

# Subdivided Module Catalogue for the Subject

# Biology

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

> Examination regulations version: 2010 Responsible: Faculty of Biology

JMU Würzburg • generated 26-Aug-2024 • exam. reg. data record 82|026|-|-|H|2010



# **Course of Studies - Contents and Objectives**

The objective of the study program biology is to familiarize the students with basic scientific concepts and content in the various biological topics. The students are made familiar with basic biological ethodologies and learn to apply them. Through practical and theoretical studies to answer fundamental questions in biological science, the study program biology improves the student's analytical thinking and thus enhances understanding of complex biological processes and relationships.

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# Abbreviations used

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

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

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

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

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

# Conventions

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

# Notes

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

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

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

# In accordance with

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

# ASP02009

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

# 12-Jan-2011 (2011-3)

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.

# The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	pag
Compulsory Courses (91 E	CTS credits)			
General Biology I (13 EC	S credits)			
07-1A1ZO-102-m01	From cells to organisms	13	NUM	56
General Biology II (15 EC	TS credits)			
07-2A2PH-072-m01	Physiology of Organisms	9	NUM	60
07-2A2GNV-072-m01	Genetics, Neurobiology, Behaviour	6	NUM	58
General Biology III (24 E	CTS credits)			
07-3A30E-102-m01	Plant and Animal Ecology	6	NUM	68
07-3A3EBIO-102-m01	Developmental Biology of Plants and Animals	8	NUM	62
07-3A3GMT-102-m01	Genes, Molecules, Technologies	6	NUM	66
07-3A3BC-102-m01	Principles of Biochemistry	4	NUM	63
Mathematics/Quantitati	ve Biology (9 ECTS credits)	-		
07-2BM-072-m01	Mathematical Biology and Biostatistics	4	NUM	62
10-M-MCB-101-m01	Mathematics for students in Chemistry and Biology	5	NUM	24
Chemistry (20 ECTS cred		2		
08-AC-Bio-102-m01	Inorganic Chemistry for Biology Majors	5	NUM	24
08-0C-Bio-102-m01	Organic Chemistry for students of Biology	10	NUM	24
08-PC-Bio-102-m01	Physical Chemistry for Biology Majors	5	NUM	24
Physics (10 ECTS credits		,		
	Introduction to Physics for Students of Non-physics-related Mi-			
11-EFNF-072-m01	nor Subjects	7	NUM	24
	Practical Course Physics for Students of Non-physics-related			
11-PFNF-072-m01	Minor Subjects	3	B/NB	25
Compulsory Electives (57	ECTS credits)			
General Biology IV (7 EC				
07-4A4FL-102-m01	The Flora of Germany	7	NUM	72
07-4A4FA-102-m01	The Fauna of Germany	7	NUM	70
Advanced Biology (10 EC		,		<u> </u>
07-4BFNVO1-102-m01	Neurobiology for advanced students	5	NUM	82
07-4BFNVO2-102-m01	Behavioral Physiology	5	NUM	8/
07-4BFNV03-102-m01	Basics in Ecology of Animals	5	NUM	80
07-4BFMZ1-102-m01	Cell- and Developmental Biology for advanced students	5	NUM	74
07-4BFMZ3-102-m01	Microbiology for advanced students	5	NUM	70
07-4BFMZ4-102-m01	Bioinformatics for advanced students	5	NUM	78
07-4BFMZ5-102-m01	Biotechnology 1	5	NUM	80
07-4BFPS1-102-m01	Molecular Physiology for Advanced Students	5	NUM	88
07-4BFPS2-102-m01	Membranebiology for Advanced Students		NUM	90
07-4BFPS3-102-m01	Biochemistry and Protein Biochemistry for Advanced Students	5	NUM	-
07-4BFPS4-102-m01	Basic plant Ecophysiology	5	NUM	92
		5		94
07-4BFPS5-102-m01	Pharmaceutical Bioanalytics	5	NUM	96
Special Biosciences I (5			NILIAA	1
07-4S1MZ3-092-m01	Ecology and Developmental Biology of marine organisms	5	NUM	10
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07-4S1NVO3-092-m01	Functional Morphology of arthropods	5	NUM	118
08-BCB-072-m01	Biochemistry for students of biological sciences	6	NUM	242
08-BCPB-072-m01	Biochemistry for students of biological sciences (practical course)	5	B/NB	242
03-4S1IM-101-m01	Immunology 1	5	NUM	10
03-4S1VL-101-m01	Virology 1	5	NUM	14
07-4S1NVO1-102-m01	Neurobiology 1	5	NUM	114
07-4S1NVO2-102-m01	Integrative Behavioral Biology	5	NUM	116
07-4S1MZ1-102-m01	Basics in Light- and Electron-Microscopy	5	NUM	98
07-4S1MZ2-102-m01	Analysis of Chromosomes	5	NUM	100
07-4S1MZ4-102-m01	Methods in Biotechnology	5	NUM	104
07-4S1MZ5-102-m01	Aspects of molecular Biotechnology	5	NUM	106
