

Annex SFB

Studienfachbeschreibung (subject description, SFB) for the subject Biochemistry as a Bachelor's with 1 major with the degree "Bachelor of Science" (180 ECTS credits)

Responsible: Faculty of Medicine

Responsible: Faculty of Chemistry and Pharmacy

Examination regulations version: 2015

Examination regulations version: 2015

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

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB: ditable for bonus.

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre-

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

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

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

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

ASP02015

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

22-Jul-2015 (2015-42)

20-Apr-2017 (2017-28)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration		Module level						
	Courses		To be spe	ecified in the form X	(y) with course type ?	(abbreviated as specified abo	ve and number of we	ekly contact hours y			
	Method of as	ssessme	ent								
	Only after su completion o		l if applica	if applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		ocati- if applica	if applicable							
	Additional information		on if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Compulsory Course	es (115 E	CTS cre	dits)								
03-5S2ST-BC-152-	Structu	ıral Bio	logy								
mo1	ECTS	10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V (2)	+ Ü (6)	•		•			
	Method of assessment			written examination (approx. 60 minutes)							
	_				Language of assessment: German and/or English						
07-1A1ZO-BC-152-					hemistry Students						
mo1	ECTS	5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course		,	V (5)							
						prox. 180 minutes)					
08-AC1-152-m01			norganic (1						
		8	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course				V (4) + V (2) a) written examination (approx. 90 to 180 minutes) or						
				b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English							
	Additio	nal Info	ormation	according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter a) of annex 1 to the APOLmCh and No. 1 of annex 2 to the APOLmCh							
	Referre	d to in	LPO I	§ 42 § 62	l Nr. 1 and § 22 II N l Nr. 1	lr. 1 h)					
08-ACP1-BC-152-	Inorgai	nic Che	mistry 1 (l	ab) fo	r Biochemistry stu	dents		'			
mo1	ECTS	6	Duratio	n	1 semester	Method of grading	(not) successfully cor	mpleted Modul level	undergraduate		
	Course	S		P (6)	+ S (2)						
	Method	d of ass	essment	[a) assessment [a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes)] as well as Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical assignments (2 to 4 random examinations) Language of assessment: German and/or English Assessment offered: Once a year, winter semester							

08-0C1-152-m01	Organic Ch	nemistry 1										
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (3) -	+ Ü (1)								
	Method of	assessment	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or									
			d) log e) pre	c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English								
			accor anne	according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter b) of annex 1 to the APOLmCh and No. 2 of annex 2 to the APOLmCh								
	Referred to	in LPO I	§ 62 l	Nr. 2								
08-0C2-152-m01	Organic Ch	nemistry 2 an	d analy	tical methods in o	organic chemistry							
	ECTS 9	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (3) -	+ Ü (1) + V (2)								
	Method of	assessment	b) ora c) ora d) log e) pre	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English								
08-0CP1-BC-152-	Organic chemistry - laboratory course for Biochemistry students											
mo1	ECTS 7	Duration	n	1 semester	Method of grading (not) successfully com	pleted Modul level	undergraduate					
	Courses	'	P (12)									
	Method of	assessment	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English									
	Modules s completed	uccessfully	08-00	C1 and 08-ACP1-BC								
08-PC-MBS-152-	Molecular	structure and	spect	roscopy								
mo1	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (2) ·	+ Ü (2)								
			a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus									
	Referred to	In LPO I	§ 62 l	§ 62 Nr. 1								

08-PC-TKE-152-	Thermo	odynam	ics, Kineti	ics, Ele	ectrochemistry	,		,			
mo1	ECTS	9	Duration)	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	es.		V (4) +	- Ü (2)						
	Method	d of ass		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus							
		ed to in I		§ 62 l		,					
08-PCP-BC-152-		_			emistry for Bioche						
mo1	ECTS	6	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	es .		P (4)							
	Method of assessment			and as Langu	ortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) anguage of assessment: German and/or English ssessment offered: Once a year, winter semester						
	Modules successfully completed			o8-PC	-MBS or o8-PC-TKE						
08-BAN-152-m01	Bioanalytics										
	ECTS	9	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	es.		V (1) +	$V(1) + \ddot{U}(1) + P(5)$						
	Method	d of ass		b) log c) oral d) ora e) pre f) prac maxin	(10 to 20 pages) of lexamination of or lexamination in grows sentation (20 to 30 ctical examination num of 4 hours)	ne candidate each (2 roups of up to 3 cand o minutes) or	o to 30 minutes) or idates (approx. 15 to 20 minutes 2 hours; time to complete will va	•) or subject area but will not exceed a		
08-BC1-152-m01		mistry 1									
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	es .		V (2) +	+ Ü (1)						
	Method	d of ass		written examination (approx. 60 to 90 minutes)							
	Additional Information			according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. II 2nd letter e) and No. II 1st letter c) of annex 1 to the APOLmCh and No. 3 of annex 3 to the APOLmCh							
	Referred to in LPO I			§ 42 Nr. 2 § 62 Nr. 2							

08-BC2-152-m01	Biochem	Biochemistry 2												
	ECTS 5	Duratio	n 1 semester	Method of grading numerical grade	Modul level	undergraduate								
	Courses		V (2) + Ü (1)	·										
	Method o	of assessment	written examination (a	approx. 60 to 90 minutes)										
	Addition	al Information	bensmittelchemikerin	ursuant to Section 2 Subsection 2 Sentence 2 Verordnung über die Ausbildung und Prüfung der Staatlich geprüften Le- ensmittelchemikerinnen und Lebensmittelchemiker (Regulation on the training and examination of state-certified food che- ists, APOLmCh) in conjunction with No. II 2. Letter e) and No. II 1. Letter c) of Annex 1 of APOLmCh and No. 3 of Annex 3 of POLmCh.										
08-BCP-152-m01	Practical course of Biochemistry													
	ECTS 5	Duratio	n 1 semester	Method of grading (not) successfully con	npleted Modul level	undergraduate								
	Courses		P (6)	·	*									
	Method	of assessment	Log (approx. 30 pages Assessment offered: C	og (approx. 30 pages) ssessment offered: Once a year, summer semester										
	Modules complete	successfully ed	08-BC1											
	Participa cation of	nts and allo- places	Students of the Bachelor's degree programme Biochemie (Biochemistry, 180 ECTS credits): no restrictions with regard to available places. Students of the Bachelor's degree programme Chemie (Chemistry, 180 ECTS credits): no more than 6 places; 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; a waiting list will be maintained and places re-allocated by lot as they become available.											
08-BC-MOL-152-	Molecula	ar Biology												
mo1	ECTS 6	5 Duratio	n 1 semester	Method of grading numerical grade	Modul level	undergraduate								
	Courses		V (2) + Ü (1) + V (1)											
			b) log (10 to 20 pages) c) oral examination of d) oral examination in e) presentation (20 to f) practical examination maximum of 4 hours) Language of assessme	one candidate each (20 to 30 minutes) or groups of up to 3 candidates (approx. 15 to 20 30 minutes) or on (on average approx. 2 hours; time to comple ent: German and/or English	•									
10-M-MCB-152-	Mathema	atics for studer	its in Chemistry and Bio	ology										
mo1	ECTS 5	Duratio	n 1 semester	Method of grading numerical grade	Modul level	undergraduate								
	Courses		V (3) + Ü (2)											
	Method o	of assessment	written examination (approx. 90 to 120 minutes) and written exercises (approx. 25)											
	Addition	al Information	Pursuant to Section 2 Subsection 2 Sentence 2 Verordnung über die Ausbildung und Prüfung der Staatlich geprüften Lebensmittelchemikerinnen und Lebensmittelchemiker (Regulation on the training and examination of state-certified food chemists, APOLmCh) in conjunction with No. I 2. Letter f) of Annex 1 of APOLmCh.											

11-EFNF-152-m01	Introduction to Physics for Students of other Disciplines												
	ECTS	7	Duration		2 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (4)	+ V (3)	, ,							
	Method	d of ass	essment	writte	written examination (60 to 120 minutes)								
	Additional Information				according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter d) and No. I 1st letter d) of annex 1 to the APOLmCh and No. 4 of annex 2 to the APOLmCh								
11-PFNF-152-m01	Laboratory Course Physics for Students of other Disciplines												
	ECTS	3	Duration	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course	S	·	P (4)	-			·					
	Method	d of ass	essment	tes). Each	practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (approx. 90 minus). ch experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each repeated once.								
	Participants and allo- cation of places			Only	Only as part of pool of general transferable skills (ASQ): 10 places (lottery)								
	Additional Information			according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter d) and No. I 1st letter d) of annex 1 to the APOLmCh and No. 4 of annex 2 to the APOLmCh									
Compulsory Elective	/es (30 E	CTS cre	edits)										
03-4S1IMM-	Immun	ology f	or biocher	nistry	students								
BC-152-mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	·	V (1) -	+ Ü (1) + P (3)								
	Method	d of ass	essment	written examination (approx. 45 minutes) Assessment offered: Once a year, summer semester									
	Particip cation			Selection number averal lot. Quantitative number 1 averal numb	tion process Bioche per of available place ge grade of success uota 2 (one third of	es, places will be allo fully completed mod places): number of si	Bachelor's (180 ECTS credits): S cated according to the following ules; among applicants with the ubject semesters of the respect	g quotas: Quota e same average ive applicant; a	per of applications exceed the a 1 (two thirds of places): current grade, places will be allocated by mong applicants with the same d and places re-allocated as they				

03-4S1VIR-BC-152-	Virolog	y for bi	ochemistr	y students								
mo1	ECTS	5	Duration	1 semest	er	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (1) + S (1) + P	(3)	·						
	Method	d of asso		a) written examination (approx. 45 to 90 minutes) or								
				b) log (10 to 20 pages) or								
				c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or								
							illilutes per calididate)	OI .				
				e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a								
				maximum of 4 h								
					anguage of assessment: German and/or English							
	Da whi aiw			Assessment offered: Once a year, summer semester								
		oants ar		Biochemie (Biochemistry), Bachelor's: 18 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): Should the number of applications exceed the								
	cation of places			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.								
o3-4S1HUG-	Human genetics for biochemistry students											
BC-152-mo1	ECTS	5	Duration	ı 1 semest	er	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V (1) + Ü (1.5) +	S (0.5)							
	Method	d of ass	essment	written examination (approx. 30 minutes)								
	Particip	ants ar	nd allo-	Biochemie (Bio	hemistry	y), Bachelor's: 5 places.						
	cation	of place				emie (Biochemistry), Bachelor's (180 ECTS cre						
				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.								

03-PBC-152-m01	Pathobiochemistry												
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Course	·S		V (1) +	+ Ü (1) + P (3)								
	Particiç	oants ar	essment nd allo-	a) written examination (approx. 45 to 90 minutes) or b) log (10 to 20 pages) or c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours) Language of assessment: German and/or English Assessment offered: Once a year, summer semester Biochemie (Biochemistry), Bachelor's: 6 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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									
as DC MOLD 470	Malagu	ulaw Bial		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. **Tatory course**									
08-BC-MOLP-152-		10 10	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			P (5)	1 Semester	Method of glading Indinencal glade	Modulilevel	undergraduate					
	Method of assessment			a) written examination (approx. 45 to 90 minutes) or b) log (10 to 20 pages) or c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed maximum of 4 hours) Language of assessment: German and/or English Assessment offered: Once a year, winter semester									
		oants ar of place		Biochemie (Biochemistry), Bachelor's: 24 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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. Chemie (Chemistry), Master's: 6 places. Selection process Chemie (Chemistry), Bachelor's (120 ECTS credits): 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. A waiting list will be maintained and places re-allocated by lot as they become available.									

03-ZBP-152-m01	Cell biology											
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S	•	P (4) ·	+ S (2)	•	-					
	Method	d of ass	essment	written examination (approx. 60 minutes)								
				Language of assessment: German and/or English								
	cation	oants ar of place	es.	Selection number averal lot. Quantity number of the contraction of the	Biochemie (Biochemistry), Bachelor's: 12 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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 ot. 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.							
07-5S2Mi-	Specifi	c Micro	biology 2	for St	udents in Biochemi	stry						
Z2-BC-152-m01	ECTS	10	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	!S		V (1) -	+ S (1) + Ü (3)							
	Partici	nante ar	nd allo-	b) log (10 to 20 pages) or c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours)								
	Participants and allo- cation of places			Selec numb avera lot. Q numb	Biochemie (Biochemistry), Bachelor's: 6 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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): curre average grade of successfully completed modules; among applicants with the same average grade, places will be allocated ot. 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 the become available.							
08-0C4-152-m01	Organi	c Chem	istry 4									
	ECTS	5	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	:S		V (2) + Ü (2)								
	Method	d of ass	essment	b) ora c) ora d) log e) pre	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English							
	Referre	d to in I	-P0 I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 62 Nr. 2								

08-0CP2-152-m01	Organic	Chemi	istry - adv	anced	laboratory course fo	or students of chemi	stry					
	ECTS	5	Duration	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	S	•	P (11))(11)							
				and a	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English							
	Modules successfully completed			08-00	08-OC2 and (08-OCP1 or OCP1-BC)							
07-4BFMZ4-	Bioinfo	rmatics	for adva	nced S	tudents in Biochemi	stry						
BC-152-m01	ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5		V (1) +	- Ü (4)	•						
	Method of assessment				Log (10 to 20 pages) Language of assessment: German and/or English							
	Particip cation o			Selection number avera lot. Quantity	Biochemie (Biochemistry), Bachelor's: 4 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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): curre exerge grade of successfully completed modules; among applicants with the same average grade, places will be allocated of the respective applicant; among applicants with the same average grade, places with the same aumber of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated as the secome available.							
03-98-PGN-152-	Introdu	ction to	Neurobi	ology								
mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses				V (2) + S (3) Course type: S might be offered in Ü format							
	Method of assessment			written examination (90 minutes) and successful completion of seminar/exercise								

08-BC-AMP-152-	Curren	t Metho	ds of Pro	ein Ch	romatography		1					
mo1	ECTS	5	Duratio	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S	<u> </u>	P (5)		·						
	Method	d of ass	essment	b) log c) ora	a) written examination (approx. 45 to 90 minutes) or b) log (10 to 20 pages) or c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours) Language of assessment: German and/or English							
				e) pre f) pra maxii								
				Asses	ssessment offered: Once a year, winter semester							
	Participants and allo- cation of places			Selection number averal lot. Quantitative number 1 averal numb	Biochemie (Biochemistry), Bachelor's: 24 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): 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.							
08-AVP5-BC-152-	Advand	ed lab	(abridged									
mo1	ECTS	5	Duratio	<u> </u>	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		P (8)	-		•					
	Method	d of ass	essment		approx. 20 pages) uage of assessme) ent: German and/or English						
	Additio	nal Info	rmation	Addit	ional information	on module duration: approx. 3 weeks.						
08-AVP10-BC-152-	Advand	ed lab	'				,					
mo1	ECTS	10	Duratio	<u> </u>	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		P (16)	P (16)							
	Method	Method of assessment			Log (approx. 30 pages) Language of assessment: German and/or English							
	Additio	nal Info	rmation	Additional information on module duration: approx. 6 weeks.								

03-VIR2-BC-171-	Virology 2 for Biochemistry Students												
mo1	ECTS 5	5 Dı	uration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		1	V (2) +	· P (3)	·	·						
	Method	of assessi		a) written examination (approx. 45 to 90 minutes) or									
				b) log (10 to 20 pages) or c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to a candidates (approx 45 to 20 minutes per candidate) or									
			C										
				d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or									
	e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not examine to complete will vary according to subject area but will not examine to complete will vary according to subject area but will not examine to complete will vary according to subject area.												
				maximum of 4 hours)									
			L	Langu	age of assessme	nt: German and/or Eng							
			F	Asses	sment offered: O	nce a year, winter sem	ester						
		ants and a	illo- E	3ioch(emie (Biochemis	try) Bachelor's: 255 pla	ices.						
	cation of												
08-BGV-171-m01		methods	in life-s	scienc	es								
	ECTS 5	5 Dı	uration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		\	V (2) +	· S (1)								
	Method	of assessr		a) written examination (approx. 45 to 90 minutes) or									
				b) log (10 to 20 pages) or									
				c) oral examination of one candidate each (20 to 30 minutes) or									
				d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or									
							oto will vany according to	subject area but will not exceed a					
					num of 4 hours)	ii (oii average approx.	z nours; time to compi	lete will vary according to	Subject area but will not exceed a				
						nt: German and/or Eng	glish						
						nce a year, winter sem							
	Participa	ants and a	illo- F	Bioch	emie (Biochemis	try) Bachelor's: 25 plac	ces.						
	cation of	f places				,							
Transferable Skills	(20 ECTS	credits)											
General Key Skills Students may sele			es offer	ed as	part of the pool	of general transferable	skills (ASQ) of JMU.						
Subject-specific Ke	y Skills (1	15 ECTS cr	redits)										
07-M-BST-152-m01	Mathema	atical Bio	logy an	d Bios	statistics								
,			uration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	<u>'</u>		V (2) +		1 0		1	, ,				
	Method	of assessr	ment v	writter	n examination (a	pprox. 60 minutes)							
	creditable for bonus												

41-IK-BM-152-m01	Informa	ation Lit	teracy (Ba	sic Lev	/el)						
	ECTS	2	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course	S		Ü (0.5)							
				presentation (approx. 15 minutes) with written elaboration (approx. 2 pages)							
			_	Additional information on module duration: usually block taught during semester break.							
	Referre			§ 99 Nr. 1 (2 ECTS credits)							
		phical	· · · · ·	es of sciences I							
mo1	ECTS	5	Duratio	,	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Course			V (2)							
	Method of assessment			written examination (45 minutes)							
	Participants and allo- cation of places			Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, 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. A waiting list will be maintained and places re-allocated by lot as they become available.							
07-3A3BI-152-m01	Bioinfo	rmatics	5								
	ECTS 2 Duration			1 semester	Method of grading	numerical grade	Modul level	undergraduate			
		Courses			V (1) + S (1)						
	Method of assessment written examination (approx. 20 minutes)										
03-TR-152-m01	Toxicology and legal studies										
	ECTS 3 Duratio		,	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			V (1) +							
				written examination (approx. 90 minutes)							
	Additional Information			according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. II 2nd letter g) and i) and No. II 1st letter d) of annex 1 to the APOLmCh and No. 5 and 6 of annex 3 to the APOLmCh							
	Referred to in LPO I			§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)							
03-FOR-BC-152-	Contem	porary	research	in biochemistry							
mo1	ECTS	2	Duratio		2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses			V (2)							
			essment	Wrap-	Wrap-up report (approx. 1 page)						
03-Phys-152-m01	Physio	logy									
	ECTS	3	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course			V (3)		,					
	Method of assessment written examination (approx. 60 minutes)										

08-EP-152-m01	Practic	al Cour	se - exter	nal							
	ECTS	10	Duratio	n	1 semester	Method of grading (not) successfully completed Modul level undergraduate					
	Course	S	·	P (o)	· (o)						
	Method of assessment			Log (approx. 30 pages) Language of assessment: German and/or English							
	other prerequisites				Please consult with course advisory service in advance.						
			ormation		Additional information on module duration: approx. 6 weeks.						
08-EPK-152-m01	Practic	al Cour	se - exteri	al (abridged)							
	ECTS	5	Duratio	1	1 semester	Method of grading (not) successfully completed Modul level undergraduate					
	Course	S		P (o)	•						
	Method of assessment				Log (approx. 20 pages) Language of assessment: German and/or English						
	other prerequisites			Pleas	e consult with cours	se advisory service in advance.					
	Additio	nal Info	ormation	Addit	Additional information on module duration: approx. 3 weeks.						
08-AP-152-m01	Practic	al Cour	se - abroa	d							
	ECTS	10	Duratio	า	1 semester	Method of grading (not) successfully completed Modul level undergraduate					
	Course	S		P (o)							
	Method of assessment			Log (approx. 30 pages) Language of assessment: German and/or English							
	other p	other prerequisites			Please consult with course advisory service in advance.						
	Additional Information			Additional information on module duration: approx. 6 weeks.							
08-APK-152-m01	Practic	al Cour	se - abroa	d (abridged)							
	ECTS	5	Duratio		1 semester	Method of grading (not) successfully completed Modul level undergraduate					
	Course			P (o)							
	Method	d of ass	essment	Log (approx. 20 pages) Language of assessment: German and/or English							
	other p	rerequi	sites	Please consult with course advisory service in advance.							
			ormation	Additional information on module duration: approx. 3 weeks.							
08-LP-152-m01		al Lab (Course								
	ECTS	10	Duratio		1 semester	Method of grading (not) successfully completed Modul level undergraduate					
	Course			P (16)							
	Method	d of ass	essment		approx. 30 pages) age of assessment:	: German and/or English					
	other p	rerequi	sites			se advisory service in advance.					
	Additio	nal Info	ormation	Addit	ional information on	n module duration: approx. 6 weeks.					

08-LPK-152-m01	Practical	Lab Course (ab	ridged	i)	1					
	ECTS 5	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses		P (8)							
	Method o	of assessment	Log (approx. 20 pages)							
			Language of assessment: German and/or English							
		requisites	Please consult with course advisory service in advance.							
		al Information	Additional information on module duration: approx. 3 weeks.							
08-WIRE1-152-m01		lecturing 1			,					
	ECTS 5	Duratio		1 semester	Method of grading (not) successfully completed		Modul level	undergraduate		
	Courses		T (o)	· ·						
	Method o	of assessment	Wrap-	Wrap-up report (approx. 2 pages)						
- O MIDE	C -! +! C -	1	Language of assessment: German and/or English							
08-WIRE2-152-m01				, , , , , , , , , , , , , , , , , , ,	AA (1 1 C 1'		100 111 1	1		
	ECTS 5	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses		T (o)							
	Method o	of assessment	Wrap-up report (approx. 2 pages) Language of assessment: German and/or English							
08-ΔFRC1-152-m01	Contemp	orany Posearch	ary Research in Biochemistry 1							
00-41001-152-11101	ECTS 3	-		2 semester	Method of grading	numorical grado	Modul level	undergraduate		
	Courses	Duration		<u> </u>	Method of grading	numerical grade	Modulitevel	undergraduate		
		of assessment	V (2) + S (1) presentation (approx. 10 minutes)							
	Method 0	n assessment	Language of assessment: German and/or English							
08-AFBC2-152-m01	Contemporary Research in Biochemistry 2									
	ECTS 3	Duratio	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (2) + S (1)							
	Method of assessment									
			Language of assessment: German and/or English							
08-AFBC3-152-m01	<u>-</u>	<u>·</u>								
	ECTS 3	Duratio		2 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (2) ·	+ S (1)						
	Method o	of assessment		presentation (approx. 10 minutes)						
					German and/or Engl	ısh				
08-BPS1-152-m01		ical Practical S								
	ECTS 1	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses		S (1)							
	Method o	of assessment		up report (approx. 1		:_L				
			Langu	lage of assessment:	German and/or Engl	ISN				

08-BPS2-152-m01	Biochemica	l Practical S	emina	12							
	ECTS 1	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	·	S (1)								
	Method of a	ssessment		Wrap-up report (approx. 1 page)							
					German and/or Engl	ish					
08-BPS3-152-m01	Biochemica										
	ECTS 1	Duratio		1 semester	Method of grading (not) successfully completed Modul level			undergraduate			
	Courses		S (1)								
	,		Wrap-up report (approx. 1 page) Language of assessment: German and/or English								
08-AWA-152-m01	Guidance in	scientific p	ractice	!							
	ECTS 5	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses		T (o)	T (o)							
	Method of a	ssessment	Wrap-up report (approx. 1 page) Language of assessment: German and/or English								
08-AC-ELO-152-	Elemental Organic Chemistry										
mo1	ECTS 5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		$V(2) + \ddot{U}(1)$								
			a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English								
	Referred to in LPO I		§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)								
08-ACP2-152-m01	Inorganic Cl	hemistry 2 (lab)								
	ECTS 5	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses		P (12)								
	Method of a	issessment	and a	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English							
	Modules successfully completed		(08-ACP1 or 08-ACP1-BC) and 08-AC1 and 08-AS1								

08-PC-SBL-152-	Symmetry, chemical bonding and light												
mo1	ECTS	9	Duration		2 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			$V(3) + \ddot{U}(2) + V(2) + \ddot{U}(2)$									
	Method of assessment			a) written examination (approx. 90 to 180 minutes) or									
				b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English									
08-AS1-152-m01		nic Cher	nistry of the	e Eler	ments								
	ECTS	6	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			V (2) + V (2)									
	Method of assessment			a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English									
	Additional Information			according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 2nd letter a) of annex 1 to the APOLmCh and No. 1 of annex 2 to the APOLmCh									
	Referred to in LPO I			§ 62 Nr. 1									
08-ANP-152-m01	Analytical Chemistry (lab)												
	ECTS	6	Duration		1 semester	Method of grading (not) successfully completed	Modul level	undergraduate					
	Courses			P (12) + S (1)									
	Method of assessment			Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English Assessment offered: Once a year, summer semester									
	Additio	nal Info	rmation a	according to § 2 para. 2 sentence 2 APOLmCh in conjunction with No. I 1st letter a) of annex 1 to the APOLmCh and No. 1 of annex 2 to the APOLmCh									

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a) written examination (approx. 45 to 90 minutes) or													
b) log (10 to 20 pages) or													
c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or													
e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours) Language of assessment: German or English													
							Please consult with course advisory service in advance.						
							n in Natural Sciences 5						
uate													
a) written examination (approx. 45 to 90 minutes) or													
b) log (10 to 20 pages) or													
c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or													
a but will not exceed a													
a													

08-BC-EQN3-152-	Completi	Completive Qualification in Natural Sciences 3											
mo1	ECTS 3	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		Ü (o)	j (o)									
<u>.</u>	Method o	of assessment		a) written examination (approx. 45 to 90 minutes) or									
			b) log (10 to 20 pages) or										
			c) oral examination of one candidate each (20 to 30 minutes) or										
				d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or e) presentation (20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours) Language of assessment: German or English									
			maxim										
		requisites			rse advisory service i	n advance.							
08-BC-EQN5-152-	<u> </u>			tural Sciences 5	T								
mo1	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		Ü (o)										
	Method o	of assessment	a) written examination (approx. 45 to 90 minutes) or										
			b) log (10 to 20 pages) or										
			c) oral examination of one candidate each (20 to 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 15 to 20 minutes per candidate) or										
			e) presentation (20 to 30 minutes) or										
			f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours) Language of assessment: German or English										
		requisites	Please consult with course advisory service in advance.										
Thesis Area (15 ECT													
08-BA-BC-152-m01				ry		_							
	ECTS 1	2 Duration	n [1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		No courses assigned to module										
	Method o	of assessment	Bachelor's thesis (50 to 70 pages)										
			Language of assessment: German or English										
			Time to complete: 10 weeks.										
08-KOLL-BC-152-		of the Bachelor	r Thesis in Biochemistry										
mo1	ECTS 3	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		K (o)										
	Method o	of assessment		final colloquium (approx. 30 minutes)									
			Language of assessment: German or English										