

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 Examination regulations version: 2017

Responsible: Faculty of Chemistry and Pharmacy Examination regulations version: 2017

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

= lecture

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

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

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

= list of modules

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

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

modules in this SFB: ditable for bonus.

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

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

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

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

ASP02015

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

20-Apr-2017 (2017-28) except for mandatory elective 10-M-MCB-152 replaced by 10-M-MCH-172 in Fast Track procedure at a later time

05-Jul-2017 (2017-42)

22-Dec-2021 (2021-87)

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 specified in the form X (y) with course type X abbreviated as specified above and number of w										
	Method of as	ssessme	ent	-							
	Only after su completion o		l if application	if applicable							
	Other prereq	uisites	if applic	if applicable							
	Participants and allocation of places		ocati- if applic	if applicable							
	Additional information		on if applic	if applicable							
	Referred to in	n LPO I	if applic	if applicable (examination regulations for teaching-degree programmes)							

Compulsory Course	es (115 ECTS cre	dits)									
03-5S2ST-BC-152-	Structural Biol	logy									
mo1	ECTS 10	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (2) -	- Ü (6)							
	Method of ass	essment		n examination (appr							
					German and/or Engl	ish					
07-1A1ZO-BC-152-	General Biolog										
mo1	ECTS 5	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses V (5)										
				n examination (appr	ox. 180 minutes)						
08-AC1-152-m01	Principles of Ir			try							
	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (4) -	- V (2)							
			(appro Langu	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		§ 42 I § 62 I	Nr. 1 and § 22 II Nr. Nr. 1	1 h)						
08-ACP1-BC-152-	Inorganic Chemistry 1 (lab) for Biochemistry students										
mo1	ECTS 6	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses		P (6) +	P (6) + S (2)							
	Method of asso	essment	nutes or e) p prox. ons) Asses	A) assessment [a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 mutes) 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 B) Vortestate/Nachtestate (pre and post-experiment examination talks a prox. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical assignments (2 to 4 random examinations) Assessment offered: Once a year, winter semester Language of assessment: German and/or English							
08-0C1-152-m01	Organic Chemi	istry 1									
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V (3) +	- Ü (1)							
	Method of assessment		exami (appro Langu	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 I	LPO I	§ 62 I	Nr. 2							

08-0C2-152-m01	Organi	Chemi	stry 2 an	d analy	tical methods in org	ganic chemistry						
	ECTS	9	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	•	V (3) ·	+ Ü (1) + V (2)							
	Method	l of asse	essment	exam (appr	a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English							
08-0CP1-BC-152-	Organi	c chemi	stry - lab	oratory course for Biochemistry students								
mo1	ECTS	7	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S	•	P (12)								
	Method of assessment			and a	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English							
	Module comple		essfully	08-00	o8-OC1 and o8-ACP1-BC							
08-PC-MBS-152-	Molecular structure and spectroscopy											
mo1			Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) ·	+ Ü (2)							
	Method of assessment			exam (appr Langu	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							
	Referre	d to in L	PO I	§ 62 l	Nr. 1							
08-PC-TKE-152-	Thermo	dynam	ics, Kinet	ics, Ele	ectrochemistry							
mo1	ECTS	9	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) ·	+ Ü (2)							
	Method of assessment			exam (appr Langu	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	Nr. 1	§ 62 Nr. 1						

08-PCP-BC-152-	Practic	al cour	se of Phys	ical Ch	emistry for Biocher	nistry Students						
mo1	ECTS	6	Duratio	n	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate				
	Course	·S	•	P (4)	, (4)							
	Method	d of ass	essment	and a Asses	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Assessment offered: Once a year, winter semester Language of assessment: German and/or English							
	Modules successfully completed			o8-PC	-MBS or o8-PC-TKE							
08-BAN-152-m01	Bioana	lytics										
	ECTS	9	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	:S		V (1) +	- Ü (1) + P (5)							
	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 a maximum of 4 hours) Language of assessment: German and/or English								
08-BC1-152-m01	Biochemistry 1											
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	·S		V (2) +	+ Ü (1)							
	Method	d of ass	essment	written examination (approx. 60 to 90 minutes)								
	Referre	d to in	LPO I	§ 42 l § 62 l	Nr. 2 Nr. 2							
08-BC2-152-m01	Bioche	mistry	2	,			'					
	ECTS	5	Duratio	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	:S		V (2) -	+ Ü (1)							
	Method	d of ass	essment	writte	n examination (app	rox. 60 to 90 minutes)						
	Additional 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 che mists, 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 APOLmCh.								

08-BCP-152-m01	Practic	al cours	se of Bioc	hemist	try							
	ECTS	5	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S S		P (6)	•	•		-				
	Method	d of ass	essment		Log (approx. 30 pages)							
					Assessment offered: Once a year, summer semester							
	Modules successfully completed			o8-B0	08-BC1							
	Particip cation	oants ar of place		availa Stude locate	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 alocated 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-	Molecu	ılar Biol	logy		,							
mo1	ECTS	6	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	s		V (2) ·	$(2) + \ddot{U}(1) + V(1)$							
	Method of assessment		essment	to 30 tion (3 area b	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							
10-M-MCH-172-	Mathematics for students in Chemistry and Biochemistry											
mo1	ECTS 5 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (3) -	+ Ü (2)	•						
	Method	d of ass	essment	written examination (approx. 90 to 120 minutes) and written exercises (approx. 25)								
11-EFNF-152-mo1	Introdu	iction to	Physics	for Stu	dents of other Disc							
	ECTS	7	Duration	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (4) ·	+ V (3)			`				
	Method	d of ass	essment	written examination (60 to 120 minutes)								
11-PFNF-152-m01	Labora	tory Co	urse Phys	ics for	Students of other I	Disciplines						
	ECTS	3	Duration	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		P (4)	•	•		•				
	Method of assessment		a) practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (90 minutes). Each experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each be repeated once.									
	Participants and allo- cation of places			Only	as part of pool of ge	eneral transferable sk	ills (ASQ): 10 places (lottery)					

Compulsory Electiv	res (30 ECTS credits)									
03-4S1IMM-	Immunology for bioche	mistry students								
BC-152-mo1	ECTS 5 Duratio	n 1 semester Method of grading numerical grade	Modul level	undergraduate						
	Courses	V (1) + Ü (1) + P (3)								
	Method of assessment	written examination (approx. 45 minutes)								
		Assessment offered: Once a year, summer semester								
	Participants and allo- cation of places	Biochemie (Biochemistry), Bachelor's: 16 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.								
03-4S1VIR-BC-152-	Virology for biochemist	ry students								
mo1	ECTS 5 Duratio	n 1 semester Method of grading numerical grade	Modul level	undergraduate						
	Courses	V (1) + S (1) + P (3)								
	Participants and 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) Assessment offered: Once a year, summer semester Language of assessment: German and/or English Biochemie (Biochemistry), Bachelor's: 18 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits):								
	cation of places	Should the number of applications exceed the number of available places, places will be allocated according to the for quotas: Quota 1 (two thirds of places): current average grade of successfully completed modules; among applicants visame average grade, places will be allocated by lot. Quota 2 (one third of places): number of subject semesters of the tive applicant; among applicants with the same number of subject semesters, places will be allocated by lot. A waiting be maintained and places re-allocated as they become available.								
03-VIR2-BC-171-	Virology 2 for Biochemi									
mo1	ECTS 5 Duratio	3 5 5	Modul level	undergraduate						
	Courses	V (2) + P (3)								
	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 a maximum of 4 hours) Assessment offered: Once a year, winter semester Language of assessment: German and/or English								
	Participants and allo- cation of places	Biochemie (Biochemistry) Bachelor's: 255 places.								

08-BGV-171-m01	Imagin	g method	ls in life-sc	iences							
	ECTS	5	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S	V	(2) + S (1)	·						
	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 a maximum of 4 hours) Assessment offered: Once a year, winter semester Language of assessment: German and/or English							
		ants and of places		ochemie (Biochemistr	y) Bachelor's: 25 places.						
03-4S1HUG-	Human	genetics	for bioche	mistry students							
BC-152-mo1	ECTS	5	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	s	V ((1) + Ü (1.5) + S (0.5)							
	Method	d of asses	ssment wr	written examination (approx. 30 minutes)							
	Participants and allocation of places			Biochemie (Biochemistry), Bachelor's: 5 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 followin 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 we be maintained and places re-allocated as they become available.							
03-PBC-152-m01	Pathob	iochemis	stry								
	ECTS	5	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S	V	(1) + Ü (1) + P (3)							
	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 a maximum of 4 hours) Assessment offered: Once a year, summer semester Language of assessment: German and/or English							
	Participants and allocation of places			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 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-BC-MOLP-152-	Molecu	ılar Biol	ogy laboi	ratory	course					
mo1	ECTS	10	Duration	n	1 semester	Method of grading	numerical grade	N	Nodul level	undergraduate
	Course	·S		P (5)	•					
	Method	d of ass	essment	to 30 tion (area l Asses	minutes) or d) oral e 20 to 30 minutes) or out will not exceed a ssment offered: Onc	examination in group	s of up to 3 candidat ion (on average app s) ster	tes (approx. 15	5 to 20 minu	ation of one candidate each (20 tes per candidate) or e) presenta- plete will vary according to subject
		oants ar of place		Shou quota same tive a be ma Chem alloca	ld the number of apuse: Quota 1 (two third average grade, place pplicant; among applicant ained and place lie (Chemistry), Masated according to the	olications exceed the ds of places): current les will be allocated b plicants with the sam is re-allocated as they ter's: 6 places. Select e number of subjects	number of available average grade of such by lot. Quota 2 (one to e number of subject become available. Lion process Chemie emesters. Among approximate and the sters.	e places, place ccessfully con third of places semesters, p (Chemistry), oplicants with	es will be all npleted mod s): number of laces will be Bachelor's (1 the same nu	y), Bachelor's (180 ECTS credits): ocated according to the following ules; among applicants with the f subject semesters of the respecallocated by lot. A waiting list will 120 ECTS credits): Places will be umber of subject semesters, plast they become available.
03-ZBP-152-m01	Cell bio	ology								
	ECTS	5	Duration		1 semester	Method of grading	numerical grade	N	1odul level	undergraduate
	Course	:S		P (4)	+ S (2)					
	Method of assessment				n examination (appuage of assessment:	rox. 60 minutes) German and/or Engl	ish			
	Participants and allocation of places			Shou quota same tive a	ld the number of ap as: Quota 1 (two thire average grade, plac pplicant; among ap	olications exceed the ds of places): current es will be allocated b	number of available average grade of suc by lot. Quota 2 (one t e number of subject	e places, place ccessfully con third of places	es will be all npleted mod s): number of	y), Bachelor's (180 ECTS credits): ocated according to the following ules; among applicants with the f subject semesters of the respecallocated by lot. A waiting list will
07-5S2Mi-	Specifi	c Micro	biology 2		udents in Biochemis					
Z2-BC-152-m01	ECTS	10	Duration	n	1 semester	Method of grading	numerical grade	N	Nodul level	undergraduate
	Course	·S	•	V (1) -	+ S (1) + Ü (3)					
	Method of assessment			to 30 tion (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)					
	Participants and allocation of places			Shou quota same tive a	ld the number of ap us: Quota 1 (two third average grade, plac pplicant; among ap	olications exceed the ds of places): current es will be allocated l	number of available average grade of suc by lot. Quota 2 (one t e number of subject become available.	e places, place ccessfully con third of places semesters, p	es will be all npleted mod s): number of laces will be), Bachelor's (180 ECTS credits): ocated according to the following ules; among applicants with the f subject semesters of the respecallocated by lot. A waiting list will
Bachelor's with 1 major l	Biochemistr	y (2017)					JMU Würzburg • gener	rated 20-0kt-2023 •	exam. reg. data r	record 82 025 - - H 2017 page 9 / 19

08-0C4-152-m01	Organi	c Chem	istry 4			-					
	ECTS	5	Duration	ı	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (2)	+ Ü (2)		-				
	Method of assessment			exam (appı	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 § 62	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 62 Nr. 2						
08-0CP2-152-m01		c Chem	istry - adv	anced	laboratory course	for students of chemistry					
	ECTS	5	Duration	า	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course	S		P (11)							
	Method of assessment			and a	Vortestate/Nachtestate (pre and post-experiment examination talks approx. 15 minutes each, log approx. 5 to 10 pages each) and assessment of practical performance (2 to 4 random examinations) Language of assessment: German and/or English						
	Modules successfully completed			08-0	C2 and (08-OCP1 or	OCP1-BC)					
07-4BFMZ4-	Bioinformatics for advanced Students in Biochemistry										
BC-152-mo1	ECTS 5 Duratio			า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		V (1)	+ Ü (4)						
	Method of assessment			Log (10 to 20 pages) Language of assessment: German and/or English							
	Participants and allocation of places			Shou quota same tive a	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 followin 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 we be maintained and places re-allocated as they become 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	l of ass	essment	written examination (90 minutes) and successful completion of seminar/exercise							

o8-BC-AMP-152-	Current	Metho	ds of Prot	tein Ch	romatography	,					
mo1	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5		P (5)				-			
	Method	of asse	essment	to 30 tion (area l Asses	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) Assessment offered: Once a year, winter semester Language of assessment: German and/or English						
	Particip cation o			Shou quota same tive a	liochemie (Biochemistry), Bachelor's: 24 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits): hould the number of applications exceed the number of available places, places will be allocated according to the following uotas: Quota 1 (two thirds of places): current average grade of successfully completed modules; among applicants with the ame average grade, places will be allocated by lot. Quota 2 (one third of places): number of subject semesters of the respecve 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-	Advance	ed lab (abridged)							
mo1	ECTS	ECTS 5 Duratio			1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5	-	P (8)							
	Method of assessment			Log (approx. 20 pages) Language of assessment: German and/or English							
	Addition	nal Info	rmation	Addit	ional information on	module duration: ap	pprox. 3 weeks.				
08-AVP10-BC-152-	Advance	ed lab									
mo1	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5	·	P (16)	P (16)						
	Method of assessment			Log (approx. 30 pages) Language of assessment: German and/or English							
	Additional Information			Additional information on module duration: approx. 6 weeks.							

08-BC-SFBM-212-	Structure and Function of Biological Membranes and Membrane Proteins											
mo1	ECTS	10	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Course	S		V (2) -	+ S (1) + P (5)			•				
	Method	d of asso	essment	b) terr c) ora d) pre Langu	m paper (8 to 12 p l examination of c sentation (20 to g lage of assessme	one candidate each (20 30 minutes) nt: German and/or Engl	to 30 minutes) or					
	Dortisin		d alla			nce a year, winter term						
Towns for making Chilling		of place	S	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 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.								
Transferable Skills	<u> </u>		<u> </u>									
General Key Skills Students may select				ered as	part of the pool of	of general transferable s	skills (ASQ) of JMU.					
Subject-specific Ke	y Skills	(15 ECT	S credits)									
07-M-BST-152-m01	Mather	natical	Biology a	nd Bio	statistics							
	ECTS	4	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
ļ	Course			V (2) -								
	Method	d of asso	essment		n examination (a _l able for bonus	oprox. 60 minutes)						
41-IK-BM-152-mo1	Informa	ation Lit	eracy (Ba	sic Lev	rel)							
	ECTS	2	Duration						undergraduate			
	Courses			Ü (o.5)								
				presentation (approx. 15 minutes) with written elaboration (approx. 2 pages)								
				Additional information on module duration: usually block taught during semester break.								
	Referred to in LPO I			§ 99 I Nr. 1 (2 ECTS credits)								

06-Ph-B-P2/1-152-	Philoso	phical p	rinciples	of sci	ences I							
mo1	ECTS	5	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		V (2)		•						
	Methoc	of asse	ssment	writte	written examination (45 minutes)							
	Participants and allo- cation of places			ber of me nu	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.							
07-3A3Bl-152-m01	Bioinfo	rmatics										
	ECTS	2	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (1) +	- S (1)	•		•				
	Methoc	of asse	ssment	writte	n examination (appr	ox. 20 minutes)						
03-TR-152-m01	Toxicol	ogy and	legal stu	ıdies								
	ECTS	3	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (1) +	V (1) + V (1)							
	Method	d of asse	essment	writte	n examination (appr	ox. 90 minutes)						
	Referred to in LPO I			§ 22 l	Nr. 1 h) Nr. 2 f) Nr. 3 f)							
03-FOR-BC-152-	Contemporary research in biochemistry											
mo1	ECTS	2	Duration	1	2 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S		V (2)								
	Method	d of asse	essment	Wrap-up report (approx. 1 page)								
03-Phys-152-m01	Physiol	logy										
	ECTS	3	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (3)								
	Methoc	d of asse	essment	writte	n examination (appr	ox. 60 minutes)						
08-EP-152-m01	Practic	al Cours	e - exteri	1al								
	ECTS	10	Duration	1	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	rerequis	ites	Pleas	Please consult with course advisory service in advance.							
	Additio	nal Info	rmation	Additi	onal information on	module duration: ap	prox. 6 weeks.					

! -	ECTS 5		Practical Course - external (abridged)										
[C	ECTS 5 Duration			1 semester	Method of grading (not) successfully completed Modul level undergraduate								
	Courses		P (o)	(0)									
N	Method of asse	essment	Log (a	Log (approx. 20 pages) Language of assessment: German and/or English									
	other prerequis			Please consult with course advisory service in advance.									
	Additional Info			Additional information on module duration: approx. 3 weeks.									
·	Practical Cours	,											
	ECTS 10	Duration		1 semester Method of grading (not) successfully completed Modul level undergraduate									
<u> </u>	Courses		P (o)										
	Method of asse		Langu		: German and/or English								
! —	other prerequis				se advisory service in advance.								
	Additional Info			Additional information on module duration: approx. 6 weeks.									
·	Practical Cours	4	, , ,										
ļ	ECTS 5 Duratio			1 semester	Method of grading (not) successfully completed Modul level undergraduate								
	Courses		P (o)										
N	Method of asse	essment	Log (approx. 20 pages) Language of assessment: German and/or English										
O	other prerequis	sites	Please consult with course advisory service in advance.										
Д	Additional Info	rmation	Additional information on module duration: approx. 3 weeks.										
08-LP-152-m01 P	Practical Lab Course												
E	ECTS 10 Duratio		n	1 semester	Method of grading (not) successfully completed Modul level undergraduate								
	Courses		P (16)										
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Method of asse	essment	Log (approx. 30 pages) Language of assessment: German and/or English										
0	other prerequis	ites	Please consult with course advisory service in advance.										
Д	Additional Info	rmation	Additional information on module duration: approx. 6 weeks.										
	Practical Lab C	ourse (ab	oridged)										
<u>E</u>	ECTS 5	Duration		1 semester	Method of grading (not) successfully completed Modul level undergraduate								
	Courses		P (8)										
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Method of asse	essment		Log (approx. 20 pages) Language of assessment: German and/or English									
С	other prerequis	sites			se advisory service in advance.								
A	Additional Info	rmation	Additi	onal information on	n module duration: approx. 3 weeks.								

08-WIRE1-152-m01	Scienti	ific lectu	ring 1									
	ECTS	5	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	:S		T (o)	(0)							
	Method of assessment			up report (approx. 2 lage of assessment:	pages) German and/or Engl	ish						
08-WIRE2-152-m01	Scientific lecturing 2											
	ECTS 5 Duration		1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Course			T (o)								
	Method of assessment				Wrap-up report (approx. 2 pages) Language of assessment: German and/or English							
08-AFBC1-152-m01	Conten	nporary	Research	in Bio	chemistry 1							
	ECTS	3	Duration	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -								
	Method of assessment			presentation (approx. 10 minutes) Language of assessment: German and/or English								
08-AFBC2-152-m01	Conten	nporary	Research	in Biochemistry 2								
	ECTS	3	Duratio	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V (2) -								
	Method	d of asse	essment	presentation (approx. 10 minutes) Language of assessment: German and/or English								
08-AFBC3-152-m01	Conten	nporary	Research	in Bio	in Biochemistry 3							
	ECTS 3 Duratio		1	2 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses			V (2) + S (1)								
	Method	d of asse	essment	presentation (approx. 10 minutes) Language of assessment: German and/or English								
08-BPS1-152-m01	Bioche	mical Pı	ractical S	eminar 1								
	ECTS	1	Duration	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	:S		S (1)								
	Method	d of asse	essment	Wrap-up report (approx. 1 page) Language of assessment: German and/or English								
08-BPS2-152-m01	Bioche	mical Pı	ractical S	eminar 2								
	ECTS	1	Duratio		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course			S (1)								
	Method of assessment				up report (approx. 1 age of assessment:	page) German and/or Engl	ish					

08-BPS3-152-m01	Biochemical	Biochemical Practical Seminar 3										
	ECTS 1	Duratio	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate					
	Courses		S (1)									
	Method of as	sessment		up report (approx. 1								
0.4144				anguage of assessment: German and/or English								
08-AWA-152-m01	Guidance in s											
	ECTS 5	Duratio		1 semester	Method of grading (not) successfully completed	Modul level	undergraduate					
	Courses		T (o)									
	Method of assessment			Wrap-up report (approx. 1 page) Language of assessment: German and/or English								
08-AC-ELO-152-	Elemental Or	ganic Cher	nistry									
mo1	ECTS 5	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (2) -									
	Method of as	sessment	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 Ch	emistry 2 (ab)									
	ECTS 5	Duratio	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate					
	Courses		P (12)									
	Method of as	sessment	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 succ	cessfully	(08- ACP1 or 08-ACP1-BC) and 08-AC1 and 08-AS1									
08-PC-SBL-152-	Symmetry, cl	nemical bo	nding and light									
mo1	ECTS 9	Duration	1	2 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		V (3) -	$V(3) + \ddot{U}(2) + V(2) + \ddot{U}(2)$								
	Method of as	sessment	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	Inorganic Chemistry of the Elements												
	ECTS	6	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2) ·	'(2) + V(2)								
	Method	d of ass	essment	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	LPO I	§ 62 l	§ 62 Nr. 1								
08-ANP-152-m01	Analyti	cal Che	mistry (la	b)		'							
	ECTS	6	Duration	1	1 semester	Method of grading	(not) successfully comple	ted Modul level	undergraduate				
	Course	S		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) Assessment offered: Once a year, summer semester Language of assessment: German and/or English									
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 of assessment			a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English									
	Referre	d to in	LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 62 Nr. 2									
08-TC-152-m01	Quantum Chemistry												
	ECTS	3	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S		V (2) + Ü (1)									
	Method	d of ass	essment	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									
	Referre	d to in	LPO I	§ 22 Nr. 1 h) § 22 Nr. 2 f) § 22 Nr. 3 f)									

08-BC-E-212-m01	Ethics of Molecular Life Sciences													
	ECTS	2	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses			V (1) -	- S (1)									
	Method	of ass	essment			approx. 45 to 90 minut	tes) or							
				b) term paper (8 to 12 pages) or										
				c) oral examination of one candidate each (20 to 30 minutes) or d) presentation (20 to 30 minutes)										
				Language of assessment: German and/or English										
08-BC-PHIL-212-	Philoso	Philosophical Aspects of the Sciences												
mo1	ECTS	3	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Course	S		S (2)	_									
	Method	d of ass	essment			approx. 45 to 90 minut	tes) or							
				b) term paper (8 to 12 pages) or c) oral examination of one candidate each (20 to 30 minutes) or										
				d) presentation (20 to 30 minutes)										
				Language of assessment: German and/or English										
				Assessment offered: Once a year, winter term										
	Participants and allo- cation of places			Biochemie (Biochemistry), Bachelor's: 30 places. Selection process Biochemie (Biochemistry), Bachelor's (180 ECTS credits):										
	Cation	oi piace	:5	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 num-										
				ber of subject semesters, places will be allocated by lot.										
				A waiting list will be maintained and places re-allocated as they become available.										
o8-BC-ZQN3-152-			_		ural Sciences 3									
mo1		3	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate					
	Courses			Ü (o)										
	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 a maximum of 4 hours)										
						: German or English								
	other prerequisites			Pleas	e consult with cour	se advisory service in	advance.							

08-BC-ZQN5-152-	Additional Qualification in Natural Sciences 5												
mo1	ECTS	5	Duration		1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate				
	Courses	;		Ü (o)	•			•					
	Method	of asse	essment	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									
	other prerequisites				Please consult with course advisory service in advance.								
08-BC-EQN3-152-	•	•			in Natural Sciences 3								
mo1	ECTS	3	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses		1	Ü (o)		, 5 5	5	J.	, ,				
	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 a maximum of 4 hours) Language of assessment: German or English									
	other pr	erequis	sites	Pleas	Please consult with course advisory service in advance.								
08-BC-EQN5-152-	Complet	tive Qu	alificatio	in Natural Sciences 5									
mo1	ECTS	5	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	j		Ü (o)									
	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 a maximum of 4 hours) Language of assessment: German or English									
	other prerequisites			Please consult with course advisory service in advance.									
Thesis Area (15 EC	S credits	;)											
08-BA-BC-152-m01	Bachelo	r Thesi	is in Bioch	emist	ry								
	ECTS	12	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	;	·	No courses assigned to module									
	Method	of asse	essment	Bachelor's thesis (50 to 70 pages) Language of assessment: German or English									
	Addition	nal Info	rmation	Time to complete: 10 weeks.									
08-KOLL-BC-152-	Defense	of the	Bachelor	Thesis in Biochemistry									
mo1	ECTS	3	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Courses	;		K (o)									
	Method of assessment			final colloquium (approx. 30 minutes) Language of assessment: German or English									
Bachelor's with 1 major l	Biochemistry ((2017)					JMU Würzburg • generated 20-Okt-20:	23 • exam. reg. data r	record 82 025 - - H 2017 page 19 / 19				