07-4S1MZ6-102-m01	Special Bioinformatics 1	5	NUM	108
07-4S1MZ7-102-m01	Specific Cell- and Developmental Biology 1	5	NUM	110
07-4S1MZ8-102-m01	Specific Methods in Proteinbiochemistry and Cell Biology	-	NUM	110
07-4S1PS1-102-m01	Molecular modelling - From DNA to protein	5	NUM	112
07-4S1PS2-102-m01	Introduction to Methods in Plant Ecophysiology	5	NUM	
07-4S1PS3-102-m01	Pharmaceutical Drugs in Plants	5	NUM	124
	Basic Methods in Pharmaceutical Biology	5	NUM	126
07-4S1PS4-102-m01		5		128
03-4S1PC-102-m01	Physiological Chemistry 1	5	NUM	12
07-S1-LP1-102-m01	Laboratory practical course l	5	NUM	185
07-S1-Ex1-102-m01	Excursion I	5	NUM	183
07-S1-IP1-102-m01	Interdisciplinary Project I	5	NUM	184
07-4S1NV05-102-m01	Basic Population Ecology	5	NUM	120
03-4S1HG-102-m01	Human Genetics	5	NUM	8
Special Biosciences II (20		1		
07-5S2NVO1-102-m01	Neurobiology 2	10	NUM	140
07-5S2NVO2-102-m01	Integrative Behavioural Biology 2	10	NUM	142
07-5S2NVO3-102-m01	Animal Ecology 2	10	NUM	144
07-5S2MZ1-102-m01	Specific Cell- and Developmental Biology 2	10	NUM	132
07-5S2MZ2-102-m01	Specific Microbiology 2	10	NUM	134
07-5S2MZ3-102-m01	Specific Bioinformatics 2	10	NUM	136
07-5S2MZ4-102-m01	Specific Biotechnology 2	10	NUM	138
07-5S2PS1-102-m01	Physiology of Membrane Transport Mechanisms	10	NUM	146
07-5S2PS2-102-m01	Molecular Biology of Plants	10	NUM	148
07-5S2PS3-102-m01	Protein biochemistry and expression of recombinant proteins	10	NUM	150
07-5S2PS4-102-m01	Advanced Plant Ecophysiology	10	NUM	152
07-5S2PS5-102-m01	Molecular Biological Methods in Pharmaceutical Biology	10	NUM	154
03-5S2IM-102-m01	Immunology 2	10	NUM	16
03-5S2VL-102-m01	Virology 2	10	NUM	28
03-5S2PC-102-m01	Physiological Chemistry 2	10	NUM	22
03-5S2KB-102-m01	Clinical Biochemistry 1 / Laboratory Medicine	10	NUM	18
03-5S2TE-102-m01	Tissue engineering 2	10	NUM	26
03-5S2ST-102-m01	Structural Biology 2	10	NUM	24
03-5S2ZT-102-m01	Cellular Tumorbiology 2	10	NUM	32
03-5S2ZM-102-m01	Molecular Biology of Cells 2	10	NUM	30
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07-SQF-GXP-102-m01	Good Practices in Laboratory, Clinics and Production	3	NUM	204
07-SQF-GGL-102-m01	Basic Principles for Laboratory Work	3	NUM	197
07-SQF-OSB-102-m01	Organisation and Safety in Biosciences	5	NUM	212
07-SQF-EDV-102-m01	Basic Data Processing	3	NUM	196
03-SQF-SBE-102-m01	Basic Career Strategies	3	NUM	54
07-SQF-CTA-102-m01	Computertools for Molecular Biology	2	B/NB	194
07-SQF-GSA-102-m01	Basics in System Administration	2	B/NB	201
07-SQF-PBD-102-m01	Principles of Image Data Processing	2	B/NB	214
Subject-specific Key Skil	s (15 ECTS credits)			
07-6BT-102-m01	Thesis Biology	12	NUM	156
Thesis (12 ECTS credits)				
07-S3-LP3-102-m01	Laboratory Practical Course III	15	NUM	191
07-S3-IP3-102-m01	Interdisciplinary Project III	15	NUM	190
07-S3-Ex3-102-m01	Excursion III	15	NUM	189
03-6S3KN-102-m01	Clinical Neurobiology 3	15	NUM	38
03-6S3PH-102-m01	Physiology	15	NUM	42
03-6S3ZM-102-m01	Cellular Molecular Biology 3	15	NUM	50
03-6S3ZT-102-m01	Cellular Tumorbiology 3	15	NUM	52
03-6S3TE-102-m01	Tissue engineering 3	15	NUM	46
03-6S3ST-102-m01	Structural Biology 3	15	NUM	44
03-6S3PC-102-m01	Physiological Chemistry 3	15	NUM	40
03-6S3KB-102-m01	Clinical Biochemistry 3 / Laboratory Medicine	15	NUM	36
03-6S3VL-102-m01	Virology 3	15	NUM	48
03-6S3IM-102-m01	Immunology 3	15	NUM	34
07-6S3PS6-102-m01	Research Project in Pharmaceutical Biology with Focus on Mo- lecular Biochemistry	15	NUM	181
07-6S3PS5-102-m01	lecular Biology Research Project in Pharmaceutical Biology with Focus on Mo-	15	NUM	179
07-6S3PS4-102-m01	Research Project in Pharmaceutical Biology with Focus on Mo-	15	NUM	177
	Scientific Work in Plant Ecophysiology	15		17
07-6S3PS2-102-m01 07-6S3PS3-102-m01	Experimental Biology of Membrane Transport Mechanisms	15	NUM NUM	173
07-653P51-102-m01	Protein Chemistry in Biosensorics 3	15		17:
07-6S3M25-102-m01	Specific Bioinformatics 3 Specific Aspects in Plant Molecular Biology 3	15	NUM	16
07-6S3MZ4-102-m01	Specific Bioinformatics 3	15	NUM	_
07-6S3MZ3-102-m01 07-6S3MZ4-102-m01	Specific Microbiology 3 Specific Biotechnology 3	15	NUM	159
07-6S3MZ1-102-m01	Specific Cell- and Developmental Biology 3	15	NUM NUM	157
07-6S3NVO3-102-m01	Animal Ecology 3	15	NUM	169
07-6S3NV02-102-m01	Integrative Behavioural Biology 3	15	NUM	16
07-6S3NV01-102-m01	Neurobiology 3	15	NUM	16
Special Biosciences III (		1		<del></del>
07-5AP-102-m01	Practical Course as Exchange Student	10	NUM	130
07-S2-LP2-102-m01	Laboratory Practical Course II	10	NUM	188
07-S2-IP2-102-m01	Interdisciplinary Project II	10	NUM	187
07-S2-EX2-102-m01	Excursion II	10	NUM	186
07-5EP-102-m01	External Practical Course	10	NUM	131

		r	<b>D</b> (110	
07-SQF-IKK-102-m01	Tutorial Intercultural Competence	4	B/NB	208
07-SQF-KEB-102-m01	Career, Personality and Communication	5	NUM	210
07-SQF-RPI-102-m01	Research, Presentation, Information	4	NUM	218
07-SQF-BGA-102-m01	Biotechnology and Social Acceptance	3	NUM	192
07-SQF-GHE-102-m01	Global Acting in Globally and Locally linked Decision Proces- ses	3	NUM	199
07-SQF-HVB-102-m01	Outstanding Publications in Biology	3	NUM	206
07-SQF-PRB-102-m01	Patents in Biology	2	NUM	216
07-SQF-SAL-102-m01	Operational Safety in Ecophysiological Laboratories	1	NUM	220
07-SQF-TFB3-102-m01	Supervising Tutorial for Basic Courses 3	3	B/NB	222
07-SQF-TFB4-102-m01	Supervising Tutorial for Basic Courses 4	4	B/NB	223
07-SQF-TFB5-102-m01	Supervising Tutorial for Basic Courses 5	5	B/NB	224
07-SQF-TSB3-102-m01	Supervising Tutorial for Biology 3	3	B/NB	226
07-SQF-TSB2-102-m01	Supervising Tutorial for Biology 2	2	B/NB	225
07-SQF-UBG-102-m01	Environmental Education in the Botanical Garden of the Uni- versity	2	B/NB	227
07-SQF-WIP-102-m01	Publishing Scientific Data	3	NUM	230
07-SQF-GTA-102-m01	Teamwork in Natural Science	2	B/NB	203
07-SQF-UDB-102-m01	Entrepreneurial Thinking in Biosciences	3	B/NB	229
07-SQF-ZQN2-102-m01	Additional Qualification in Natural Sciences 2	2	B/NB	236
07-SQF-ZQN3-102-m01	Additional Qualification in Natural Sciences 3	3	B/NB	237
07-SQF-ZQN4-102-m01	Additional Qualification in Natural Sciences 4	4	B/NB	238
07-SQF-ZQN5-102-m01	Additional Qualification in Natural Sciences 5	5	B/NB	239
07-SQF-ZQA2-102-m01	Additional Qualification outside Natural Sciences 2	2	B/NB	232
07-SQF-ZQA3-102-m01	Additional Qualification outside Natural Sciences 3	3	B/NB	233
07-SQF-ZQA4-102-m01	Additional Qualification outside Natural Sciences 4	4	B/NB	234
07-SQF-ZQA5-102-m01	Additional Qualification outside Natural Sciences 5	5	B/NB	235

Module	e title				Abbreviation		
Human					03-4S1HG-102-m01		
Module	e coord	inator		Module offered by			
holder	of the (	Chair of of Human Gene		Faculty of Medicine			
ECTS		od of grading	Only after succ. con	npl. of module(s)			
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate	By way of exception assessments.	, additional prerequi	isites are listed in th	e section on	
Conten	ts						
		of and analytical meth ype and chromosome a				the normal	
Intend	ed lear	ning outcomes					
		complete this module will learn how to prepa					
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	n)		
compo • c	nent. )3-4S1⊦	omprises 2 module con IG-1-102: V + Ü (no infor IG-2-102: S (no informa	mation on SWS (week	ly contact hours) and	l course language av	vailable)	
			· ·				
		sessment (type, scope,			tion offered — If not	every seme-	
low. Ur vidual Assess • 3 • v • 0	<ul> <li>written examination (approx. 20 minutes)</li> </ul>						
• p	resent	ation (approx. 20 to 30	minutes)				
Allocat	ion of <sub>l</sub>	olaces					
Allocation of places Number of places: 15. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio- logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Ma- thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa- ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the ap- Bachelor's with 1major Biology (2010)							
				ord Bachelor (180 ECTS) Biolog		page 8 / 252	

plicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2010)

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Modul	e title				Abbreviation		
Immunology 1 03-4S1IM-101-m01							
Modul	e coord	inator		Module offered by	<u> </u>		
holder	ofthe	Professorship of Immuno	genetics	Faculty of Medicine			
ECTS		od of grading	Only after succ. cor	ucc. compl. of module(s)			
5 numerical grade							
Durati		Module level	Other prerequisites				
1 seme	ester	undergraduate	assessments.	i, additional prerequi	isites are listed in the section on		
Contents							
dy reco ergies, on gen	ognise a , autoim ietic an	and eliminate pathogens nmunity)? Organs, cells a	and tumour cells? He nd molecules of the i of recognition and e	ow can the immune s immune system will b limination of foreign	be addressed: How does the bo- system damage its own body (all- be presented with an emphasis substances by the immune sy- blied.		
Intend	ed lear	ning outcomes					
system mune :	n. The a system	re familiar with the mech	anisms of self and no	on-self discrimination	s for the analysis of the immune n by the adaptive and innate im- nent as well as major immune ef-		
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	– if other than Germa	n)		
• ( Metho ster, ir Assess low. U	03-4S11 03-4S11 <b>d of as</b> s nformat	M-2IM-101: P (no informa sessment (type, scope, la ion on whether module c n this module comprises ated otherwise, success	tion on SWS (weekly anguage — if other th an be chosen to earn the assessments in t	contact hours) and c an German, examina a bonus) he individual module	nd course language available) course language available) tion offered — if not every seme- e components as specified be- successful completion of all indi-		
• • • • • • • • • • • • • • • • • • •	2 ECTS, written Languag Other p cessful <b>sment i</b> 3 ECTS, present Assessr Languag Other p	Method of grading: num examination (approx. 30 ge of assessment: Germa rerequisites: Admission completion of the respec <b>n module component 03</b> Method of grading: (not) ation (approx. 20 to 30 n nent offered: once a year ge of assessment: Germa	erical grade minutes) on or English prerequisite to asse tive exercises as spe <b>-4S1IM-2IM-101:</b> Prace successfully comple- ninutes) c, summer semester on or English prerequisite to asse	ssment: regular atte cified at the beginnin tical Course Immuno ted ssment: regular atte	ndance of exercises and suc-		
	tion of		F -	5	-		
Biolog chemie places de of s by lot.	ie (Biol e (Bioch will be success Quota	ogy) