

Subdivided Module Catalogue for the Subject

Biochemistry

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

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

JMU Würzburg • generated 26-Aug-2024 • exam. reg. data record 82|025|-|-|H|2013



Course of Studies - Contents and Objectives

No translation available.

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	data record Bachelor (180 ECTS) Biochemie - 2013	

Abbreviations used

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

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

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

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

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

Conventions

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

Notes

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

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

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

In accordance with

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

ASP02009

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

23-Sep-2013 (2013-110) except for mandatory electives added in Fast Track procedure at a later time

09-Dec-2014 (2014-81)

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.

Bachelor's with 1 major Biochemistry (2013)	
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The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page				
Compulsory Electives (30 ECTS credits)								
03-4S1IMM-BC-132-m01	Immunology for students of biochemistry	5	NUM	7				
03-4S1VIR-BC-132-m01	Virology for students of biochemistry	5	NUM	8				
03-4S1HUG-BC-132-m01	Human genetics for students of biochemistry	5	NUM	6				
03-PBC-132-m01	Pathobiochemistry	5	NUM	13				
08-BC-MOLP-111-m01	Molecular Biology Lab	10	NUM	48				
03-ZBP-132-m01	Cell biology	5	NUM	17				
03-MTUB-132-m01	Molecular Tumor Biology	5	NUM	12				
07-5S2MiZ2-BC-132-m01	Specific Microbiology 2 for Students of Biochemistry	10	NUM	22				
08-0C4-102-m01	Organic Chemistry 4	10	NUM	64				
07-4BFMZ4-BC-132-m01	Bioinformatics for Advanced Students in Biochemistry	5	NUM	21				
08-AVP5-BC-132-m01	Advanced lab (abridged)	5	NUM	36				
08-AVP10-BC-132-m01	Advanced lab	10	NUM	35				
03-98-PGN-092-m01	Introductory Neurobiology for students of biomedicine	5	NUM	10				
08-BC-AMP-141-m01	Current Methods of Protein Chromatography	5	NUM	42				
Compulsory Courses (118	ECTS credits)							
03-5S2ST-BC-132-m01	Structural Biology	10	NUM	9				
07-1A1ZO-BC-132-m01	General Biology for students of biochemistry	5	NUM	19				
08-AC1-BC-111-m01	Inorganic Chemistry 1	16	NUM	24				
08-0C1-092-m01	Organic Chemistry 1	5	NUM	59				
08-0C2-102-m01	Organic Chemistry 2	9	NUM	61				
08-0C3P-112-m01	Organic Chemistry - laboratory course for students of bioche- mistry		B/NB	63				
08-PC1-092-m01	Physical Chemistry 1	8	NUM	67				
08-PC2V-BC-132-m01	Physical Chemistry 2 for Biochemistry Majors	9	NUM	70				
08-PC2P-132-m01	Practical course of Physical Chemistry for Biochemistry Majors	6	B/NB	69				
08-BAN-092-m01	Bioanalytics	8	NUM	39				
08-BC-132-m01	Principles of Biochemistry	6	NUM	41				
08-BCBCP-132-m01	Biochemistry for Biochemistry Majors (Exercises)	5	B/NB	43				
08-BC-MOL-122-m01	Molecular Biology for Biochemistry students	6	NUM	46				
10-M-MCB-132-m01	Mathematics for students in Chemistry and Biology	5	NUM	76				
11-EFNF-072-m01	Introduction to Physics for Students of Non-physics-related Mi- nor Subjects	7	NUM	77				
11-PFNF-072-m01	Practical Course Physics for Students of Non-physics-related Minor Subjects	3	B/NB	79				
08-VS-BC-132-m01	Consolidation Seminar	3	NUM	73				
Thesis (12 ECTS credits)								
08-BA-BC-132-m01	Bachelor Thesis in Biochemistry	12	NUM	38				
Subject-specific Key Skills								
07-M-BST-132-m01	Mathematical Biology and Biostatistics	4	NUM	23				
41-IK-NW1-101-m01	Information Literacy for Students of the Natural Sciences (Ba- sic Level)	2	B/NB	81				

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41-IK-NW2-101-m01	Information Literacy for Students of the Natural Sciences (Ad- vanced Level)	2	B/NB	83
06-B-P2TF2-102-m01 Philosophy 2		5	NUM	18
07-3A3Bl-132-m01	Bioinformatics	2	NUM	20
03-TR-072-m01	Toxicology and legal studies	3	NUM	16
03-FOR-BC-092-m01	Contemporary Research in Biochemistry	2	B/NB	11
03-Phys-092-m01	Physiology	3	NUM	15
08-EP-132-m01	Practical Course - external	10	B/NB	55
08-EPK-132-m01	Practical Course - external, abridged	5	B/NB	56
08-AP-132-m01	Practical Course - abroad	10	B/NB	31
08-APK-132-m01	Practical Course - abroad	5	B/NB	32
08-LP-132-m01	Practical lab course	10	B/NB	57
08-LPK-132-m01	Practical lab course, abridged	5	B/NB	58
08-WIRE1-132-m01	Scientific lecturing 1	5	B/NB	74
08-WIRE2-132-m01	Scientific lecturing 2	5	B/NB	75
08-AFBC1-111-m01	Contemporary Research in Biochemistry 1	3	NUM	28
08-AFBC2-111-m01	Contemporary Research in Biochemistry 2	3	NUM	29
08-AFBC3-111-m01	Contemporary Research in Biochemistry 3	3	NUM	30
08-BPS1-111-m01	Biochemistry (practical course) 1	1	B/NB	52
08-BPS2-111-m01	Biochemical Practical Seminar 2	1	B/NB	53
08-BPS3-111-m01	Biochemical Practical Seminar 3	1	B/NB	54
08-AWA-132-m01	Guidance in scientific practice	5	B/NB	37
08-AC3-BC-131-m01	Inorganic Chemistry 3 for Biochemistry Majors	9	NUM	26
08-PC3-092-m01	Physical and Theoretical Chemistry 3: Symmetry and Quantum Chemistry	6	NUM	71
08-AS1-BC-132-m01	Chemistry of the Elements and Analytical Chemistry for Bioche- mistry Majors	11	NUM	33
08-0C4-VL-141-m01	Organic Chemistry 4 - lecture	5	NUM	66
08-BC-ZQN3-141-m01	Additional Qualification in Natural Sciences 3	3	B/NB	50
08-BC-ZQN5-141-m01	Additional Qualification in Natural Sciences 5	5	B/NB	51
08-BC-EQN3-141-m01	Completive Qualification in Natural Sciences 3	3	NUM	44
08-BC-EQN5-141-m01	Completive Qualification in Natural Sciences 5	5	NUM	45

Module	e title			Abbreviation	
Human genetics for students of biochemistry					03-4S1HUG-BC-132-m01
Module coordinator				Module offered by	
holder	ofthe	Chair of of Human Geneti	cs	Faculty of Medicine	
ECTS	Methe	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		s of and analytical metho ype and chromosome ab			Characterisation of the normal volution.
Intende	ed lear	ning outcomes			
					actical experience in human cyto- critically interpret cytogenetic fin-
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
V + Ü +	S (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)
ster, in	format	ion on whether module c	an be chosen to earn		tion offered — if not every seme-
		nation (approx. 30 minut	es)		
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Additio	nal inf	ormation			
	-				
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPO I (examination regu	llations for teaching-o	legree programmes)	
Module	e appea	ars in			
	or' deg				

Immunology for students of biochemistry 03-451IMM-BC-132-m01 Module coordinator Module offered by holder of the Professorship of Immunogenetics Faculty of Medicine ECTS Method of grading Only after succ. compl. of module(s) 5 numerical grade - Duration Module level Other prerequisites 1 semester undergraduate - Contents - - This module gives an introduction to immunology. The following questions will be addressed: How does the bo- dy recognise and eliminate pathogens and tumour cells? How can the immune system damage its own body (ali- ergies, autimunuh?)? Organs, cells and molecules of the immune system damage its own body (ali- targies, autimunuh?)? Organs, cells and molecules of the immune system substances by the immune sy- stem. The most important immunological techniques will be introduced and applied. Intended learning outcomes - The students acquire a practical knowledge of cellular and molecular techniques for the analysis of the immune system. The are familiar with the mechanisms of self and non-self discrimination by the adaptive and innate im- tector cell functions and molecules. Courses (type, number of weekly contact hours, language available) - Method of assesment (type, scope, language - if other than German, examination offered - if not every seme- ster, information on SWS (weekly contact hours, l	Module title					Abbreviation	
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Teaching cycle Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Workload						
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in							
Referred to in LPO I (examination regulations for teaching-degree programmes) Module appears in	Teaching cycle						
	Referred to in LPO I (examination regulations for teaching-degree programmes)						
	-						
Bachelor' degree (1 major) Biochemistry (2013)							
	Bachel	or' deg	ree (1 major) Biochemistr	y (2013)			

Module title				Abbreviation			
Virolog	Virology for students of biochemistry 03-4S1VIR-BC-132-m01						
Modul	Module coordinator			Module offered by			
	of the (Chair of Virology		Faculty of Medicine	!		
ECTS	·	od of grading	Only after succ. con	npl. of module(s)			
5	·	rical grade					
Duratio		Module level	Other prerequisites	i			
1 seme		undergraduate					
Introdu genetic tegratic scienti cal virc	uction to cs; RNA on; DNA fic methology; H	o virology; the infectiou -viruses: mRNA-synthes A-viruses: transcription nod and scientific appro IV and AIDS. Safe work netic analysis of viral qu	sis and RNA-genome re and genome replicatio pach; principles of ant in a BSL-2 laboratory;	eplication; retrovirus on. Foundations of ce iviral therapy and va	es: reverse transcrip Il biology. Introducti ccination; introducti	tion and in- ion to the on to clini-	
Intend	ed leari	ning outcomes					
ons; pi	rinciple	knowledge of molecula s of antiviral vaccines a research.					
Course	s (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)		
V + S +	P (no i	nformation on SWS (we	ekly contact hours) an	d course language a	vailable)		
		essment (type, scope, on on whether module			tion offered — if not	every seme-	
candid tes per 2 hours will be Assess	ate eac candid s; time informo ment o	nination (approx. 45 to h (approx. 30 minutes) ate) or e) presentation to complete varies acco ed about the method a ffered: once a year, sur ssessment: German or	or d) oral examination (approx. 20 to 30 min ording to subject area l nd length of the assess nmer semester	n in groups of up to 3 utes) or f) practical e but will not exceed a	candidates (approx xamination (on avera maximum of 4 hours	. 20 minu- age approx.	
Allocat	ion of p	olaces					
Biochemie (Biochemistry) Bachelor's: 18 places. Selection process Biochemie (Biochemistry) Bachelor's: Should the number of applications exceed the number of available places, places will be allocated according to the fol- lowing quotas: Quota 1 (two thirds of places): current average grade of successfully completed modules; among applicants with the same average grade, places will be allocated by lot. Quota 2 (one third of places) number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated as they become availa- ble.							
Additional information							
Workload							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Modul	Module appears in						
Bachel	or' deg	ree (1 major) Biochemis	stry (2013)				
Bachelor's	with 1 maj	or Biochemistry (2013)	-	g • generated 26-Aug-2024 • e Bachelor (180 ECTS) Biochem	-	page 8 / 84	

Module title Abbreviation					
Structural Biology 03-5S2ST-BC-132-m01					
Module coordinator				Module offered by	
holder	of the (Chair of Structural Biology	/	Faculty of Medicine	9
ECTS		od of grading	Only after succ. com		
10	nume	rical grade	o8-BC (module com	ponent o8-BC-1 only)
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
as the f selecte molecu	fundar d biolo Ile in si	nental principles of macro ogical macromolecules ar	omolecular architectu e presented. In small ructure and biologica	res. Building on this groups, participants l function and will p	d biophysical techniques as well s, the structure and function of s will analyse one specific macro- resent their results in a talk. The al problems.
Intend	ed lear	ning outcomes			
On the problem	basis c ns in st	of individually assigned n	nalyse structure-fund	tion relationships. T	the ability to explore common hey will also acquire skills in the jical macromolecules.
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	in)
v + Ü (r	no infoi	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
candid tes per 2 hours will be	ate eac candid s; time inform	h (approx. 30 minutes) o late) or e) presentation (a	r d) oral examination pprox. 20 to 30 minu ding to subject area b l length of the assess	in groups of up to 3 utes) or f) practical e out will not exceed a	ges) or c) oral examination of one candidates (approx. 20 minu- xamination (on average approx. maximum of 4 hours). Students urse.
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module		ars in			
		ree (1 major) Biochemistr	N (2012)		
Dacilel	oi ueg		y (2013)		

Module	e title				Abbreviation
Introdu	uctory	Neurobiology for stud	ents of biomedicine		03-98-PGN-092-m01
Module coordinator				Module offered by	
holder	ofthe	Chair of Clinical Neuro	biology	Faculty of Medicine	2
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	erical grade			
Duratio	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate			regular attendance of courses beginning of the course.
Conten	nts				
			omy, important method options, discussion of no		iseases of the nervous system:
Intend	ed lear	ning outcomes			
and fur	nction	of the nervous system.		ns, they have develo	al knowledge about the structure oped the ability to critically reflect obiology.
Course	e s (type	e, number of weekly co	ntact hours, language –	- if other than Germa	an)
V + S +	Ü (no	information on SWS (w	veekly contact hours) an	d course language a	available)
			e, language — if other th e can be chosen to earn		ation offered — if not every seme-
on of o	ne can	didate each (approx. 2		amination in groups	to 20 pages) or c) oral examinati- s of up to 3 candidates (approx. 15
Allocat	tion of	places			
		•			
Additio	onal in	formation			
Worklo	ad				
			L		
Teachi	ng cyc	le			
Referre	ed to in	LPOI (examination re	egulations for teaching-	degree programmes))
Module	e appe	ars in			
		gree (1 major) Biochem	istry (2011)		
	-	gree (1 major) Biochem	,		
Bachel	or' deg	gree (1 major) Biochem	istry (2009)		
	-	gree (1 major) Biomedi			
Bachel	or' deg	gree (1 major) Biomedi	cine (2013)		

Module title Abbreviation						
Contemporary Research in Biochemistry 03-FOR-BC-092-mo1						
Modul	e coord	inator		Module offered by	<u> </u>	
holder	ofthe	Chair of Biochemistry		Chair of Biochemis	try	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	•	
2	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
2 seme	ester	undergraduate				
Conter	nts					
Presen	tation o	of current research result	s in the Biocentre col	loquium and discus	sion of recent literature.	
Intend	ed lear	ning outcomes				
Studer	nts are i	ntroduced to the topics of	of current research in	the life sciences.		
Course	es (type	, number of weekly conta	act hours, language —	- if other than Germa	in)	
		mation on SWS (weekly o				
ster, in attend	formati ance of	on on whether module c 80% of talks			ition offered — if not every seme-	
Allocal	tion of _l	Diaces				
		4 °				
Additio		ormation				
Worklo						
Teachi	ng cycl	e				
		-				
Referre	ed to in	LPOI (examination regu	llations for teaching-o	degree programmes)		
Modul	e appea	ars in				
		ree (1 major) Biochemisti	ry (2011)			
	Bachelor' degree (1 major) Biochemistry (2013)					
Bachel	lor' deg	ree (1 major) Biochemisti	ry (2009)			

	e title			Abbreviation		
Molecular Tumor Biology					03-MTUB-132-m01	
Module coordinator				Module offered by		
holder	of the (Chair of Physiological Ch	emistry	Faculty of Medicine	2	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade	o8-BC (module com	ponent o8-BC-1 only		
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conten	nts					
		duction to model system n. Reading and presentat			imental methods of molecular tu-	
Intend	ed lear	ning outcomes				
		amiliar with tumour mod ply this knowledge in pra		l techniques in mole	ecular cancer research, and they	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
Ü (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language availabl	e)	
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
Assess Langua	30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. Assessment offered: once a year, winter semester Language of assessment: German or English					
Allocation of places						
Allocat		ssessment: German or E				
Bioche the nur lowing applica subjec	tion of J emie (Bi mber of quotas ants wit t semes	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of e number of subject semesters, llocated as they become availa-	
Bioche the nui lowing applica subjec places ble.	tion of J emie (Bi mber of quotas ants wit t semes will be	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nui lowing applica subjec places ble.	tion of J emie (Bi mber of quotas ants wit t semes will be	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nui lowing applica subjec places ble.	tion of p emie (Bi mber of quotass ants wit t semes will be onal inf	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nui lowing applica subjec places ble. Additio	tion of p emie (Bi mber of quotass ants wit t semes will be onal inf	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nur lowing applica subjec places ble. Additic Worklo	tion of p emie (Bi mber of quotass ants wit t semes will be onal inf	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap allocated by lot. A waitir ormation	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nur lowing applica subjec places ble. Additic Worklo	tion of j emie (Bi mber of quotas ants wit t semes will be onal inf	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap allocated by lot. A waitir ormation	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same	be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,	
Bioche the nur lowing applica subjec places ble. Additic Worklo Teachi	tion of p emie (Bi mber of quotas ants wit t semes will be onal inf oad	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap allocated by lot. A waitir ormation	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli ng list will be maintai	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same ned and places re-al	pe allocated according to the fol- fully completed modules; among 2 (one third of places) number of 2 number of subject semesters, llocated as they become availa-	
Bioche the nur lowing applica subjec places ble. Additic Worklo Teachi	tion of p emie (Bi mber of quotas ants wit t semes will be onal inf oad	ssessment: German or E blaces ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap allocated by lot. A waitir ormation	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli ng list will be maintai	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same ned and places re-al	pe allocated according to the fol- fully completed modules; among 2 (one third of places) number of 2 number of subject semesters, llocated as they become availa-	
Bioche the nur lowing applica subjec places ble. Additic Worklo Teachi Referre	tion of p emie (Bi mber of quotas ants wit t semes will be onal inf oad	ssessment: German or E places ochemistry) Bachelor's: applications exceed the cuota 1 (two thirds of p the same average grad sters of the respective ap allocated by lot. A waitir ormation e LPOI (examination regu	nglish 12 places. Selection p number of available places): current avera le, places will be allo plicant; among appli ng list will be maintai	process Biochemie (places, places will b ge grade of success cated by lot. Quota a cants with the same ned and places re-al	pe allocated according to the fol- fully completed modules; among 2 (one third of places) number of 2 number of subject semesters, llocated as they become availa-	

Module title				Abbreviation		
Pathobiochemistry					03-PBC-132-m01	
Module	Module coordinator			Module offered by		
holder chemis		Chair of Clinical Biochem	istry and Pathobio-	Faculty of Medicine		
ECTS		od of grading	Only after succ. con	pl. of module(s)		
5		rical grade		• • • •		
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Fundan	nentals	of selected topics in pat	hobiochemistry and	pathophysiology.		
Intende	ed learı	ning outcomes				
Studen	ts are f	amiliar with the fundame	entals of pathobioche	emistry and pathoph	ysiology.	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
					sted separately for each module	
compo • o	nent. 3-PBC-		ion on SWS (weekly	contact hours) and c	ourse language available)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
low. Ur vidual a Assess 2 w w L Assess 3 a a 1 Assess 4 Asses 4 Asses 4 Asses 4 Asses 4 Asses 4 Asses 4 Asses 4 Asses 4 A Asses 4 A A A A A Asses 4 A A A A A A A A A A A A A A A A A A	 Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o3-PBC-1-092: Basics in Pathobiochemistry Basics in Pathobiochemistry 2 ECTS, Method of grading: numerical grade written examination (approx. 90 minutes) Language of assessment: German or English Assessment in module component o3-PBC-2-132: Pathobiochemistry Practical Course 3 ECTS, Method of grading: (not) successfully completed 					
Allocat						
 Information on the allocation of places will be listed separately for each module component. o3-PBC-2-132: Biochemie (Biochemistry) Bachelor's: 6 places. Selection process Biochemie (Biochemistry) Bachelor's: Should the number of applications exceed the number of available places, places will be allocated according to the following quotas: Quota 1 (two thirds of places): current average grade of successfully completed modules; among applicants with the same average grade, places will be allocated by lot. Quota 2 (one third of places) number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated as they become available. o3-PBC-1-092: 						
Additio	nal inf	ormation				
Worklo	ad					

Teaching cycle

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

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Module appears in

Bachelor' degree (1 major) Biochemistry (2013)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 14 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Modul	e title				Abbreviation
Physic	ology				03-Phys-092-m01
Modul	e coord	inator		Module offered by	<u> </u>
Manag	ging Dire	ector of the Institute of P	hysiology	Faculty of Medicine	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
3	nume	rical grade			
Durati	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Conte	nts				
		ogy, cardiac/circulatory f nd digestion, liver functi		d, respiration, acid/	base homeostasis, endocrinolo-
Intend	led lear	ning outcomes			
Stude	nts are l	familiar with the fundam	ental principles of hu	man physiology.	
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	ın)
V (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language available	2)
Metho	d of as	sessment (type, scope, b	anguage — if other th	an German, examina	tion offered — if not every seme-
		ion on whether module of			,
writter	ı exami	nation (30 multiple choi	ce questions)		
Alloca	tion of	places			
Additi	onal inf	ormation			
Workl	oad				
			,		
Teachi	ing cycl	e			
Referr	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
Modul	e appea	ars in			
Bache	lor' deg	ree (1 major) Biochemist	ry (2011)		
	-	ree (1 major) Biochemist			
Bache	lor' deg	ree (1 major) Biochemist	ry (2009)		

Modul	e title				Abbreviation	
Toxico	Toxicology and legal studies 03-TR-072-m01					
Modul	e coord	inator		Module offered by		
lecturer of lecture "Toxikologie und Rechts			chtskunde"	Faculty of Medicine		
ECTS	1	od of grading	Only after succ. con	, ,		
3		rical grade				
Duratio	·	Module level	Other prerequisites			
1 seme		undergraduate				
Conter	its		I			
Basics toxicol	-	l regulations for chemist	s (handling and trans	portation of hazardo	ous materials), funda	mentals of
Intend	ed lear	ning outcomes				
		master the basics of lega the fundamentals of to		nists (handling and t	ransport of hazardou	us substan-
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	n)	
		mation on SWS (weekly				
		s essment (type, scope, la on on whether module c			tion offered — if not	every seme-
written	exami	nation (approx. 90 minut	es)			
	ion of p		-			
Additid	nalinf	ormation				
Auunin						
Worklo	ad					
	/uu					
Teachi	ng cycl	A	-			
	ing cycl	6				
Referre	d to in	LPOI (examination regu	lations for teaching.	legree programmes)		
Modul	e appea	irs in				
		ree (1 major) Biochemisti	ry (2011)			
	-	ree (1 major) Biochemist				
	-	ree (1 major) Biochemist				
Bachel	or' deg	ree (1 major) Chemistry (2007)			
Bachel	or' deg	ree (1 major) Chemistry (2008)			
Bachel	or' deg	ree (1 major) Chemistry (2010)			
Bachel	or' deg	ree (1 major) Chemistry (2009)			
Bachel	or' deg	ree (1 major) Food Chemi	stry (2009)			
Bachel	or' deg	ree (1 major) FOKUS Chei	mistry (2011)			
Master	's degr	ee (1 major) Chemistry (2	013)			
Master	's degr	ee (1 major) Chemistry (2	010)			
	-	ee (1 major) Chemistry (2	•			
		mination for the teaching				
		mination for the teaching	,	• •		
		mination for the teaching				
		mination for the teaching				
		mination for the teaching		· · · · · · · · · · · · · · · · · · ·	,	
Bachelor's	with 1 ma	or Biochemistry (2013)		• generated 26-Aug-2024 • e		page 16 / 84

Module	title				Abbreviation
Cell bio	logy				03-ZBP-132-m01
Module coordinator				Module offered by	
holder of the Chair of Medical Radiation and Cell Researc			n and Cell Research	Faculty of Medicine	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade	o8-BC (module com	ponent o8-BC-1 only	
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
	ral orga			_	l seminars. Major topics are the proliferation, differentiation and
Intende	ed learr	ning outcomes			
niques their sig	for the gnifica	analysis of cells. Unders	tanding the molecula tent. Independent ex	r basis of cell biolog	erstanding of principles of tech- gy and cellular malfunctions and nformation and presentation of
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
P + S (n	o infor	mation on SWS (weekly o	contact hours) and co	urse language availa	able)
ster, in	formati	eessment (type, scope, la on on whether module ca nation (approx. 60 minut	an be chosen to earn		tion offered — if not every seme-
		ssessment: German or Er			
Allocat	ion of p	olaces			
the nun lowing applica subject	nber of quotas nts wit semes	applications exceed the : Quota 1 (two thirds of p h the same average grad ters of the respective ap	number of available laces): current averag e, places will be alloc plicant; among appli	places, places will b ge grade of successfi cated by lot. Quota 2 cants with the same	Biochemistry) Bachelor's: Should e allocated according to the fol- ully completed modules; among (one third of places) number of number of subject semesters, ocated as they become availa-
Additio	nal inf	ormation			
Worklo	ad				
Teachir	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
		•			
Module					
Bachel	or' degi	ree (1 major) Biochemistr	y (2013)		

Module					Abbreviation
Philoso	ophy 2				06-B-P2TF2-102-m01
Module coordinator				Module offered by	
holder	ofthe	Chair of Theoretical Philo	osophy	Institute of Philoso	phy
ECTS	Methe	od of grading	Only after succ. com	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	Admission prerequi		regular attendance of seminar (a bsence).
Conten	ts				
Introdu science		o the theory of intellectu	al disciplines; philoso	ophical bases of the	humanities and the social
Intend	ed lear	ning outcomes			
limits of though losoph al sche	of vario t, cultu ical tex mata -	us intellectual discipline ire, and knowledge Form its and issues - ability to	es - knowledge of, and hal outcomes (skills to organise concepts an ophical positions in a	ability to criticise, b be tested in the ass d philosophical pos structured and lingu	ata - insight into the scope and basic assumptions in systems of sessment): - ability to analyse ph sitions into overarching intellectuuistically appropriate manner an)
		rmation on SWS (weekly			
Metho	d of as		anguage — if other tha	an German, examina	ation offered — if not every seme-
written	exami	nation (approx. 90 minu	tes)		
Allocat	ion of _l	places			
	r of sul				be allocated according to the ect semesters, places will be allo
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination reg	ulations for teaching-o	degree programmes)	
Module	e appea	ars in			
		ree (1 major) Biochemist	try (2011)		
	-	ree (1 major) Biochemist	•		
No fina	l exam	ination Special study of	fering (2010)		

					Abbreviation			
Genera	al Biolo	gy for students of bioche		07-1A1ZO-BC-132-m01				
Module coordinator				Module offered by				
Dean of Studies Biologie (Biology)			Faculty of Biology					
ECTS		od of grading	Only after succ. con					
5	nume	rical grade						
Duratio	on	Module level	Other prerequisites					
1 seme	ster	undergraduate						
Conten	Contents							
cal cate ting with ference plants) and hy thods. to the p will acc organis tents o Intende - Know ledge of mal an liarity v hing ch se plan	egories th its m es and). The s pothes Using t phyloge quire th sms, wi f the m ed lear ledge c of the s d plant with the naracte nt and a	Building on this knowle hacroscopic structure before similarities between prok- econd part will address of es will be discussed and the examples of plants are enetic diversity of eukaryon of fundamental knowledge ith morphology and cytologic odule are relevant for bio ning outcomes of the structures of prokar pecific characteristics of a cells Ability to recognise e concepts of phylogenetic ristics and major represe	dge, the course will to bre moving on to its r aryotic cells (bacteria ne of the central issu students will be intro- danimals, the subse- otes. At the level of gr e necessary to under ogy being discussed logical disciplines at yotic and eukaryotic the intracellular and se evolution as the di- c relationships betwo ntatives of groups in	hen discuss the cell nicroscopic structure a, archaebacteria) ar es of biology: evolut oduced to major phy equent module comp roups in the plant ar rstand the forms and in an evolutionary ar all levels of biologic cells and their (biolo extracellular structure riving force behind the een plants/animals. the plant and anima	olocks of life as well as biologi- , the smallest unit of life, star- e. The course will point out dif- nd eukaryotic cells (animals, tion. Fundamental mechanisms logenetic reconstruction me- bonents will introduce students and animal kingdoms, students I functions of animal and plant nd ecological context. The con- cal organisation. ogical) macromolecules Know- res of prokaryotes as well as ani- he phylogeny of species Fami- - Familiarity with the distinguis- l kingdoms Ability to select tho- sues Familiarity with the compo-			
		, number of weekly conta	ct hours, language –	- if other than Germa	ın)			
V + V +	V + V (no information on SWS (v	veekly contact hours)) and course languag	ge available)			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-			
		ninations (including mult minutes (ungraded); we		s): 3 examinations: 6	o minutes each (graded); 1 ex-			
Allocat	tion of _l	places						
Additio	onal inf	ormation						
Worklo	ad							
Teachi	ng cycl	e						
Referre	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)				
Module	e appea	ars in						
Bachel	or' deg	ree (1 major) Biochemistr	y (2013)					

Module title					Abbreviation
Bioinformatics					07-3A3BI-132-m01
Module	e coord	inator		Module offered by	
holder	of the (Chair of Bioinformatics		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
2	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
Fundan	nental	principles of bioinformat	ics.		
Intende	ed learı	ning outcomes			
Studen	ts are p	proficient in methods for	the analysis of DNA a	nd protein database	25.
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
V + S (r	no infor	mation on SWS (weekly o	contact hours) and co	urse language availa	able)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	examiı	nation (approx. 20 minut	es)		
Allocat	ion of p	olaces			
Additio	onal info	ormation			
Worklo	ad				
Teachir	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	irs in			
Bachel	Bachelor' degree (1 major) Biochemistry (2013)				

Module					Abbreviation
Bioinfo	rmatic	s for Advanced Studer	its in Biochemistry		07-4BFMZ4-BC-132-m01
Module	e coord	inator		Module offered by	1
holder	ofthe	Chair of Bioinformatics		Faculty of Biology	
ECTS	Methe	od of grading	Only after succ. cor	npl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites	i	
1 seme	ster	undergraduate			
Conten	ts				
					over the following topics: se- etworks as well as gene regulati-
Intend	ed lear	ning outcomes			
Studen their re		able to use appropriate	e bioinformatic algorith	ms to address simp	le problems as well as to interpre
Course	s (type	, number of weekly co	ntact hours, language –	– if other than Germ	an)
1) Ü + V	no info	rmation on SWS (week	ly contact hours) and co	ourse language ava	ilable)
			, language — if other th e can be chosen to earn		ation offered — if not every seme
		o to 20 pages) ssessment: German o	r English		
Allocat	ion of ۱	places			
the nur lowing applica subject	nber of quotas ints wif semes	f applications exceed t : Quota 1 (two thirds o th the same average gr sters of the respective	he number of available of places): current avera rade, places will be allo applicant; among appli	places, places will ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of e number of subject semesters, llocated as they become availa-
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination re	egulations for teaching-	degree programmes	5)
 Module	e appea	ars in			

C	e title				Abbreviation
Specific Microbiology 2 for Students of Biochemistry					07-5S2MiZ2-BC-132-m01
Module coordinator				Module offered by	
holder	ofthe	Chair of Microbiology		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Conten	nts				
In this	module	e, students will acquire a	n in-depth insight int	o approaches and n	nethods in microbiology.
Intend	ed lear	ning outcomes			
		e acquired knowledge ab form scientific laboratory		s and methods of m	icrobiology. They are able to inde
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
S + Ü (I	no info	rmation on SWS (weekly	contact hours) and co	ourse language avai	lable)
		s essment (type, scope, la ion on whether module c			ation offered — if not every seme-
	inform	to complete varies accor ed about the method and		out will not exceed a	maximum of 4 hours) Students
			d length of the assess	sment prior to the co	
the nur lowing applica subject	emie (Bi mber of quotas ants wit t semes	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	
the num lowing applica subject places ble.	emie (Bi mber of quotas ants wil t semes will be	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the num lowing applica subject places ble.	emie (Bi mber of quotas ants wil t semes will be	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the num lowing applica subject places ble.	mie (Bi mber of quotas ants wit t seme will be onal inf	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the num lowing applica subject places ble. Additic	mie (Bi mber of quotas ants wit t seme will be onal inf	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the num lowing applica subject places ble. Additic	emie (Bi mber of quotas ants wit t seme: will be onal inf	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir formation	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the nur lowing applica subject places ble. Additio Worklo	emie (Bi mber of quotas ants wit t seme: will be onal inf	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir formation	6 places. Selection p number of available places): current avera le, places will be allo plicant; among appli	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of a number of subject semesters,
the nur lowing applica subject places ble. Additio Worklo Teachin 	mie (Bi mber of quotas ants wit t seme: will be onal inf oad	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir formation	6 places. Selection p e number of available places): current avera le, places will be allo pplicant; among appli ng list will be maintai	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same ned and places re-a	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of e number of subject semesters, llocated as they become availa-
the nur lowing applica subject places ble. Additio Worklo Teachin 	mie (Bi mber of quotas ants wit t seme: will be onal inf oad	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir formation	6 places. Selection p e number of available places): current avera le, places will be allo pplicant; among appli ng list will be maintai	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same ned and places re-a	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of e number of subject semesters, llocated as they become availa-
the nur lowing applica subject places ble. Additic Worklo Teachin Referre	mie (Bi mber of quotas ants wit t seme: will be onal inf oad	places iochemistry) Bachelor's: f applications exceed the s: Quota 1 (two thirds of p th the same average grad sters of the respective ap allocated by lot. A waitir formation	6 places. Selection p e number of available places): current avera le, places will be allo pplicant; among appli ng list will be maintai	rocess Biochemie (E places, places will l ge grade of success cated by lot. Quota cants with the same ned and places re-a	Biochemistry) Bachelor's: Should be allocated according to the fol- fully completed modules; among 2 (one third of places) number of e number of subject semesters, llocated as they become availa-

Modul	e title				Abbreviation
Mathe	matica	Biology and Biostatistic	S		07-M-BST-132-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Bioinformatics		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
4	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conter	ts				
Fundar	mental	principles of the most im	portant mathematica	l and statistical met	hods in biology.
Intend	ed lear	ning outcomes			
		have acquired fundamen as well as the mathemati			s, the interpretation of readings
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
V + Ü (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
written	exami	nation (approx. 60 minut	es)		
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	ars in			
	-	ree (1 major) Biochemistr			
	-	ree (1 major) Biology (201			
	-	ree (1 major) Computer S			
	-	ree (1 major) Mathematic	•	`	
	-	ree (1 major) Computation	-	14)	
Bachel	or's de	gree (1 major, 1 minor) Bi	010gy (Minor, 2013)		

Module title					Abbreviation
Inorganic Chemistry 1					08-AC1-BC-111-m01
Module	e coord	inator		Module offered by	<u> </u>
lecturer of lecture "Experimentalchemie" (Experimental Chemistry)			e" (Experimental	Institute of Inorgan	ic Chemistry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
16	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	By way of exception, additional prerequisites are listed in the section on assessments.		
Conten	ts				
This module provides students with an overview of the fundamental principles of chemistry. It focuses on partic- les, metals, acid-base reactions, the periodic table, chemical equilibrium and complexometry. In addition, the module introduces fundamental models of chemistry and principles of inorganic chemistry. It includes practical exercises based on the lecture on experimental chemistry and its extension. After a safety briefing, the students autonomously conduct experiments in the laboratory. The course focuses on laboratory safety, simple lab techni- ques, the synthesis of simple substances and analyses of unknown substances. In addition, students have the opportunity to advance their laboratory knowledge.					
Intend	ed lear	ning outcomes			
Students are able to explain the principles of the periodic table and to extract information from it. They are ab- le to explain basic models of the structure of matter. They have developed the ability to use the language of che- mical formulas to describe chemical reactions and to interpret them by identifying the type of reaction. Students					

le to explain basic models of the structure of matter. They have developed the ability to use the language of chemical formulas to describe chemical reactions and to interpret them by identifying the type of reaction. Students are able to describe the main quantitative and qualitative analytical methods and their application areas. They are able to identify fundamental problems in chemistry and perform experiments to solve them. They have developed the ability to perform the necessary stoichiometric calculations and describe the chemical processes in an appropriate manner, both in written and oral form.

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

This module comprises 3 module components. Information on courses will be listed separately for each module component.

- 08-AC1-BC-2-092: P (no information on SWS (weekly contact hours) and course language available)
- 08-AC1-BC-3-092: V (no information on SWS (weekly contact hours) and course language available)
- 08-AC1-1-102: V + V + Ü (no information on SWS (weekly contact hours) and course language available)

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

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

Assessment in module component o8-AC1-BC-2-092: Practical course of Inorganic Chemistry 1 for Biochemistry Majors

- 4 ECTS, Method of grading: (not) successfully completed
- Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each)
- Assessment offered: once a year, winter semester

Assessment in module component o8-AC1-BC-3-092: Accompanying lecture to the practical course of Inorganic Chemistry 1 for Biochemistry Majors

- 2 ECTS, Method of grading: numerical grade
- 2 written examinations (approx. 45 minutes each), weighted 1:1

Assessment in module component o8-AC1-1-102: Principles of Inorganic Chemistry Principles of Inorganic Chemistry Principles of Inorganic Chemistry

• 10 ECTS, Method of grading: numerical grade

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	data record Bachelor (180 ECTS) Biochemie - 2013	

- a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)
- Language of assessment: German or English
- Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).

Allocation of places

Additional information

Workload

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Teaching cycle

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

§ 42 (1) 1. Chemie "Allgemeine und Anorganische Chemie" und "Physikalische und Analytische Chemie"
§ 62 (1) 1. Chemie "Allgemeine und Anorganische Chemie"; "Physikalische und Analytische Chemie"

Module appears in

Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2013)

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	data record Bachelor (180 ECTS) Biochemie - 2013	

Inorganic Che	Module title			Abbreviation
	mistry 3 for Biochemis	try Majors		08-AC3-BC-131-m01
Module coord	inator		Module offered by	
lecturer of lec Organic Chem	ture "Elementorganisch istry)	ne Chemie" (Elemental	Institute of Inorgar	nic Chemistry
	od of grading	Only after succ. con	n pl. of module(s)	
9 nume	rical grade	08-0C3P		
Duration	Module level	Other prerequisites		
1 semester	undergraduate	By way of exception assessments.	, additional prerequ	uisites are listed in the section on
Contents				
tunity to do so handling of or is used for the	ome autonomous resea ganometallic compour e exact determination o	rch and plan and cond ids, their synthesis and	uct complex synthe	odule gives students the oppor- ses. The course focuses on the ective atmospheres. Spectroscopy
	ning outcomes			n an appropriate manner. They ar
in oral and wr out the synthe Courses (type This module c component.	itten form using approp esis of a substance usin , number of weekly con omprises 2 module con	oriate scientific termino ng advanced lab techni ntact hours, language – mponents. Information	ology. They are able ques. - if other than Germ on courses will be l	isted separately for each module
• 08-AC3-	1-102: V + Ü (no inform	ation on SWS (weekly o	contact hours) and o	ourse language available) course language available)
	sessment (type, scope, ion on whether module			ation offered — if not every seme
	ated otherwise, succes			le components as specified be- successful completion of all indi
 5 ECTS, pre/pos pages) 	Method of grading: (no it-experiment examinat	ot) successfully completion talks (Vor-/Nachtes	ted	b) for Biochemistry Majors nutes each), log (approx. 5 to 10
Assessment i 4 ECTS, a) 1 to 3 60 or 90 candida	Method of grading: nu written examinations (1	8-AC3-1-102: Elementa merical grade written examination: a en examinations: appro nutes) or c) oral examin	pprox. 90 minutes; ox. 60 minutes each	v Elemental Organic Chemistry 2 written examinations: approx. n) or b) oral examination of one

Additional information

Workload

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Teaching cycle

--

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

Module appears in

Bachelor' degree (1 major) Biochemistry (2013)

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	data record Bachelor (180 ECTS) Biochemie - 2013	

Module title Abbreviation					Abbreviation
Contem	porary	Research in Biochemis	try 1		08-AFBC1-111-m01
Module coordinator				Module offered by	<u> </u>
holder c	of the (Chair of Biochemistry		Chair of Biochemis	try
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
3	nume	rical grade			
Duratio	n	Module level	Other prerequisites	i	
2 semes	ster	undergraduate			
Content	ts				
		tures discussing recent earch methods used and			nal research. The lectures will de- f recent literature.
Intende	d lear	ning outcomes			
					They have developed an under- rt presentation on those pro-
Courses	s (type	, number of weekly cont	act hours, language –	- if other than Germa	an)
V + S (n	o infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		essment (type, scope, l on on whether module o			tion offered — if not every seme-
		approx. 10 minutes) ssessment: German or E	nglish		
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Workloa	ad				
Teachin	ig cvcl	e			
	5 7 2				
Referre	d to in	LPOI (examination reg	ulations for teaching-	degree programmes	
			3		
Module	appea	nrs in			
	or' deg	ree (1 major) Biochemist	ry (2011)		

Module title Abbreviation				
Contempor	ary Research in Biochemis	stry 2		08-AFBC2-111-m01
Module coordinator			Module offered by	
holder of th	e Chair of Biochemistry		Chair of Biochemis	try
ECTS Me	hod of grading	Only after succ. con	npl. of module(s)	
3 nur	nerical grade			
Duration	Module level	Other prerequisites	i	
2 semester	undergraduate			
Contents				
	ectures discussing recent esearch methods used and			nal research. The lectures will de- f recent literature.
Intended le	arning outcomes			
				They have developed an under- rt presentation on those pro-
Courses (ty	pe, number of weekly cont	act hours, language –	- if other than Germa	an)
V + S (no in	ormation on SWS (weekly	contact hours) and co	ourse language avail	able)
	ssessment (type, scope, l ation on whether module			ation offered — if not every seme-
	n (approx. 10 minutes) f assessment: German or I	English		
Allocation o	f places			
Additional i	nformation			
Workload				
Teaching cy	cle			
<u>0</u> -,				
Referred to	in LPO I (examination reg	ulations for teaching-	degree programmes	
Module app	ears in			
Bachelor' d	egree (1 major) Biochemis	try (2011)		

Modul	Module title Abbreviation				
Conter	mporary	Research in Biochemist	ry 3		08-AFBC3-111-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Biochemistry		Chair of Biochemis	try
ECTS	1	od of grading	Only after succ. con		
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
2 seme	ester	undergraduate			
Conter	nts				
					earch groups are presented in a e context of current literature.
Intend	ed lear	ning outcomes			
		g the module events, stue erstand the discussed iss			gress of biochemical research. ents in a short talk.
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
		mation on SWS (weekly o			
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
•		approx. 10 minutes) ssessment: German or Ei	nglish		
Allocat	tion of j	olaces			
Additio	onal inf	ormation			
Worklo	bad				
Teachi	ng cycl	e			
	- /				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Modul	e appea	urs in			
Bachel	lor' deg	ree (1 major) Biochemistr ree (1 major) Biochemistr			

Module	e title				Abbreviation
Practic	al Coui	rse - abroad			08-AP-132-m01
Module	Module coordinator			Module offered by	
chairpe mistry)		f examination committee	Biochemie (Bioche-	Chair of Biochemis	try
ECTS	Methe	od of grading	Only after succ. con	npl. of module(s)	
10	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
course with th	offered e comp	d in the context of the Bac betent coordinator in adva	chelor's programme i		rrespond to the contents of a lab ECTS credits); please consult
		ning outcomes			
		familiar with procedures a I subject-specific skills as			ntries other than Germany. They s.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
P (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		o pages) or talk (approx. ssessment: German or E			
Allocat	ion of j	places			
	,				
Additio	onal inf	ormation			
Additio	nal inf	ormation on module dura	ition: 6 weeks.		
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
				<u> </u>	
Module	e appea	ars in			
		ree (1 major) Biochemisti	y (2013)		

Module	Module title				Abbreviation
Practic	al Cou	rse - abroad			08-APK-132-m01
Module	Module coordinator			Module offered by	
chairpe mistry)		f examination committee	Biochemie (Bioche-	Chair of Biochemis	try
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ster	undergraduate			
Conten	ts				
course with th	offered e comp	d in the context of the Bac petent coordinator in adva	chelor's programme i		rrespond to the contents of a lab ECTS credits); please consult
		ning outcomes			
		familiar with procedures a l subject-specific skills as			ntries other than Germany. They s.
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
P (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		o pages) or talk (approx. Issessment: German or El			
Allocat	ion of	places			
Additio	onal inf	ormation			
Additio	nal inf	ormation on module dura	ition: 3 weeks.		
Worklo					
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
		· · · · · · · · · · · · · · · · · · ·		<u> </u>	
Module	e appea	ars in			
		ree (1 major) Biochemisti	y (2013)		

emistry of the Elements and Analytical Chemistry for Biochemistry Major odule coordinator Module offered turer of lecture "Chemie der Hauptgruppenelemen- (Chemistry of Main-group Elements) Institute of Inorg TS Method of grading Only after succ. compl. of module(s) numerical grade 08-AC1 (module component 08-AC1-2 nent 08-OC3-2 only) ration Module level Other prerequisites emester undergraduate	by			
turer of lecture "Chemie der Hauptgruppenelemen- (Chemistry of Main-group Elements) Institute of Inorg TS Method of grading Only after succ. compl. of module(s) numerical grade 08-AC1 (module component 08-AC1-2 nent 08-OC3-2 only) ration Module level Other prerequisites	ganic Chemistry			
Method of grading Only after succ. compl. of module(s) numerical grade 08-AC1 (module component 08-AC1-2 nent 08-OC3-2 only) ration Module level Other prerequisites				
numerical grade 08-AC1 (module component 08-AC1-2 nent 08-OC3-2 only) ration Module level Other prerequisites	i only) and o8-OC3 (module compo-			
nent o8-OC3-2 only) ration Module level Other prerequisites	, only) and o8-OC3 (module compo			
ration Module level Other prerequisites				
emester undergraduate				
ntents				
s on bonding conditions, trends in the periodic table and the description a , it introduces students to elementary organic chemistry, coordination che odule gives students the opportunity to apply in practice the knowledge th ture(s). After a safety briefing, the students autonomously conduct experi- nents focus on different methods for the analysis of unknown substances.	mistry and complex chemistry. The ey have gained through the related			
ended learning outcomes				
activity and fabrication. They are able to identify the coordination of the ato w to use the periodic table, an essential tool for chemists. Students are ab e unknown substances. In addition, they are able to separate and analyse	le to use different methods to ana- mixtures.			
urses (type, number of weekly contact hours, language — if other than Ge	man)			
 module comprises 2 module components. Information on courses will b mponent. o8-AN1-BC-2-132: P (no information on SWS (weekly contact hours) and o8-AS1-1-102: V + V (no information on SWS (weekly contact hours) and ethod of assessment (type, scope, language — if other than German, exampler, information on whether module can be chosen to earn a bonus) 	l course language available) l course language available)			
sessment in this module comprises the assessments in the individual movel v. Unless stated otherwise, successful completion of the module will required lual assessments.				
 sessment in module component o8-AN1-BC-2-132: Analytical Chemistry (l. 5 ECTS, Method of grading: (not) successfully completed pre/post-experiment examination talks (Vor-/Nachtestate, approx. 15 r 				
 pages) Assessment offered: once a year, summer semester Language of assessment: German or English Assessment in module component o8-AS1-1-102: Chemistry of the elements Chemistry of the elements 				
 6 ECTS, Method of grading: numerical grade a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English 				
ocation of places				
ditional information				

Workload

Teaching cycle

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

§ 62 (1) 1. Chemie "Allgemeine und Anorganische Chemie"; "Physikalische und Analytische Chemie"

Module appears in

Bachelor' degree (1 major) Biochemistry (2013)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 34 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Module title					Abbreviation
Advanc	ed lab				08-AVP10-BC-132-m01
Module	Module coordinator			Module offered by	
chairpe mistry)	erson of	f examination committee	Biochemie (Bioche-	Chair of Biochemist	ry
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
	-	ives students the opport en report.	unity to explore a spe	ecific research topic a	and present the results of their
Intende	ed learr	ning outcomes			
Studen	ts are a	ble to explore a specific	research topic and p	resent the results of	their work in a written report.
Course	s (type,	, number of weekly conta	ct hours, language –	· if other than Germa	n)
Ü (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		e ssment (type, scope, la on on whether module ca			tion offered — if not every seme-
		o pages) ssessment: German or Er	nglish		
Allocat	ion of p	olaces			
Additio	nal info	ormation			
Additio	nal info	ormation on module dura	ition: 6 weeks.		
Worklo	ad				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	irs in			
		ree (1 major) Biochemistr	y (2013)		

Module title					Abbreviation
Advand	ed lab	(abridged)			08-AVP5-BC-132-m01
Module coordinator				Module offered by	<u> </u>
chairpe mistry)		f examination committe	e Biochemie (Bioche-	Chair of Biochemist	try
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		gives students the oppor ten report.	tunity to explore a spe	ecific research topic	and present the results of their
Intend	ed lear	ning outcomes			
Studen	its are	able to explore a specific	research topic and p	resent the results of	their work in a written report.
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	n)
		tion on SWS (weekly cor			
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-
		o pages) Issessment: German or E	Inglish		
Allocat	ion of	places			
 Additia	nalinf	ormation			
	-	ormation on module dur			
Worklo	bad				
Teachi	ng cycl	e			
			_		
Referre	ed to in	LPO I (examination reg	ulations for teaching-o	degree programmes)	
Module	e appe	ars in			
Bachel	or' deg	ree (1 major) Biochemist	try (2013)		

Module	e title				Abbreviation
Guidan	ice in s	cientific practice			08-AWA-132-m01
Module	Module coordinator			Module offered by	
•	chairperson of examination committee Biochemie (Bio mistry)			Chair of Biochemist	try
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	(not) s	successfully completed	o8-BAN		
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Contents					
tical ex	perime				f their degrees through a prac- e experiments in a responsible
Intend	ed lear	ning outcomes			
		able to guide students in o instruct others in the la		r degrees through pr	actical experiments and have
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
S (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
sessme	ent to b	supervising student lab e specified at the beginn ssessment: German or El	ing of the course)	t to be successfully o	completed (type and length of as-
Allocat					
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cvcl	e			
	0.93				
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
Bachel	or' deg	ree (1 major) Biochemistr	ry (2013)		

Module	e title				Abbreviation
Bachel	or The	sis in Biochemistry			08-BA-BC-132-m01
Modul	e coord	inator		Module offered by	
chairpe	erson o	f examination committee	e Biochemie (Bioche-	Chair of Biochemist	try
mistry)	·				
ECTS			Only after succ. con	npl. of module(s)	
12	I	rical grade			
		Other prerequisites			
Conten	-				
		ives students the oppor scientific methods they			problem within a given time frame
Intend	ed lear	ning outcomes			
		able to conduct research to present the results of	•		the principles of good scientific
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	n)
no cou	rses as	signed			
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-
		(50 to 70 pages) ssessment: German or E	Inglish		
Allocat					
			_		
Additio	onal inf	ormation			
Additic	nal inf	ormation on module dur	ation: 10 weeks.		
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination reg	ulations for teaching-	degree programmes)	
 Module	e appea	ars in			

Module	e title				Abbreviation	
Bioana	•				08-BAN-092-m01	
Module	e coord	inator		Module offered by		
holder	of the C	Chair of Biochemistry		Chair of Biochemist	try	
			Only after succ. com	pl. of module(s)		
8	L	rical grade			-	
Duratio		Module level	Other prerequisites			
1 seme	I	undergraduate				
Conten						
tical pr	Comprising lectures as well as theoretical and practical exercises, this module introduces students to the theore- tical principles of, and essential methods in, bioanalysis.					
Intende	ed learr	ning outcomes				
		e developed a knowledge riments.	of the fundamental ı	orinciples of bioanal	ysis and are able to apply it to	
Course	s (type,	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
This mo	odule c	omprises 2 module comp	onents. Information	on courses will be li	sted separately for each module	
compo						
					course language available)	
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)						
low. Ur vidual a Assess a a o 2 w C L Assess 5 a a e ta p A	 Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o8-BAN-1-o92: Principles of Bioanalytics Principles of Bioanalytics 3 ECTS, Method of grading: numerical grade a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. 					
Allocat	ion of p	olaces				
Additio	nal info	ormation				
Worklo	ad					
Teachi	ng cycle	e				

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

Module appears in

Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2013) Bachelor' degree (1 major) Biochemistry (2009)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 40 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Modul					Abbreviation	
Princip	oles of E	Biochemistry			08-BC-132-m01	
Modul	e coord	inator		Module offered by		
holder	of the (Chair of Biochemistry		Chair of Biochemist	ry	
ECTS Method of grading		Only after succ. com	pl. of module(s)			
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conter	its					
	Comprising lectures and exercises, this module acquaints students with the fundamental principles of bioche- mistry.					
Intend	ed lear	ning outcomes				
		e become familiar with th cal processes in cellular s		ples of biochemistry	. They are able to describe the	
Course	e s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)	
compo • c	 This module comprises 2 module components. Information on courses will be listed separately for each module component. o8-BC-1-132: V + Ü (no information on SWS (weekly contact hours) and course language available) 					
	 o8-BC-2-132: V + Ü (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- 					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
low. Ui	Assessment in this module comprises the assessments in the individual module components as specified be- low. Unless stated otherwise, successful completion of the module will require successful completion of all indi- vidual assessments.					
• 3 • V Assess	3 ECTS, written s ment i 3 ECTS,	n module component o8- Method of grading: nume examination (approx. 60 n module component o8- Method of grading: nume examination (approx. 60	erical grade to 90 minutes) BC-2-132: Principles erical grade		nciples of Biochemistry 1 inciples of Biochemistry 2	
Allocat	tion of p	places				
Additio	onal inf	ormation				
Worklo	ad					
	-					
Teachi	ng cycl	ρ				
	iis cyci	<u> </u>				
Poforre	ad to in	LPO I (examination regu	lations for toaching a	lagrae programmac)		
Kelent		LFOT (examination regu				
Modul	e appea	arc in				
		ree (1 major) Biochemistr	v (2012)			
	-	ree (1 major) Biochemistr ree (1 major) Physics (201				
	-	ee (1 major) Chemistry (20				
	0		· ·			

Module	title				Abbreviation	
Current	Metho	ods of Protein Chromatog	graphy		08-BC-AMP-141-m01	
Module coordinator				Module offered by		
holder	of the (Chair of Biochemistry		Chair of Biochemist	ry	
ECTS Method of grading			Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 semester undergraduate						
Contents						
	Comprising practical experiments, this module equips students with the theoretical principles of, and methodo- logical skills for, protein purification using modern chromatographic techniques.					
Intende	d lear	ning outcomes				
familiar able to	Students have become familiar with the tools used for chromatographic protein purification. They have become familiar with the relevant parameters and are able to transfer what they have learned to new problems. They are able to evaluate their results, produce written reports detailing those results as well as to discuss them. Courses (type, number of weekly contact hours, language — if other than German)					
		tion on SWS (weekly cont				
ster, inf a) writte didate of 30 minu about th Assessi Langua Allocati Biocher the nun lowing of applica subject	ormati en exar each (a utes, gr he met ment o ge of a on of g nie (Bi nber of quotas nts wit semes	on on whether module ca mination (approx. 60 to 9 approx. 20 minutes) or d) roups of 3: approx. 40 mi hod and length of the as ffered: once a year, winte ssessment: German or Er blaces ochemistry) Bachelor's: 2 applications exceed the : Quota 1 (two thirds of p h the same average grad sters of the respective ap	an be chosen to earn to minutes) or b) log (oral examination in g nutes) or d) presenta sessment prior to the er semester nglish 24 places. Selection p number of available laces): current averag e, places will be alloc plicant; among applic	a bonus) (approx. 20 pages) o groups of up to 3 can tion (approx. 30 min course. process Biochemie (I places, places will b ge grade of successf cated by lot. Quota 2 cants with the same	tion offered — if not every seme- r c) oral examination of one can- ididates (groups of 2: approx. nutes). Students will be informed Biochemistry) Bachelor's: Should e allocated according to the fol- ully completed modules; among (one third of places) number of number of subject semesters, ocated as they become availa-	
Additio	nal inf	ormation				
Worklo	ad					
Teachir	ig cycl	e				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	appea	ars in				
Bachelo	or' deg	ree (1 major) Biochemistr	y (2013)			

Modul	e title				Abbreviation
Bioche	emistry	for Biochemistry Majors	(Exercises)		08-BCBCP-132-m01
Modul	e coord	inator		Module offered by	
holder of the Chair of Biochemistry				Chair of Biochemis	ry
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	·
5	(not)	successfully completed			
Durati	on	Module level	Other prerequisites		
1 semester undergraduate					
Conter	nts				
	cal exer ments.	cises give students the o	pportunity to learn th	e fundamental princ	iples of conducting biochemical
Intend	ed lear	ning outcomes			
Studer	nts have	e become proficient in es	sential methods in bi	ochemistry.	
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	n)
Ü (no i	nforma	tion on SWS (weekly con	tact hours) and cours	e language available	2)
a) log tion in minute	(approx groups es) Stuc		mination of one canc minutes, groups of 3 out the method and l	lidate each (approx. : approx. 40 minutes	20 minutes) or c) oral examina- 5) or d) presentation (approx. 30 nent prior to the course.
Alloca	tion of	places			
Additi	onal inf	ormation			
			-		
Worklo	oad				
	ing cycl	e	-		
	ing cycl	e			
 Teachi 			lations for teaching-o	degree programmes)	
 Teachi 		e LPOI (examination regu	llations for teaching-o	legree programmes)	
 Teachi Referro		LPOI (examination regu	llations for teaching-o	degree programmes)	

Module title				Abbreviation	
Completive Q	ualification in Natural So	ciences 3		08-BC-EQN3-141-m01	
Module coord	linator		Module offered by		
chairperson o mistry)	chairperson of examination committee Biochemie (Bioche- Chair of Biochemistry		ry		
ECTS Method of grading Only after succ. co			pl. of module(s)		
	rical grade				
Duration	Module level	Other prerequisites			
1 semester	undergraduate	Please consult with	It with academic advisory service in advance.		
Contents	·				
dents with ad	vanced knowledge in the Iniversity of Würzburg or	e natural sciences tha	t is related to their d	Biochemistry that equips stu- iscipline. That course may be of- t transfer to be made by exami-	
Intended lear	ning outcomes				
	e developed an improved e acquired additional ex	0		anced their specific qualificati- eir field.	
Courses (type	, number of weekly cont	act hours, language —	- if other than Germa	n)	
V (no informa	tion on SWS (weekly con	tact hours) and cours	e language available	e)	
	sessment (type, scope, l ion on whether module o			tion offered — if not every seme-	
didate each (a minutes, grou certified by le se.	approx. 20 minutes) or d ips of 3: approx. 40 minu) oral examination in g ites) or d) presentation nformed about the me	groups of up to 3 car n (approx. 30 minute	rr c) oral examination of one can- ididates (groups of 2: approx. 30 es) or f) successful completion as the assessment prior to the cour-	
Allocation of	·				
		_			
Additional inf	ormation				
Workload		-			
Teaching cycl	e				
Referred to in	LPOI (examination reg	ulations for teaching-o	degree programmes)		
	Ŭ				
 Module appea	ars in				

	le title				Abbreviation
Comp	oletive Q	ualification in Natural S	ciences 5		08-BC-EQN5-141-m01
Module coordinator				Module offered by	<u> </u>
chairperson of examination committee Biochemie (Bioche- mistry)		Chair of Biochemis	try		
ECTS Method of grading Only after succ. con		npl. of module(s)			
5	nume	erical grade			
Durat	ion	Module level	Other prerequisites		
1 sem	semester undergraduate Please consult with academic advisory service in advance.			service in advance.	
Conte	ents				
dents fered	with ad	lvanced knowledge in the Iniversity of Würzburg or	e natural sciences tha	t is related to their d	Biochemistry that equips stu- iscipline. That course may be of- it transfer to be made by exami-
Inten	ded lear	ning outcomes			
		e developed an improve ve acquired additional ex			anced their specific qualificati- neir field.
Cours	ses (type	e, number of weekly cont	act hours, language –	- if other than Germa	ın)
V (no	informa	tion on SWS (weekly cor	itact hours) and cours	e language available	2)
		sessment (type, scope, l ion on whether module o			tion offered — if not every seme-
didat minut certifi se.	e each (tes, grou ied by le	approx. 20 minutes) or d ups of 3: approx. 40 minu) oral examination in g utes) or d) presentatio nformed about the mo	groups of up to 3 car n (approx. 30 minute	or c) oral examination of one can- ndidates (groups of 2: approx. 30 es) or f) successful completion as the assessment prior to the cour-
Alloca	ation of	places			
		-	_		
Addit	ional in	formation			
Work	load				
			_		
Tooch	ing ave				
react	ning cyc		_		
Refer	red to ir	LPOI (examination reg	ulations for teaching-	legree programmes)	
	ıle appe				
Bach	elor' deg	gree (1 major) Biochemis	try (2013)		

Module title					Abbreviation	
	Molecular Biology for Biochemistry students 08-BC-MOL-122-mo1					
Module	e coord	inator		Module offered by		
holder	of the C	hair of Biochemistry		Chair of Biochemist	ry	
ECTS	·	od of grading	Only after succ. con			
6	L	rical grade		ponent o8-BC-1 only)	
Duratio		Module level	Other prerequisites			
1 seme		undergraduate				
Conten	ts					
	Comprising a lecture and an exercise, this module discusses advanced topics in molecular physiology and func- tional biochemistry. Another lecture discusses the fields of genetic engineering and biosafety.					
Intend	ed learr	ning outcomes				
each oi usage i netic e	Students have developed a sound knowledge of molecular biology. They know what infrastructure is needed for each of the four safety levels into which genetic engineering facilities are categorised and are familiar with the usage rules for them. They have developed a knowledge and understanding of the theoretical principles of genetic engineering and are able to describe relevant examples of applications of genetic engineering as well as to discuss the associated safety issues.					
Course	s (type,	number of weekly conta	ct hours, language –	- if other than Germa	n)	
compo • c • c Metho	 This module comprises 2 module components. Information on courses will be listed separately for each module component. o3-GTBS-1-092: V (no information on SWS (weekly contact hours) and course language available) o8-BC-MOL-1-122: V + Ü (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)					
low. Ur vidual Assess • 1 • v Assess • 5	ment ir assessr ECTS, I vritten e ment ir ECTS, I	ated otherwise, successf ments. module component 03- Method of grading: (not) examination (approx. 30 f module component 08- Method of grading: nume	ul completion of the GTBS-1-092: Genetic successfully complet minutes) BC-MOL-1-122: Mole erical grade	module will require s Engineering and Bio ted cular Biology Molecu	ılar Biology	
0 2 V	 a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination of one candidate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 2: approx. 30 minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German or English 					
Allocat	ion of p	laces				
Additio	onal info	ormation				
Worklo	ad					
Teachi	ng cycle	a				
	-3 -9 -10	-				
Poforra	d to in	LPO I (examination regu	lations for toaching	lagrae programmes)		
Referre						

Bachelor's with 1 major Biochemistry (2013)

Module appears in

Bachelor' degree (1 major) Biochemistry (2013) Master's degree (1 major) Biochemistry (2012)

Bachelor's with 1 major Biochemistry (2013)

Molecular Biology Lab 08-BC-MOLP-111-m Module coordinator Module offered by holder of the Chair of Biochemistry Chair of Biochemistry ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade 08-BC (module component 08-BC-1 only) Duratior Module level Other prerequisites 1 semester undergraduate Contents This module equips students with practical skills in the areas of recombinant engineering and chara of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical premodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German) Ü (no information on SWS (weekly contact hours) and course language available)	acterisation
holder of the Chair of Biochemistry Chair of Biochemistry ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade o8-BC (module component o8-BC-1 only) Duration Module level Other prerequisites 1 semester undergraduate Contents This module equips students with practical skills in the areas of recombinant engineering and chara of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical primodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
holder of the Chair of Biochemistry Chair of Biochemistry ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade o8-BC (module component o8-BC-1 only) Duration Module level Other prerequisites 1 semester undergraduate Contents This module equips students with practical skills in the areas of recombinant engineering and chara of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical premodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
ECTS Method of grading Only after succ. compl. of module(s) 10 numerical grade o8-BC (module component o8-BC-1 only) Duration Module level Other prerequisites 1 semester undergraduate Contents This module equips students with practical skills in the areas of recombinant engineering and chara of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical prodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
10 numerical grade o8-BC (module component o8-BC-1 only) Duration Module level Other prerequisites 1 semester undergraduate Contents Contents of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical premodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
Duration Module level Other prerequisites 1 semester undergraduate Contents This module equips students with practical skills in the areas of recombinant engineering and chara of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical prodern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
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of macromolecular complexes, modern biomolecular techniques, in vivo analysis of biochemical pro- modern imaging techniques. Intended learning outcomes Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	
Students have developed a knowledge of molecular biology and are able to apply it to practical exp Courses (type, number of weekly contact hours, language — if other than German)	ocesses, and
Courses (type, number of weekly contact hours, language — if other than German)	
Courses (type, number of weekly contact hours, language — if other than German)	periments.
Method of assessment (type, scope, language — if other than German, examination offered — if not	t avary como
a) written examination (approx. 60 to 90 minutes) or b) log (approx. 20 pages) or c) oral examination	
didate each (approx. 20 minutes) or d) oral examination in groups of up to 3 candidates (groups of 3 o minutes, groups of 3: approx. 40 minutes) or d) presentation (approx. 30 minutes). Students will about the method and length of the assessment prior to the course. Assessment offered: once a year, winter semester Language of assessment: German or English Allocation of places Biochemie (Biochemistry) Bachelor's: 24 places. Chemie (Chemistry) Master's: 6 places. Selection p chemie (Biochemistry) Bachelor's: Should the number of applications exceed the number of availab places will be allocated according to the following quotas: Quota 1 (two thirds of places): current av de of successfully completed modules; among applicants with the same average grade, places will by lot. Quota 2 (one third of places) number of subject semesters of the respective applicant; amon with the same number of subject semesters, places will be allocated according to the quotas: Quota 1 (two thirds of places): grade of module 08-BC; among applicants with the same gra will be allocated by lot. Quota 2 (one third of places): grade of module 08-BC; among applicants with the same gra will be allocated by lot. Quota 2 (one third of places): grade of module 08-BC; among applicants with the same gra will be allocated by lot. Quota 2 (one third of places): grade of module 08-BC; among applicants with the same gra will be allocated by lot. Quota 2 (one third of places) number of subject semesters of the respective among applicants with the same number of subject semesters, places will be allocated by lot. A wa be maintained and places re-allocated as they become available.	l be informed process Bio- ble places, verage gra- be allocated ng applicants aintained and uld the num- e following ade, places e applicant;
Additional information	
Workload	
Teaching cycle	
Referred to in LPO I (examination regulations for teaching-degree programmes)	
-	
Module appears in	
Bachelor' degree (1 major) Biochemistry (2011)	
Bachelor' degree (1 major) Biochemistry (2013)	



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

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 49 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

	<u>ile title</u>				Abbreviation
Additional Qualification in Natural Sciences 3			ences 3		08-BC-ZQN3-141-m01
Module coordinator				Module offered by	
chairµ mistry		of examination committee	Biochemie (Bioche-	Chair of Biochemist	ry
ECTS			Only after succ. com	npl. of module(s)	
3	3 (not) successfully completed				
Durat	ion	Module level	Other prerequisites		
1 sem	nester	undergraduate	Please consult with	academic advisory s	ervice in advance.
Conte	ents				
dents fered	s with ac	lvanced knowledge in the Jniversity of Würzburg or	natural sciences that	t is related to their d	Biochemistry that equips stu- iscipline. That course may be of- t transfer to be made by exami-
Inten	ded lear	ning outcomes			
		e developed an improved /e acquired additional exp			anced their specific qualificati- eir field.
Cours	ses (type	e, number of weekly conta	ict hours, language —	- if other than Germa	n)
V (no	informa	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
didate minut certifi se.	e each (tes, grou ied by le	approx. 20 minutes) or d) 1ps of 3: approx. 40 minu	oral examination in s tes) or d) presentation nformed about the me	groups of up to 3 car n (approx. 30 minute	rr c) oral examination of one can- ididates (groups of 2: approx. 30 es) or f) successful completion as the assessment prior to the cour-
			iigiisii		
	ation of	places			
	ation of	places			
Alloca		places formation			
Alloca		-			
Alloca	ional in	-			
Alloca Addit 	ional in	-			
Alloca Addit Work	ional in	formation			
Alloca Addit Work	ional in load	formation			
Alloca Addit Work Teach 	ional in load ning cyc	formation		legree programmes)	
Alloca Addit Work Teach 	ional in load ning cyc	formation		legree programmes)	
Alloca Addit Workl Teach Refer	ional in load ning cyc	formation le ILPOI (examination regu		degree programmes)	

Module title					Abbreviation
Additional Qualification in Natural Sciences 5			ences 5		08-BC-ZQN5-141-m01
Module coordinator				Module offered by	
chair mistr	•	of examination committee	Biochemie (Bioche-	Chair of Biochemist	ry
ECTS			Only after succ. con	npl. of module(s)	
5	(not) successfully completed				
Durat	tion	Module level	Other prerequisites		
1 sem	nester	undergraduate	Please consult with	academic advisory s	ervice in advance.
Conte	ents				
dents fered	s with ad	lvanced knowledge in the Jniversity of Würzburg or	natural sciences tha	t is related to their d	Biochemistry that equips stu- iscipline. That course may be of- t transfer to be made by exami-
Inten	ded lear	ning outcomes			
		e developed an improved /e acquired additional exp			anced their specific qualificati- eir field.
Cours	ses (type	e, number of weekly conta	ct hours, language –	- if other than Germa	n)
V (no	informa	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
didat minu certif se.	te each (tes, grou ied by le	approx. 20 minutes) or d) 1ps of 3: approx. 40 minu	oral examination in g tes) or d) presentatio nformed about the me	groups of up to 3 car n (approx. 30 minute	or c) oral examination of one can- adidates (groups of 2: approx. 30 es) or f) successful completion as the assessment prior to the cour-
	ation of	-	i.		
Alloca	ation of	places			
Alloca		places			
		formation			
		-			
	tional in	-			
 Addit	tional in	-			
 Addit Work	tional in	formation			
 Addit Work	tional in	formation			
 Addit Work Teach 	tional in cload hing cyc	formation	lations for teaching-o	degree programmes)	
 Addit Work Teach 	tional in cload hing cyc	formation	lations for teaching-o	degree programmes)	
 Addit Work Teach Refer 	tional in cload hing cyc	formation le ILPOI (examination regu	lations for teaching-o	degree programmes)	

Module	e title				Abbreviation
Bioche	Biochemistry (practical course) 1			08-BPS1-111-m01	
Module	Module coordinator			Module offered by	
chairpe mistry)		f examination committee	Biochemie (Bioche-	Chair of Biochemis	try
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)	
1	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		icipate in a project in the nd write a report about th		they have selected	in consultation with the module
Intend	ed lear	ning outcomes			
		e developed advanced su at they have learned.	bject-specific knowle	edge and skills and a	are able to write a report reflec-
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	n)
S (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		rox. 1 page) ssessment: German or El	nglish		
Allocat	ion of j	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cvcl	e			
	0.95				
Referre	d to in	LPOI (examination regu	lations for teaching-	legree programmes)	
Module	annes	ars in			
		ree (1 major) Biochemistr	V (2011)		
	-	ree (1 major) Biochemisti			

Module	e title				Abbreviation
Bioche	Biochemical Practical Seminar 2			08-BPS2-111-m01	
Module	e coord	inator		Module offered by	
chairpe mistry)	erson o	f examination committee	Biochemie (Bioche-	Chair of Biochemist	try
ECTS		od of grading	Only after succ. con	npl. of module(s)	
1	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		icipate in a project in the nd write a report about th		they have selected	in consultation with the module
Intende	ed lear	ning outcomes			
		e developed advanced su at they have learned.	bject-specific knowle	edge and skills and a	are able to write a report reflec-
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
S (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		rox. 1 page) ssessment: German or El	nglish		
Allocat	ion of _l	places			
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
		ree (1 major) Biochemisti	ry (2011)		
	-	ree (1 major) Biochemistr	-		

	mical P				Abbreviation
Module	Biochemical Practical Seminar 3				08-BPS3-111-m01
	Module coordinator			Module offered by	
chairpe mistry)	erson of	f examination committee	Biochemie (Bioche-	Chair of Biochemist	try
ECTS		od of grading	Only after succ. con	npl. of module(s)	
1	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Content	ts				
		cipate in a project in the nd write a report about th		they have selected	in consultation with the module
Intende	ed learı	ning outcomes			
		e developed advanced su t they have learned.	bject-specific knowle	edge and skills and a	are able to write a report reflec-
Courses	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
S (no in	Iformat	ion on SWS (weekly cont	act hours) and cours	e language available	
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
		rox. 1 page) ssessment: German or Er	nglish		
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Workloa	ad				
Teachin	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	appea	irs in			
	-	ree (1 major) Biochemistr ree (1 major) Biochemistr	-		

Module	e title				Abbreviation
Practical Course - external				08-EP-132-m01	
Module	Module coordinator			Module offered by	
chairpe mistry)		f examination committee	Biochemie (Bioche-	Chair of Biochemis	try
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
course with th	offered e comp	d in the context of the Bac betent coordinator in adva	chelor's programme i		rrespond to the contents of a lab ECTS credits); please consult
Intend	ed lear	ning outcomes			
		e become familiar with th ualify them to work in the		niversity research in	stitutions and have developed
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
P (no ir	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	<u>e)</u>
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		o pages) or talk (approx. Issessment: German or El			
Allocat		·			
Additio	onal inf	ormation			
Additio	nal inf	ormation on module dura	ition: 6 weeks.		
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	e appea	ars in			
		ree (1 major) Biochemistr	y (2013)		

Module	e title				Abbreviation
Practical Course - external, abridged					08-EPK-132-m01
Module	Module coordinator			Module offered by	
chairpe mistry)	erson o	f examination committee	Biochemie (Bioche-	Chair of Biochemis	try
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
be dete course with the	ermined offered e comp	d by the host institution. I in the context of the Bac betent coordinator in adv	The contents of the p chelor's programme i	lacement should co	ion or a business. Contents to rrespond to the contents of a lab ECTS credits); please consult
Intende	ed lear	ning outcomes			
		e become familiar with th ualify them to work in the		niversity research in	stitutions and have developed
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	in)
P (no in	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
		o pages) or talk (approx. ssessment: German or E			
Allocat	.=				
Additio	nal inf	ormation	-		
Additio	nal inf	ormation on module dura	ation: 3 weeks.		
Worklo			-		
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	llations for teaching-o	degree programmes)	
Module	appea	ars in			
Bachel	or' deg	ree (1 major) Biochemistr	ry (2013)		

Module title					Abbreviation
Practical lab course					08-LP-132-m01
Module coordinator				Module offered by	
chairpe mistry)	erson o	f examination committee	Biochemie (Bioche-	Chair of Biochemist	ry
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
10	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
burg. P ves stu	lease c dents t	onsult with the competer	nt coordinator in adva y engage with metho	ance regarding conte ds in biochemistry, r	oup at the University of Würz- ents to be covered. The course gi- nolecular biology and/or bioin- eriments and findings.
Intende	ed lear	ning outcomes			
ty to ap	oply the arned l	se methods to new probl	lems and to determin	e whether they are s	s. They have developed the abili- uitable for those problems. They gs according to best scientific
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
		o pages) or talk (approx. ssessment: German or Er			
Allocat	ion of p	olaces			
Additio	onal inf	ormation			
Additio	nal info	ormation on module dura	tion: 6 weeks.		
Worklo	ad				
Teachi	ng cycl	9			
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	irs in			
	Bachelor' degree (1 major) Biochemistry (2013)				

Module ti	tle		Abbreviation	
Practical	lab course, abridged			08-LPK-132-m01
Module c	oordinator		Module offered by	
chairpers mistry)	on of examination committee	Biochemie (Bioche-	Chair of Biochemist	ry
ECTS M	ethod of grading	Only after succ. com	pl. of module(s)	
5 (r	ot) successfully completed			
Duration	Module level	Other prerequisites		
1 semeste	er undergraduate			
Contents				
burg. Plea ves stude	se consult with the competer	nt coordinator in adva y engage with metho	ance regarding conte ds in biochemistry, n	oup at the University of Würz- ents to be covered. The course gi- nolecular biology and/or bioin- eriments and findings.
Intended	learning outcomes			
ty to appl	y those methods to new prob	lems and to determin	e whether they are s	s. They have developed the abili- suitable for those problems. They gs according to best scientific
Courses (type, number of weekly conta	ct hours, language —	if other than Germa	n)
P (no info	rmation on SWS (weekly cont	act hours) and cours	e language available	e)
	f assessment (type, scope, la mation on whether module ca			tion offered — if not every seme-
	ox. 20 pages) or talk (approx. of assessment: German or E			
Allocation	n of places			
Additiona	l information			
Additiona	l information on module dura	ition: 3 weeks.		
Workload				
Teaching	cvcle			
Referred	to in LPO I (examination regu	lations for teaching-	legree programmes)	
Module a	ppears in			
	degree (1 major) Biochemisti	y (2013)		

Organi	e title				Abbreviation	
Organic Chemistry 1					08-0C1-092-m01	
Module coordinator			Module offered by			
nolder of the Professorship of Organic (c Chemistry	Institute of Organic	Chemistry		
ECTS	-	od of grading	Only after succ. cor		,	
5		rical grade		-		
Duratio	on	Module level	Other prerequisites	5		
1 seme	ster	undergraduate	ses in the respectiv (usually 70% of exe	Admission prerequisite to assessment: successful completion of exe ses in the respective classes as specified at the beginning of the cou (usually 70% of exercises to be successfully completed) as well as re lar attendance of exercises (usually a maximum of 2 incidents of une sed absence)		f the course vell as regu-
Conten	Its		·			
the bor organic	nding s c compo	rovides students with a ituation of carbon and i ounds. The module also nination reactions as w	introduces students to o discusses the fundar	the nomenclature of mental principles of s	simple and modera	itely complex
Intende	ed lear	ning outcomes				
lecules that pu synthes	. They a irpose, ses.	re to determine simple are able to describe and they can analyse and c	d formulate some of th ategorise the characte	e most important rea eristic reaction condit	ictions in organic ch ions and can use th	emistry. For
Course	s (type	, number of weekly con	tact hours, language -	– if other than Germa	n)	
V + Ü (r	no infoi	mation on SWS (weekl	y contact hours) and c	ourse language avail	able)	
		essment (type, scope, on on whether module			tion offered — if not	every seme-
nutes e	each; 3	n examinations (1 writt written examinations: (oral examination in gro	60 minutes each) or b)	oral examination of		
nutes e	each; 3 s) or c)	written examinations: oral examination in gro	60 minutes each) or b)	oral examination of		
nutes e minute	each; 3 s) or c)	written examinations: oral examination in gro	60 minutes each) or b)	oral examination of		
nutes e minute Allocat	each; 3 (s) or c) (ion of p	written examinations: oral examination in gro	60 minutes each) or b)	oral examination of		
nutes e minute Allocat	each; 3 (s) or c) (ion of p	written examinations: (oral examination in gro places	60 minutes each) or b)	oral examination of		
nutes e minute Allocat	each; 3 (s) or c) (ion of ponal inf	written examinations: (oral examination in gro places	60 minutes each) or b)	oral examination of		
nutes e minute Allocat Additio 	each; 3 (s) or c) (ion of ponal inf	written examinations: (oral examination in gro places	60 minutes each) or b)	oral examination of		
nutes e minute Allocat Additio 	each; 3 (s) or c) (ion of p (onal info (onal info	written examinations: o oral examination in gro olaces ormation	60 minutes each) or b)	oral examination of		
nutes e minute Allocat Additio Worklo 	each; 3 (s) or c) (ion of p (onal info (onal info	written examinations: o oral examination in gro olaces ormation	60 minutes each) or b)	oral examination of		
nutes e minute Allocat Additio Worklo Teachin 	each; 3 (s) or c) (ion of p (onal info (onal info (onal info (onal info (onal info (onal info (onal info (onal info))	written examinations: o oral examination in gro places prmation	50 minutes each) or b) pups (groups of 2, app) oral examination of rox. 30 minutes)	one candidate each	
nutes e minute Allocat Additio Worklo Teachin Referre	each; 3 is) or c) ion of p onal info pad ng cycl	written examinations: (oral examination in gro places prmation e LPOI (examination reg	50 minutes each) or b) pups (groups of 2, app	oral examination of rox. 30 minutes) degree programmes)	one candidate each	
nutes e minute Allocat Additio Worklo Teachin Referre § 62 (1)	each; 3 (s) or c) (ion of p (onal info (onal info)) (onal info (onal info)) (onal info) (onal info) (ona	written examinations: (oral examination in gro places prmation e LPO I (examination reg mie "Organische und E	50 minutes each) or b) pups (groups of 2, app	oral examination of rox. 30 minutes) degree programmes)	one candidate each	
nutes e minute Allocat Additio Worklo Teachin Referre § 62 (1) Module Bachel Bachel Bachel Bachel Bachel	each; 3 is) or c) ion of p onal info pad ed to in) 2. Che e appea or' deg or' deg or' deg or' deg or' deg or' deg	written examinations: (oral examination in gro places prmation e LPO I (examination reg mie "Organische und E	So minutes each) or b) pups (groups of 2, app gulations for teaching- Bioorganische Chemie stry (2011) stry (2013) stry (2009) (2010) (2009)	oral examination of rox. 30 minutes) degree programmes)	one candidate each	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011) First state examination for the teaching degree Gymnasium Chemistry (2009)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 60 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Modul	e title				Abbreviation		
Organi	ic Chem	istry 2			08-0C2-102-m01		
Modul	<u>a coord</u>	inator		Module offered by			
Module coordinator		nic Chomistry	Institute of Organic	Chomistry			
ECTS	Ider of the Chair of Physically Organic Chemistry IS Method of grading Only after suc		Only after succ. cor		Chemistry		
9		rical grade	08-0C1				
Duratio	·	Module level	Other prerequisites	•			
1 seme		undergraduate			successful completion	on of exerci-	
1 Semester		U		Admission prerequisite to assessment: successful completion of exer ses in the respective classes as specified at the beginning of the court			
			(usually 70% of exe	rcises to be success	fully completed) as v	vell as regu-	
			lar attendance of ex	ercises (usually a m	aximum of 2 inciden	ts of unexcu-	
			sed absence).				
Conten	nts						
This m	odule ir	ntroduces students to t	he rules of aromaticity	and discusses spec	ific reactions of arom	natics. Using	
			, it extends the studen				
			chanisms. The course				
		trometry and NMR spe	t introduces students to ctroscopy	o the spectroscopic i	nethods of infrared s	spectrosco-	
		ning outcomes					
		-	the criteria for aromati	city They can analys	e the varving reactiv	ity of car-	
			lescribe specific reaction				
			age syntheses with cor				
			le to describe importar	it spectroscopic met	hods, to evaluate a s	pectrum and	
		usions regarding the m					
			itact hours, language –				
			eekly contact hours) ar				
			language — if other th can be chosen to earn		ition offered — if not	every seme-	
			en examination: appro				
			nations: approx. 60 min			candidate	
		ssessment: German, E	examination in groups	(groups of 2, approx	. 30 minutes)		
	tion of p						
Additic	onal inf	ormation					
Worklo	oad						
Teachi	ng cycl	e					
	- /						
Referre	ed to in	LPOI (examination re	gulations for teaching-	degree programmes)			
Module	e appea	ars in					
Bachel	lor' deg	ree (1 major) Biochemi	stry (2011)				
	-	ree (1 major) Biochemi					
	-	ree (1 major) Chemistry					
Bachel	lor' deg	ree (1 major) Mathema	tics (2012)				
Bachelor's	s with 1 maj	or Biochemistry (2013)		• generated 26-Aug-2024 • (-	page 61 / 84	
			data record	Bachelor (180 ECTS) Biochem	IE - 2013	ļ	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

Module	e title				Abbreviation	
Organi	c Chem	istry - laboratory course	for students of bioch	emistry	08-0C3P-112-m01	
Module	e coord	inator		Module offered by		
holder of the Chair of Organic Chemistry I			y II	Institute of Organic	Chemistry	
ECTS	Method of grading Only after succ. compl. of module(s)					
7	(not) s	successfully completed	08-0C1 and 08-AC1-	BC (module compor	ient o8-AC1-BC-2 only)	
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
lated le dition t their kr	ecture(s o those nowled;	5). After a safety briefing, e experiments, students v	the students autonor will be expected to ta h the safe handling of	nously conduct exp ke oral tests and wri f hazardous substar	they have gained through the re- eriments in the laboratory. In ad- te lab reports to demonstrate aces, simple experimental unit is of the products.	
Intendo	ed lear	ning outcomes			· · · · ·	
rations	of orga ources.	anic chemistry. They are a They are able to connect	ble to analyse the yie	eld and purity of the	nduct simple experimental ope- products and identify possible cture with practical experiments	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)	
P (no ir	format	tion on SWS (weekly cont	act hours) and course	e language available	e)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
to 10 pa	ages), l	e-experiment exams, app Nachtestate (post-experin ffered: once a year, sumr	ment exams, approx.		actical performance (log approx. 5	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teaching cycle						
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	e appea	ars in				
Bachel	or' deg	ree (1 major) Biochemistr	y (2011)			
		ree (1 major) Biochemistr	()			

Module title Abbreviation							
Organ	Organic Chemistry 4 08-OC4-102-m01						
Modul	e coord	inator		Module offered by			
	ofthe	Chair of Organic Chemis	stry II	Institute of Organic	Institute of Organic Chemistry		
ECTS		od of grading	Only after succ. compl. of module(s)				
10		rical grade					
Durati		Module level	Other prerequisites				
1 seme	ester	undergraduate		, additional prerequi	isites are listed in th	e section on	
Cambo			assessments.				
Conte		1 1 1				1 .	
ting gr ces, us	oup tec sing cor	ocuses on heterocyclic hniques. Students enha nplicated working and s e product analyses.	ance their experimenta	Il skills by working w	ith special hazardou	us substan-	
Intend	ed lear	ning outcomes					
able to protein roids. form c	o charac ns. In ac Student	able to name important sterise and categorise d ddition, they are able to ts know how to safely a syntheses, purification ents.	yes. Students are able describe the structure nd responsibly handle	to describe the struct of the DNA, carbohy special hazardous s	cture and selective s /drates, fats, terpend substances. They are	synthesis of es and ste- able to per-	
Course	es (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)		
compo • d • d	onent. 08-0C4 08-0C4 08-0C4 d of ass	omprises 2 module con 1-102: V + Ü (no inform 2-102: P (no informatio sessment (type, scope,	ation on SWS (weekly n on SWS (weekly con language — if other th	contact hours) and c tact hours) and cours an German, examina	ourse language avai se language availab	ilable) le)	
	_	on on whether module		-			
low. U		n this module comprise ated otherwise, succes ments.					
	 Only after successful completion of module components: 08-OC1 or 08-OC1-GHR 						
		n module component of	8-0C4-2-102: Organic	Chemistry - advance	d laboratory course f	for students	
	5 ECTS, pre/pos pages) Assessr Languag Dnly aft p8-OC3		on talks (Vor-/Nachtes ar, winter semester an, English on of module compone	state, approx. 15 mins nts: 08-OC3 (module	e component o8-OC3		
Bachelor's	with 1 ma	jor Biochemistry (2013)	-	• generated 26-Aug-2024 • e Bachelor (180 ECTS) Biochem	-	page 64 / 84	

Allocation of places

Additional information

Workload

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Teaching cycle

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

§ 62 (1) 2. Chemie "Organische und Bioorganische Chemie"

Module appears in

Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2013) Bachelor' degree (1 major) Chemistry (2010) Bachelor' degree (1 major) FOKUS Chemistry (2011)

Bachelor's with 1 major Biochemistry (2013)

	e title				Abbreviation
Organi	c Chem	istry 4 - lecture		08-0C4-VL-141-m01	
Module	e coord	inator		Module offered by	
holder of the Chair of Organic Chemistry II			ry II	Institute of Organic	: Chemistry
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	5 numerical grade				
Duratio	on	Module level	Other prerequisites	i	
1 seme	ster	undergraduate			
Conten	Its				
	zardou				nd syntheses, working with spe- rification methods and product
Intend	ed lear	ning outcomes			
protein ids.	is. In ac	ddition, they are able to c	lescribe the structure	e of the DNA, carbohy	cture and selective synthesis of ydrates, fats, terpenes and stero-
Course	s (type	, number of weekly conta	ect hours, language –	- if other than Germa	an)
1) Ü + V	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	abla
				suise language avan	
		sessment (type, scope, la ion on whether module c		an German, examina	ation offered — if not every seme-
ster, in a) writt 30 min or d) lo and ler	formati en exa utes) o og (appi ogth of	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	
ster, in a) writt 30 min or d) lo and ler	formati en exar utes) o g (appr ngth of age of a	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua	formati en exar utes) o g (appr ngth of age of a	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat	formati en exa utes) o g (app ngth of age of a :ion of j	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat	formati en exa utes) o g (app ngth of age of a :ion of j	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E places	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat	formati en exar utes) o g (appr ogth of age of a cion of j	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E places	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio	formati en exar utes) o g (appr ogth of age of a cion of j	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the c ssessment: German or E places	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio	formati en exac utes) o og (appingth of age of a cion of j onal inf	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the o ssessment: German or E places ormation	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio Worklo	formati en exac utes) o og (appingth of age of a cion of j onal inf	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the o ssessment: German or E places ormation	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course.	an German, examina a bonus) al examination of on pprox. 30 minutes, §	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes)
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio Worklo Teachin 	formati en exac utes) o og (appingth of age of a cion of j onal inf	ion on whether module c mination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the o ssessment: German or E places ormation	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course. nglish	an German, examina a bonus) al examination of on pprox. 30 minutes, g ninutes). Students v	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio Worklo Teachin 	formati en exac utes) o og (appingth of age of a cion of j onal inf	ion on whether module comination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the o ssessment: German or E places ormation	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course. nglish	an German, examina a bonus) al examination of on pprox. 30 minutes, g ninutes). Students v	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio Worklo Teachin 	formati en exa utes) o g (appingth of age of a cion of p onal inf onal inf onal inf onal inf	ion on whether module comination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the of ssessment: German or E places ormation e LPO I (examination regu	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course. nglish	an German, examina a bonus) al examination of on pprox. 30 minutes, g ninutes). Students v	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type
ster, in a) writt 30 min or d) lo and ler Langua Allocat Additio Teachin Referre Module	formati en exat utes) o g (appingth of age of a ion of p onal inf onal inf oad age to in eat to in	ion on whether module comination (approx. 90 to 1 r c) oral examination in g rox. 20 pages) or e) prese assessment prior to the of ssessment: German or E places ormation e LPO I (examination regu	an be chosen to earn 80 minutes) or b) ora roups (groups of 2: a entation (approx. 30 r course. nglish	an German, examina a bonus) al examination of on pprox. 30 minutes, g ninutes). Students v	ation offered — if not every seme- e candidate each (approx. 20 to groups of 3: approx. 40 minutes) vill be informed about the type

	essful completion of exerci- he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
Module coordinator Module offered by lecturer of lecture "Grundlagen der Quantenmechanik and Spektroskopie" (Principles of Quantum Mechanics and Spectroscopy) Institute of Physical and ECTS Method of grading Only after succ. compl. of module(s) 8 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at the (usually 70% of exercises to be successfully of lar attendance of exercises (usually a maximu sed absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical	Theoretical Chemistry ressful completion of exerci- he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, hicrowave spectroscopy and problems, matrix represen-
lecturer of lecture "Grundlagen der Quantenmechanik and Spektroskopie" (Principles of Quantum Mechanics and Spectroscopy) Institute of Physical and Institute of Physical and Spectroscopy) ECTS Method of grading Only after succ. compl. of module(s) 8 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at th (usually 70% of exercises to be successfully of lar attendance of exercises (usually a maximu sed absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathema	essful completion of exerci- he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
Spektroskopie" (Principles of Quantum Mechanics and Spectroscopy) Spektroskopie" (Principles of Quantum Mechanics and Spectroscopy) ECTS Method of grading Only after succ. compl. of module(s) 8 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at the (usually 70% of exercises to be successfully of lar attendance of exercises (usually a maximu sed absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical the basis of the following models.	essful completion of exerci- he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
8 numerical grade Duration Module level Other prerequisites 1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at the (usually 70% of exercises to be successfully of lar attendance of exercises (usually a maximul sed absence). Contents Image: Content set of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical	he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
Duration Module level Other prerequisites 1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at th (usually 70% of exercises to be successfully of lar attendance of exercises (usually a maximu sed absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical	he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
1 semester undergraduate Admission prerequisite to assessment: succe ses in the respective classes as specified at the (usually 70% of exercises to be successfully or lar attendance of exercises (usually a maximu sed absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical context and respective data and respective data.	he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
ses in the respective classes as specified at the ses in the respective classes as specified at the ses in the respective classes as specified at the set is set is set in the respective classes to be successfully of the lar attendance of exercises to be successfully of the set is set absence). Contents This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathematical classes.	he beginning of the course completed) as well as regu- um of 2 incidents of unexcu- cs. It analyses molecules on or. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathema	r. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
This module introduces students to the fundamental principles of quantum mechanic the basis of the following models: particle in a box, harmonic oscillator and rigid roto the module focuses on vibrational spectroscopy, angular momentum quantisation, m UV-VIS spectroscopy. In addition, the module discusses linear operators, eigenvalue tation, differential equations, Fourier transform and orthogonal functions as mathema	r. As regards spectroscopy, nicrowave spectroscopy and problems, matrix represen-
Intended learning outcomes	
Students are able to explain key models of quantum mechanics and to apply them to to describe different spectroscopic methods. In addition, students know how to apply quantum mechanics.	
Courses (type, number of weekly contact hours, language — if other than German)	
$V + \ddot{U} + V + \ddot{U}$ (no information on SWS (weekly contact hours) and course language ava	ailable)
Method of assessment (type, scope, language — if other than German, examination or ster, information on whether module can be chosen to earn a bonus)	offered — if not every seme-
a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written e nutes each; 3 written examinations: 60 minutes each) or b) oral examination of one c minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)	
Allocation of places	
Additional information	
Workload	
Teaching cycle	
Referred to in LPO I (examination regulations for teaching-degree programmes)	
Module appears in	
Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2013) Bachelor' degree (1 major) Biochemistry (2009) Bachelor' degree (1 major) Chemistry (2010)	
Bachelor's with 1 major Biochemistry (2013) JMU Würzburg • generated 26-Aug-2024 • exam. re data record Bachelor (180 ECTS) Biochemie - 2013	

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Chemistry (2009) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

Modul	e title				Abbreviation
Practic	al cour	se of Physical Chemistry	for Biochemistry Ma	ijors	08-PC2P-132-m01
Modul	e coord	linator		Module offered by	<u> </u>
lecturer of lecture "Thermodynamik, Kinetik, Elektroche- mie"			netik, Elektroche-	Institute of Physica	l and Theoretical Chemistry
ECTS	5 Method of grading Only after succ. c		Only after succ. con	npl. of module(s)	
6	(not) successfully completed 08-PC1 (module c		08-PC1 (module con	nponent o8-PC1-1 on	ly)
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conter	nts				
lated le dition t their k	ecture(to thos nowled	s). After a safety briefing, e experiments, students ge.	the students autono	mously conduct exp	hey have gained through the re- eriments in the laboratory. In ad- te lab reports to demonstrate
Intend	ed lear	ning outcomes			
		able to connect the theor practical laboratory expe			tics, electrochemistry and spec- ulting measurements.
Course	e s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
P (no ii	nforma	tion on SWS (weekly cont	act hours) and cours	e language available	2)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
examir	nation t	e-experiment exams), as alks (approx. 15 minutes offered: once a year, winte	each), logs (approx.		testate (post-experiment exams),
Allocat		· ·			
Additio	onal inf	ormation			
Worklo	nad		-		
Teachi	ng cucl	0			
reacili	ing cycl	e			
Kererre	a to in	LPOI (examination regu	liations for teaching-	uegree programmes)	
Modul					
Bachel	or' deg	ree (1 major) Biochemisti	ry (2013)		

Modul					Abbreviation
Physic	al Cher	nistry 2 for Biochemistry	y Majors		08-PC2V-BC-132-m01
Module coordinator				Module offered by	
lecturer of lecture "Thermodynamik, Kinetik, Elektroche- mie"			inetik, Elektroche-	Institute of Physica	l and Theoretical Chemistry
ECTS	5 Method of grading Only after succ. co		Only after succ. con	npl. of module(s)	
9	nume	rical grade			
Duratio	-	Module level	Other prerequisites		
1 semester undergraduate		ses in the respective (usually 70% of exe	e classes as specifie rcises to be success	successful completion of exerci- d at the beginning of the course fully completed) as well as regu- aximum of 2 incidents of unexcu-	
Conter	nts				
chemio	cal equi		ses/solutions/mixed	phases and electroo	s on the laws of thermodynamics, chemistry. In addition to thermo-
Intend	ed lear	ning outcomes			
solutio	ons, gas				ribe thermodynamic aspects of le to interpret the kinetic aspects
Course	es (type	, number of weekly cont	act hours, language –	- if other than Germa	in)
V + Ü (no infoi	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, laion on whether module of			tion offered — if not every seme-
nutes e	each; 3		o minutes each) or b)	oral examination of	tten examinations: 60 or 90 mi- one candidate each (approx. 20
Allocat	tion of p	olaces			
Additio	onal inf	ormation			
Worklo	oad				
Teachi	ing cycl	e			
Referre	ed to in	LPOI (examination reg	ulations for teaching-o	degree programmes)	
§ 62 (1) 1. Chemie "Allgemeine und Anorganische Chemie"; "Physikalische und Analytische Chemie"					
Module appears in					
_			organische Chemie";	"Physikalische und	Analytische Chemie"

Physica	e title				Abbreviation	
	al and 1	Theoretical Chemistry 3	: Symmetry and Quant	tum Chemistry	08-PC3-092-m01	
Module	a coord	inator		Module offered by		
Module coordinator					l an d The anotice I Ch	
		ture "Quantenchemie"			l and Theoretical Ch	iemistry
ECTS	1	od of grading	Only after succ. com	ipl. of module(s)		
6		rical grade				
Duratio		Module level	Other prerequisites	• •	<u> </u>	
1 seme	ester	undergraduate	Admission prerequis			
			ses in the respective	•	• •	
			(usually 70% of exer			-
			lar attendance of ex	ercises (usually a m	aximum of 2 inciden	its of unexcu-
			sed absence).			
Conten	its					
This mo	odule d	iscusses the fundamen	tal principles of quant	um chemistry and sy	/mmetry in chemistr	ĩу.
Intende	ed lear	ning outcomes				
Studen	nts have	e become familiar with t	he fundamental princi	ples of quantum che	emistry and symmetr	ry in che-
		able to apply the know	•			
Course	es (type	, number of weekly cont	act hours, language —	· if other than Germa	ın)	
V + Ü +	• V + Ü (no information on SWS	(weekly contact hours)) and course langua	ge available)	
		sessment (type, scope,			-	t everv seme-
		on on whether module				cvery serie
		n examinations (1 writte			minations: 60 or 90	minutes
		n examinations: 60 min				
-		examination in groups (• • •	
Allocat	tion of p	places				
	-					
Additio						
	onal inf					
	onal inf	ormation				
 Worklo						
 Worklo 	oad	ormation				
	oad	ormation				
 Worklo 	oad	ormation				
 Worklo Teachin	oad ng cycl	ormation	ulations for teaching-c	legree programmes)		
 Worklo Teachin	oad ng cycl	ormation e	ulations for teaching-c	legree programmes)		
 Worklo Teachin Referre	ng cycl ed to in	ormation e LPOI (examination reg	ulations for teaching-c	legree programmes)		
 Worklo Teachin Referre Module	oad ng cycl ed to in e appea	ormation e LPOI (examination reg		legree programmes)		
 Worklo Teachin Referre Bachele	ng cycl ed to in e appea or' deg	ormation e LPOI (examination reg urs in ree (1 major) Biochemis	try (2013)	legree programmes)		
 Worklo Teachin Referre Bachele Bachele	ng cycl ed to in e appea or' deg or' deg	ormation e LPOI (examination reg urs in ree (1 major) Biochemis ree (1 major) Chemistry	try (2013) (2010)	legree programmes)		
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First state examination for the teaching degree Gymnasium Chemistry (2009) First state examination for the teaching degree Mittelschule Chemistry (2013)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 72 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Module title					Abbreviation	
Consoli	idation	Seminar			08-VS-BC-132-m01	
Module coordinator				Module offered by		
chairperson of examination committee mistry)			Biochemie (Bioche-	Chair of Biochemist	ry	
ECTS		d of grading	Only after succ. compl. of module(s)			
3 numerical grade						
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
Studen with the		•	findings of their prac	tical research projec	ts and critically discuss them	
Intende	ed learn	ing outcomes				
					r choice of experimental me- gs in a scientific discussion.	
Course	s (type,	number of weekly conta	ct hours, language —	if other than Germa	n)	
S (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available)	
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		on (approx. 30 minutes) ssessment: German or Er		/ the candidate		
Allocat	ion of p	laces				
Additio	nal info	ormation				
Worklo	ad					
Teaching cycle						
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)		
Module	e appea	rs in				
Bachelo	or' degr	ee (1 major) Biochemistr	y (2013)			

Module	title				Abbreviation
Scienti	fic lect	uring 1			08-WIRE1-132-m01
Module coordinator				Module offered by	
chairperson of examination committee Biocher mistry)			Biochemie (Bioche-	Chair of Biochemist	try
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		ives students the opport I Pharmacy and learn how			ecture offered by the Faculty of priate manner.
Intende	ed lear	ning outcomes			
Studen needs.	ts are a	able to teach students in	earlier stages of thei	r degrees and tailor t	heir teaching to those students'
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
Ü (no ir	format	tion on SWS (weekly cont	tact hours) and cours	e language available	2)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
• •		materials for demonstra ssessment: German or E		approx. 120 hours to	otal)
Allocati	-				
Additio	nal inf	ormation			
Worklo	ad				
Teachir	ıg cycl	e			
	-				
Referre	d to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	appea	irs in			
Bachelo	or' deg	ree (1 major) Biochemistr	y (2013)		

Module	title				Abbreviation
Scienti	fic lect	uring 2			08-WIRE2-132-m01
Module coordinator				Module offered by	
chairperson of examination committee Biochemie (Bioche- mistry)			Biochemie (Bioche-	Chair of Biochemist	try
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5		successfully completed			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
		ives students the opport I Pharmacy and learn how			ecture offered by the Faculty of priate manner.
Intende	ed leari	ning outcomes			
Studen needs.	ts are a	able to teach students in	earlier stages of thei	r degrees and tailor t	their teaching to those students'
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
Ü (no ir	format	tion on SWS (weekly cont	tact hours) and cours	e language available	2)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
		materials for demonstra ssessment: German or E		approx. 120 hours to	otal)
Allocati					
Additio	nal inf	ormation			
Worklo	ad				
Teachir	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Module	appea	irs in			
Bachelo	or' deg	ree (1 major) Biochemistr	y (2013)		

Module coor Dean of Stuc ECTS Meti	for students in Chemist dinator ies Mathematik (Mathem tod of grading erical grade		Module offered by	10-M-MCB-132-m01
Dean of Stuc ECTS Metl 5 num Duration	ies Mathematik (Mathem od of grading		· · · ·	<u> </u>
ECTSMetl5numDuration	od of grading		· · · ·	
5 num Duration		Only after succ. con	Institute of Mathen	natics
Duration	erical grade		npl. of module(s)	
1 semester	Module level	Other prerequisites		
	undergraduate	Admission prerequi ses (approx. 25 to 3		successful completion of exerci-
Contents				
	n several variables, pow			, curve sketching, differentiation systems of linear equations, basic
Intended lea	rning outcomes			
	s able to recognise and p nathematical methods to			nces as mathematical problems,
Courses (typ	e, number of weekly cont	act hours, language –	- if other than Germa	an)
V + Ü (no infe	ormation on SWS (weekly	contact hours) and co	ourse language avai	lable)
	sessment (type, scope, tion on whether module			ation offered — if not every seme-
written exam	ination (approx. 90 to 12	o minutes)		
Allocation of	places			
Additional ir	formation			
Workload				
Teaching cyo	le			
		_		
Referred to i	n LPO I (examination reg	ulations for teaching-	degree programmes)	
Module appe	ars in			
	gree (1 major) Biochemis gree (1 major) Biology (20			

Module	e title				Abbreviation	
Introdu	iction to Physics f	or Students o	of Non-physics-rel	ated Minor Subjects	11-EFNF-072-m01	
	e coordinator			Module offered b	•	
_	ing Director of the		1	Faculty of Physics	and Astronomy	
ECTS	Method of gradi	ng	Only after succ.	compl. of module(s)		
7	numerical grade					
Duratio	on Module le	vel	Other prerequis	ites		
2 seme	ester undergrad	luate				
Conten	ts					
Mechai	nics, vibration the	orv. thermody	vnamics, optics, s	cience of electricity. A	tomic and Nuclear Physics.	
	ed learning outco		<u>/</u> /	, , , , , , , , , , , , , , , , , , ,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
			 principles of Physic			
					`	
				ge — if other than Gerr		
		-		d course language ava		
			anguage — if othe can be chosen to e		nation offered — if not every s	seme-
	examination (app					
	ion of places					
		noral kov ski		s. Places will be alloca	ated by lot	
		eneral key ski				
Additio	onal information					
 Worklo	ad					
 Worklo	ad					
	ad ng cycle					
 Teachiı 	ng cycle	mination rog	ulations for toachi	ng dogroo programmo	c)	
 Teachiı 	ng cycle	mination reg	ulations for teachi	ng-degree programme	s)	
 Teachin Referre 	ng cycle ed to in LPO I (exa	mination reg	ulations for teachi	ng-degree programme	s)	
 Teachin Referre Module	ng cycle ed to in LPO I (exa e appears in			ng-degree programme	s)	
 Teachin Referre Bachelo	ng cycle ed to in LPO I (exa e appears in or' degree (1 majo	r) Biochemist	try (2011)	ng-degree programme	s)	
 Teachin Referre Module Bachele Bachele	ng cycle ed to in LPO I (exa e appears in or' degree (1 majo or' degree (1 majo	r) Biochemist r) Biochemist	try (2011) try (2013)	ng-degree programme	s)	
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Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Biomedicine (2009) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor' degree (1 major) Computational Mathematics (2014) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

	e title				Abbreviation	
Practic	cal Course Physi	cs for Students	s of Non-physics-rela	ted Minor Subjects	11-PFNF-072-m01	
Madul	a accuding to a			Madula offered by		
Module coordinator Managing Director of the Institute of Applied Physics				Module offered by		
-			<u> </u>	Faculty of Physics a	and Astronomy	
ECTS	Method of gra	-	Only after succ. co	mpl. of module(s)		
3	1 · · · · · · · · · · · · · · · · · · ·	ully completed				
Durati			Other prerequisite	S		
1 seme	ester undergr	aduate				
Conter	nts					
		heory, thermod	ynamics, optics, X-ra	iys, nuclear magnetic	resonance, Atomic a	nd Nuclear
Physic	:S .					
Intend	led learning out	comes				
The stu	udents have kno	wledge of the p	principles of Physics.			
Course	es (type, number	r of weekly cont	act hours, language	— if other than Germa	an)	
				se language available	-	
				han German, examina		AVARY COMO
			can be chosen to ear		llion onereu — ii not	every serile-
•				ungraded written exa	mination (approx. or	n minutos)
		minutes) dum		ungraded whileh exa		J IIIIIutes)
	tion of places					
			ills (ASQ): 10 places.	Places will be allocat	ed by lot.	
Additi	onal informatior	1				
Worklo	oad					
Teachi	ing cycle					
Doforr	ad to in IBOL (o	vamination roa	ulations for toaching	-degree programmes)		
Kelein		xammation reg		-degree programmes		
	•					
	e appears in					
	lor' degree (1 ma	-				
Bache	lor' degree (1 ma	ajor) Biochemis	try (2013)			
		-	. ()			
Bache	-	ajor) Biochemis				
Bache Bache	lor' degree (1 ma	ajor) Biochemis ajor) Biology (20	011)			
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Bachelor' degree (1 major) Biomedicine (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

Bachelor's with 1 major Biochemistry (2013)	JMU Würzburg • generated 26-Aug-2024 • exam. reg.	page 80 / 84
	data record Bachelor (180 ECTS) Biochemie - 2013	

Module					Abbreviation
Informa	ation Li	iteracy for Students of th	e Natural Sciences (B	asic Level)	41-IK-NW1-101-m01
Module coordinator				Module offered by	
head of University Library				University Library	
			Only after succ. com		
2					
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Contents Information literacy in an academic context: - Search strategies and tools Using the library's electronic resources Resources for natural sciences: databases and journals Online searches and search engines Overview of additional resources (eLearning etc.) Reference management. Some sections of the module will focus on particular disciplines (wherever possible, on disciplines in the natural sciences). Intended learning outcomes Students know what information is needed for what purpose. They are able to locate information that is relevant within their discipline and beyond in a variety of resources and to evaluate this information. They recognise the difference in quality between information they have retrieved from specific, restricted access resources (databases) and information they have found on the free web. Students are able to manage and process the information					ocate information that is relevant information. They recognise the ricted access resources (databa- nage and process the information e module aims to equip students
		needed to find informati			ppics of their Bachelor's theses.
		tion on SWS (weekly conta			
			-		
		ion on whether module ca			ition offered — if not every seme-
10 minu sentatio prox. 5	utes or on with minute	approx. 5 minutes and a nout slides (approx. 20 to	pprox. 1 page) or c) co 30 minutes) or e) pre ses (approx. 5 exerci	ompleting exercises paring and delivering	esentation with slides (approx. (approx. 10 exercises) or d) pre- ng a presentation with slides (ap- on without slides (approx. 10 to
Allocat	ion of _l	olaces			
Number of places: 5-50. There is a restricted number of places. If necessary, places will be allocated as follows: Students of the degree programmes of the respective subject-specific focuses will be given preferential conside- ration. The remaining places, if and when any become available, will be allocated to students of the other natura sciences degree programmes. In each of the above-mentioned groups, 30% of places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. The remaining 70% of places will each be allocated by lot.					
Additio	nal inf	ormation			
Worklo	ad				
Teachir	ng cycl	e			
	-3 -9 -0	-			
Poforro	d to in	LPO I (examination regu	lations for toaching a	lagree programmac)	
Referre			tations for teaching-t	iegree programmes)	

Bachelor's with 1 major Biochemistry (2013)

Module appears in

Bachelor' degree (1 major) Biochemistry (2011) Bachelor' degree (1 major) Biochemistry (2013) Bachelor' degree (1 major) Biochemistry (2009) Master's degree (1 major) Nanostructure Technology (2011) Master's degree (1 major) Nanostructure Technology (2010) Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010) No final examination Special study offering (2010)

Module title				Abbreviation
	iteracy for Students of th	e Natural Sciences (A	Advanced Level)	41-IK-NW2-101-m01
Module coord	inator		Module offered by	·
head of Unive	rsity Library		University Library	
	od of grading	Only after succ. com	pl. of module(s)	
2 (not) :	successfully completed			
Duration	Module level	Other prerequisites		
1 semester	undergraduate	Knowledge and skill desirable.	s equivalent to thos	se achieved in the basic module
Contents				
ject-specific d - Publishing a - Subject-spec - New web-bas - Searching fo - Information s - Copyright an - Electronic pu	atabases. nd information practices cific information retrieval sed information and com r subject-specific facts (e search skills for the work d citations. ublishing. Some sessions	in the natural science tools, e. g. classificat munication technolog e. g. substances and p place.	es. tions and thesauri. gies. ohysical data).	e module, e. g. searching sub- rever possible, on disciplines in
the natural sc	ning outcomes			
tools to locate formation retr ped an unders academic con	e subject-specific facts in ieval tools as well as to u standing of the legal fram text and are able to use i	a variety of resources use new web-based te nework surrounding p nformation responsib	s. Students are able echnologies to share ublications, informa bly.	hey are able to use electronic to work with subject-specific in- e information. They have develo- ation, and communication in an
	, number of weekly conta			
	tion on SWS (weekly con			
	sessment (type, scope, la ion on whether module c			ation offered — if not every seme-
10 minutes or sentation with prox. 5 minute	approx. 5 minutes and a nout slides (approx. 20 to	pprox. 1 page) or c) co 30 minutes) or e) pro ises (approx. 5 exerci	ompleting exercises eparing and deliveri	esentation with slides (approx. 6 (approx. 10 exercises) or d) pre- ng a presentation with slides (ap- on without slides (approx. 10 to
Allocation of	places			
Number of places: 10 to 50. There is a restricted number of places. If necessary, places will be allocated as fol- lows: Students of the degree programmes of the respective subject-specific focuses will be given preferenti- al consideration. The remaining places, if and when any become available, will be allocated to students of the other natural sciences degree programmes. In each of the above-mentioned groups, 30% of places will be allo- cated according to the number of subject semesters. Among applicants with the same number of subject seme- sters, places will be allocated by lot. The remaining 70% of places will each be allocated by lot.				
Additional inf	ormation			
Workload				

Teaching cycle

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

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Module appears in

Bachelor' degree (1 major) Biochemistry (2011)

Bachelor' degree (1 major) Biochemistry (2013)

Bachelor' degree (1 major) Biochemistry (2009)

Master's degree (1 major) Nanostructure Technology (2011)

Master's degree (1 major) Nanostructure Technology (2010)

Master's degree (1 major) FOKUS Physics - Nanostructuring Technology (2010)

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