oral exar c) oral exar d) log (app e) presenta	examination (approx. 90 to 1 mination of one candidate ex nination in groups of up to 3 rox. 20 pages) or ation (approx. 30 minutes) of assessment: German and/	ach (20 to 30 minute 3 candidates (approx.	-	didate) or		
Allocation						
Additional	information					
Additionat	intornation					
Workload						
90 h						
Teaching c	ycle					
	in LPO I (examination regu	lations for teaching-o	legree programmes)			
§ 22 Nr. 1 § 22 Nr. 2 § 22 Nr. 3	2 f)					
Module appears in						
Bachelor's degree (1 major) Chemistry (2015)						
Bachelor's Bachelor's Bachelor's First state of First state of First state of	degree (1 major) Mathemati degree (1 major) Computatio degree (1 major) Functional examination for the teaching examination for the teaching examination for the teaching examination for the teaching aching degree Gymnasium N	cs (2015) onal Mathematics (20 Materials (2015) g degree Grundschule g degree Realschule C g degree Gymnasium g degree Mittelschule	chemistry (2015) Chemistry (2015) Chemistry (2015) Chemistry (2015)	ork Bavaria (ENB) (2016)		

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 52 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2020) First state examination for the teaching degree Mittelschule Chemistry (2020 (Prüfungsordnungsversion 2015)) Bachelor's degree (1 major) Functional Materials (2021) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Mathematics (2023) Master's teaching degree Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2025) Bachelor's degree (1 major) Functional Materials (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 53 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module title Abbreviation					
Advand	ced lab	oratory course			08-VP-152-m01
Modul	e coord	inator		Module offered by	
		search group offering the	e module	Faculty of Chemistr	v and Pharmacy
ECTS	1	od of grading	Only after succ. con	· · ·	y and i namacy
5		successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conten	nts				
		vives 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			
Studen oral pre		· · ·	research topic and p	resent the results of	their work in a written report or
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
P (10)					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		15 minutes) Issessment: German and	/or English		
Allocat	tion of _l	places			
Additic	onal inf	ormation			
Additic 20 day		ormation on module dura	ation: block placemer	nt / block taught pra	ctical course with a duration of
Worklo					
150 h					
Teachi	ng cycl	e			
			-		
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
	e annea	•			
Module	c uppci	ars in			
		a rs in gree (1 major) Chemistry	(2015)		

Modul	Module title Abbreviation					
Qualifi	cations	- Partner University 1			08-VPUB1-152-m01	
Modul	e coord	inator		Module offered by		
progra	mme co	oordinator of the exchang	e programme	Faculty of Chemistr	y and Pharmacy	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	· · · · ·	
25	(not) s	successfully completed				
Durati	on	Module level	Other prerequisites			
2 seme	ester	undergraduate	Please consult with	course advisory serv	vice in advance.	
Conter	nts					
This m	odule d	liscusses topics from the	curriculum of the par	rtner university abroa	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)	
		signed to module pecified by partner unive	ersity abroad			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		as specified by partner u ssessment: German and,		at partner university	abroad	
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Worklo	bad					
750 h						
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
		gree (1 major) Chemistry	(2015)			
Bachel	lor's de	gree (1 major) Chemistry	(2017)			

Module	e title				Abbreviation	
Qualifications - Partner University 2 08-VPUB2-152-mo1				08-VPUB2-152-m01		
Module coordinator Module offered by						
progra	programme coordinator of the exchange prog		e programme	Faculty of Chemistry and Pharmacy		
		Only after succ. com				
25	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
2 seme	emester undergraduate Please consult with course advisory service in advance.			vice in advance.		
Conten	ts					
This m	odule c	liscusses topics from the	curriculum of the par	rtner university abroa	ad.	
Intend	ed lear	ning outcomes	,			
Studen sity.	nts have	e developed the knowled	ge and skills taught i	n the courses attend	led by them at the partner univer-	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)	
No cou	rses as	signed to module				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		as specified by partner u ssessment: German and,		at partner university	r abroad	
Allocat	ion of _l	places				
Additio	onal inf	ormation				
Worklo	ad					
750 h						
Teachi	ng cycl	e				
Referre	ed to in	LPO I (examination regu	lations for teaching-o	legree programmes)		
Module	e appea	ars in				
		gree (1 major) Chemistry	(2015)			
Bachel	or's de	gree (1 major) Chemistry	(2017)			

Module	e title			Abbreviation	
Mather	natics for students in Chemis	stry and Biology		10-M-MCB-152-m01	
	e coordinator		Module offered by		
Dean o	f Studies Mathematik (Mathe		Institute of Mathem	natics	
ECTS	Method of grading	Only after succ. con	npl. of module(s)		
5	numerical grade				
Duration Module level Other prerequisites					
1 seme	ster undergraduate				
Conten	ts				
of funct	nal relations, differentiation tions in several variables, po s in statistics.				
Intende	ed learning outcomes				
apply b	dent is able to recognise and pasic mathematical methods	to them and interpret th	e results.		il problems,
	s (type, number of weekly co	ntact hours, language –	- if other than Germa	n)	
V (3) +	Ü (2)				
ster, in	d of assessment (type, scope formation on whether module	e can be chosen to earn	a bonus)		every seme-
	examination (approx. 90 to 1	20 minutes) and writter	n exercises (approx.	25)	
Allocat	ion of places				
Additio	onal information				
prüften state-ce	nt to Section 2 Subsection 2 Lebensmittelchemikerinnen ertified food chemists, APOLr	und Lebensmittelchem	iker (Regulation on t	he training and exan	nination of
Worklo	ad				
150 h					
Teachi	ng cycle				
Referre	ed to in LPO I (examination re	gulations for teaching-	degree programmes)		
Module	e appears in				
	or's degree (1 major) Biochen	nistry (2015)			
	or's degree (1 major) Biology				
	or's degree (1 major) Chemist				
Bachelor's degree (1 major) Food Chemistry (2015)					
Bachelor's degree (1 major) Food Chemistry (2016)					
	or's degree (1 major) Biology				
	or's degree (1 major, 1 minor)	-			
	or's degree (1 major, 1 minor)	-	10r, 2018)		
	or's degree (2 majors) Digital				
June a hal	or's degree (1 major) Food Ch				
Bachel	or's degree (1 major) Biology				
Bachel Bachel	or's degree (1 major) Biology or's degree (1 major) Food Ch	emistry (2021)			
Bachel Bachel Bachel	or's degree (1 major) Biology or's degree (1 major) Food Ch or's degree (1 major) Biology	emistry (2021) (2022)			
Bachele Bachele Bachele exchan	or's degree (1 major) Biology or's degree (1 major) Food Ch	emistry (2021) (2022) 23)	ırg • generated 18-Apr-2025 •	oyam	page 57 / 70



Bachelor's degree (1 major) Food Chemistry (2025)

Bachelor's with 1 major Chemistry (2015)	JMU Würzburg • generated 18-Apr-2025 • exam.	page 58 / 70
	reg. data record Bachelor (180 ECTS) Chemie - 2015	

Module	title			Abbreviation	
Introdu	iction to Physics for Students	of other Disciplines		11-EFNF-152-m01	
Module coordinator			Madula affared by		
			Module offered by		
	ing Director of the Institute of		Faculty of Physics a	and Astronomy	
ECTS	Method of grading	Only after succ. co	mpl. of module(s)		
7	numerical grade				
Duratio		Other prerequisite	S		
2 seme					
Conten					
Fundan physics	nentals of mechanics, vibratio	on theory, thermodyna	mics, optics, science	of electricity, atomic	c and nuclear
Intende	ed learning outcomes				
	dents are able to identify fund n physics. They are able to ap			-	
Course	s (type, number of weekly cor	tact hours, language	— if other than Germa	an)	
V (4) +	V (3)				
Method	d of assessment (type, scope, formation on whether module			ition offered — if not	every seme-
	examination (60 to 120 minu		,		
	ion of places				
Allocat					
• • • • • • •					
	nal information				1) (
nex 1 to	ing to § 2 para. 2 sentence 2 A the APOLmCh and No. 4 of a			er d) and No. I 1st lett	er d) of an-
Worklo	ad				
210 h					
Teachi	ng cycle				
Referre	d to in LPO I (examination re	gulations for teaching	-degree programmes)	1	
	·				
Module	e appears in				
	or's degree (1 major) Biology (
	or's degree (1 major) Chemist				
	or's degree (1 major) Psycholo				
	or's degree (1 major, 1 minor)				
	or's degree (1 major, 1 minor)		udies (2013)		
Bachel	or's degree (1 major, 1 minor)	Russian Language and	d Culture (2008)		
Bachel	or's degree (2 majors) Special	Education (2009)			
-	er Theologiae Catholic Theolo				
	ate examination for the teachi				
	ate examination for the teachi				
	ate examination for the teachi	,			
	ate examination for the teachi				
	ate examination for the teaching	,		9)	
	ate examination for the teaching		-		
	ate examination for the teachi ate examination for the teachi	,	• •	00)	
				•	page == /
Dachelors	with 1 major Chemistry (2015)		ourg • generated 18-Apr-2025 cord Bachelor (180 ECTS) Chen		page 59 / 70

First state examination for the teaching degree Gymnasium Computer Science (2009) First state examination for the teaching degree Gymnasium Italian Studies (2009) First state examination for the teaching degree Gymnasium Catholic Theology (2009) First state examination for the teaching degree Gymnasium Latin Philology (2009) First state examination for the teaching degree Gymnasium Mathematics (2012) First state examination for the teaching degree Gymnasium Mathematics (2009) First state examination for the teaching degree Gymnasium Music (2009) First state examination for the teaching degree Gymnasium Physics (2009) First state examination for the teaching degree Gymnasium Russian (2009) First state examination for the teaching degree Gymnasium Social Science (2009) First state examination for the teaching degree Gymnasium Spanish Studies (2009) First state examination for the teaching degree Gymnasium Science of Sport (2009) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2009) Bachelor's degree (2 majors) English and American Studies (2009) Bachelor's degree (2 majors) German Language and Literature (2013) Bachelor's degree (1 major) Biochemistry (2015) Bachelor's degree (1 major) Chemistry (2015) Bachelor's degree (1 major) Geography (2015) Bachelor's degree (1 major) Computer Science (2015) Bachelor's degree (1 major) Food Chemistry (2015) Bachelor's degree (1 major) Mathematics (2015) Bachelor's degree (1 major) Musicology (2015) Bachelor's degree (1 major) Physics (2015) Bachelor's degree (1 major) Psychology (2015) Bachelor's degree (1 major) Business Management and Economics (2015) Bachelor's degree (1 major) Nanostructure Technology (2015) Bachelor's degree (1 major) Biomedicine (2015) Bachelor's degree (1 major) Music Education (2015) Bachelor's degree (1 major) Computational Mathematics (2015) Bachelor's degree (1 major) Political and Social Studies (2015) Bachelor's degree (1 major) Functional Materials (2015) Bachelor's degree (1 major) Academic Speech Therapy (2015) Bachelor's degree (1 major) Indology/South Asian Studies (2015) Bachelor's degree (1 major, 1 minor) Egyptology (2015) Bachelor's degree (1 major, 1 minor) Pedagogy (2015) Bachelor's degree (1 major, 1 minor) History (2015) Bachelor's degree (1 major, 1 minor) Musicology (2015) Bachelor's degree (1 major, 1 minor) Philosophy (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Ancient World (2015) Bachelor's degree (1 major, 1 minor) Philosophy and Religion (2015) Bachelor's degree (1 major, 1 minor) Theological Studies (2015) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2015) Bachelor's degree (1 major, 1 minor) Russian Language and Culture (2015) Bachelor's degree (1 major, 1 minor) German Language and Literature (2015) Bachelor's degree (2 majors) Egyptology (2015) Bachelor's degree (2 majors) Pedagogy (2015) Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 60 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 61 / 70

reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. page 63 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)

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			Faculty of Physics a	nd Astronomy	
ECTS	Method of grading	Only after succ. con	· · · · ·	na Astronomy	
3	(not) successfully completed				
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Bachelor's degree (2 majors) Protestant Theology (2015) Bachelor's degree (2 majors) Musicology (2015) Bachelor's degree (2 majors) Philosophy (2015) Bachelor's degree (2 majors) Special Education (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (2 majors) Latin Philology (2015) Bachelor's degree (2 majors) Music Education (2015) Bachelor's degree (2 majors) Philosophy and Religion (2015) Bachelor's degree (2 majors) Theological Studies (2015) Bachelor's degree (2 majors) Political and Social Studies (2015) Bachelor's degree (2 majors) Russian Language and Culture (2015) Bachelor's degree (2 majors) Greek Philology (2015) Bachelor's degree (2 majors) European Ethnology (2015) Bachelor's degree (2 majors) Indology/South Asian Studies (2015) First state examination for the teaching degree Gymnasium English (2015) First state examination for the teaching degree Gymnasium Biology (2015) First state examination for the teaching degree Gymnasium Chemistry (2015) First state examination for the teaching degree Gymnasium Geography (2015) First state examination for the teaching degree Gymnasium French Studies (2015) First state examination for the teaching degree Gymnasium German (2015) First state examination for the teaching degree Gymnasium History (2015) First state examination for the teaching degree Gymnasium Greek Philology (2015) First state examination for the teaching degree Gymnasium Computer Science (2015) First state examination for the teaching degree Gymnasium Italian Studies (2015) First state examination for the teaching degree Gymnasium Catholic Theology (2015) First state examination for the teaching degree Gymnasium Latin Philology (2015) First state examination for the teaching degree Gymnasium Mathematics (2015) First state examination for the teaching degree Gymnasium Physics (2015) First state examination for the teaching degree Gymnasium Russian (2015) First state examination for the teaching degree Gymnasium Social Science (2015) First state examination for the teaching degree Gymnasium Spanish Studies (2015) First state examination for the teaching degree Gymnasium Science of Sport (2015) Bachelor's degree (2 majors) Geography (2015) Bachelor's degree (2 majors) French Studies (2015) Bachelor's degree (2 majors) History (2015) Bachelor's degree (2 majors) Sport Science (Focus on health and Pedagogics in Movement) (2015) Bachelor's degree (2 majors) German Language and Literature (2015) Bachelor's degree (1 major) Mathematical Physics (2016) First state examination for the teaching degree Gymnasium Music (2015) First state examination for the teaching degree Gymnasium Music Education, Advanced Studies (2015) Bachelor's degree (1 major, 1 minor) French Studies (2016) Bachelor's degree (2 majors) French Studies (2016) Bachelor's degree (1 major, 1 minor) Italian Studies (2016) Bachelor's degree (2 majors) Italian Studies (2016) Bachelor's degree (1 major, 1 minor) Spanish Studies (2016) Bachelor's degree (2 majors) Spanish Studies (2016) Bachelor's degree (1 major) Romanic Languages (French/Italian) (2016) Bachelor's degree (1 major) Romanic Languages (French/Spanish) (2016) Bachelor's degree (1 major) Romanic Languages (Italian/Spanish) (2016) Bachelor's degree (1 major) Business Information Systems (2016) First state examination for the teaching degree Gymnasium French Studies (2016) First state examination for the teaching degree Gymnasium Italian Studies (2016) First state examination for the teaching degree Gymnasium Spanish Studies (2016) JMU Würzburg • generated 18-Apr-2025 • exam. Bachelor's with 1 major Chemistry (2015) page 67 / 70 reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major) Games Engineering (2016) Bachelor's degree (1 major, 1 minor) English and American Studies (2016) Bachelor's degree (2 majors) English and American Studies (2016) First state examination for the teaching degree Gymnasium English (2016) Bachelor's degree (1 major) Media Communication (2016) Bachelor's degree (1 major) Food Chemistry (2016) Bachelor's degree (1 major, 1 minor) Digital Humanities (2016) Bachelor's degree (1 major) Biology (2017) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) History of Medieval and Modern Art (2017) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2017) Bachelor's degree (1 major) Aerospace Computer Science (2017) Bachelor's degree (1 major) Biochemistry (2017) Bachelor's degree (1 major) Chemistry (2017) Bachelor's degree (1 major, 1 minor) Museology and material culture (2017) Bachelor's degree (1 major) Economathematics (2017) Bachelor's degree (1 major) Games Engineering (2017) Bachelor's degree (1 major) Computer Science (2017) First state examination for the teaching degree Gymnasium Greek Philology (2018) Bachelor's degree (1 major) Media Communication (2018) Bachelor's degree (1 major) Biomedicine (2018) Bachelor's degree (1 major) Human-Computer Systems (2018) Bachelor's degree (2 majors) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Classical Archaeology (2018) Bachelor's degree (1 major, 1 minor) Digital Humanities (2018) Bachelor's degree (2 majors) Digital Humanities (2018) First state examination for the teaching degree Gymnasium Physics (2018) Bachelor's degree (1 major) Computer Science (2019) First state examination for the teaching degree Gymnasium Mathematics (2019) Bachelor's degree (1 major, 1 minor) English and American Studies (2019) Bachelor's degree (1 major) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Information Systems (2019) Bachelor's degree (2 majors) Indology/South Asian Studies (2019) Bachelor's degree (1 major) Business Management and Economics (2019) Bachelor's degree (1 major) Modern China (2019) Bachelor's degree (1 major) Food Chemistry (2019) Module studies (Bachelor) Orientierungsstudien (2020) Bachelor's degree (1 major) Biomedicine (2020) Bachelor's degree (1 major) Pedagogy (2020) Bachelor's degree (1 major) Political and Social Studies (2020) Bachelor's degree (1 major) Business Information Systems (2020) Bachelor's degree (1 major, 1 minor) Political and Social Studies (2020) Bachelor's degree (2 majors) European Ethnology (2020) Bachelor's degree (2 majors) Political and Social Studies (2020) Bachelor's degree (2 majors) Special Education (2020) Bachelor's degree (1 major) Physics (2020) Bachelor's degree (1 major) Nanostructure Technology (2020) Bachelor's degree (1 major) Mathematical Physics (2020) Bachelor's degree (1 major) Aerospace Computer Science (2020) Bachelor's degree (1 major, 1 minor) Museology and material culture (2020) First state examination for the teaching degree Gymnasium Physics (2020) Bachelor's degree (1 major, 1 minor) Pedagogy (2020) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam.

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Bachelor's degree (2 majors) Pedagogy (2020) First state examination for the teaching degree Gymnasium Political and Social Studies (2020) Bachelor's degree (1 major) Psychology (2020) Bachelor's degree (1 major) Biology (2021) Magister Theologiae Catholic Theology (2021) Bachelor's degree (2 majors) History (2021) Bachelor's degree (1 major, 1 minor) History (2021) First state examination for the teaching degree Gymnasium History (2021) Bachelor's degree (1 major) Media Communication (2021) Bachelor's degree (2 majors) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) Theological Studies (2021) Bachelor's degree (1 major, 1 minor) English and American Studies (2021) Bachelor's degree (2 majors) English and American Studies (2021) First state examination for the teaching degree Gymnasium English (2021) Bachelor's degree (1 major) Functional Materials (2021) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2021) Bachelor's degree (1 major) Computer Science und Sustainability (2021) Bachelor's degree (2 majors) Comparative Indo-European Linguistics (2021) Bachelor's degree (1 major) Food Chemistry (2021) Bachelor's degree (1 major) Quantum Technology (2021) Bachelor's degree (2 majors) Special Education (2021) Bachelor's degree (1 major) Business Information Systems (2021) Bachelor's degree (1 major) Economathematics (2021) Bachelor's degree (1 major) Business Management and Economics (2021) Bachelor's degree (1 major) Human-Computer Systems (2022) Bachelor's degree (1 major, 1 minor) Museology and material culture (2022) Bachelor's degree (1 major) Biochemistry (2022) Bachelor's degree (1 major) Biology (2022) Bachelor's degree (1 major) Economathematics (2022) Bachelor's degree (1 major) Mathematical Data Science (2022) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2022) First state examination for the teaching degree Gymnasium Philosophy and Ethics (2022) Bachelor's degree (2 majors) Ancient Near Eastern Archaeology (2022) Bachelor's degree (1 major, 1 minor) Ancient World (2022) Bachelor's degree (2 majors) Ancient Near Eastern Studies (2022) Bachelor's degree (1 major) Franco-German studies: language, culture, digital competence (2022) First state examination for the teaching degree Gymnasium Russian (2023) First state examination for the teaching degree Gymnasium Mathematics (2023) First state examination for the teaching degree Gymnasium English (2023) First state examination for the teaching degree Gymnasium Geography (2023) Bachelor's degree (1 major) European Law (2023) Bachelor's degree (1 major, 1 minor) English and American Studies (2023) Bachelor's degree (2 majors) English and American Studies (2023) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2023) Bachelor's degree (1 major) Mathematics (2023) Bachelor's degree (1 major) Business Information Systems (2023) Bachelor's degree (1 major) Economathematics (2023) Bachelor's degree (1 major, 1 minor) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) History of Medieval and Modern Art (2023) Bachelor's degree (2 majors) Special Education (2023) Bachelor's degree (1 major) Business Management and Economics (2023) Bachelor's degree (1 major) Geography (2023) Bachelor's degree (2 majors) Geography (2023) Bachelor's with 1 major Chemistry (2015) JMU Würzburg • generated 18-Apr-2025 • exam. reg. data record Bachelor (180 ECTS) Chemie - 2015

Bachelor's degree (1 major, 1 minor) Geography (2023) Bachelor's degree (2 majors) European Ethnology/Empiric Cultural Studies (2023) First state examination for the teaching degree Gymnasium German (2024) Bachelor's degree (1 major) Mathematical Physics (2024) Bachelor's degree (2 majors) German Language and Literature (2024) Bachelor's degree (1 major, 1 minor) German Language and Literature (2024) Bachelor's degree (1 major) Music Education (2024) Bachelor's degree (2 majors) Music Education (2024) Bachelor's degree (1 major, 1 minor) Music Education (2024) Bachelor's degree (1 major) Indology/South Asian Studies (2024) Bachelor's degree (2 majors) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Indology/South Asian Studies (2024) Bachelor's degree (1 major, 1 minor) Ancient World (2024) Bachelor's degree (2 majors) Digital Humanities (2024) Bachelor's degree (1 major, 1 minor) Digital Humanities (2024) Bachelor's degree (1 major) Midwifery (2024) Bachelor's degree (2 majors) Greek Philology (2024) Bachelor's degree (2 majors) Latin Philology (2024) First state examination for the teaching degree Gymnasium Latin Philology (2024) Bachelor's degree (1 major) Business Information Systems (2024) Bachelor's degree (1 major) Economathematics (2024) Bachelor's degree (1 major) Business Management and Economics (2024) Bachelor's degree (1 major) Artificial Intelligence and Data Science (2024) First state examination for the teaching degree Gymnasium English (2024) First state examination for the teaching degree Gymnasium History (2024) First state examination for the teaching degree Gymnasium Greek Philology (2024) Bachelor's degree (1 major) Human-Computer-Interaction (2024) Bachelor's degree (2 majors) Art Education (2024) Bachelor's degree (1 major) Digital Business & Data Science (2024) Bachelor's degree (1 major) Classics (2024) Bachelor's degree (1 major) Diversity, Ethics and Religions (2024) Bachelor's degree (1 major) Functional Materials (2025) Bachelor's degree (1 major) (2025) Bachelor's degree (1 major) Food Chemistry (2025) Bachelor's degree (1 major, 1 minor) European Ethnology/Empiric Cultural Studies (2025) Bachelor's degree (1 major) Pedagogy (2025) Bachelor's degree (2 majors) Pedagogy (2025) Bachelor's degree (1 major) Economathematics (2025) Bachelor's degree (1 major) Academic Speech Therapy (2025) Bachelor's degree (1 major, 1 minor) Pedagogy (2025) Bachelor's degree (1 major) Games Engineering (2025)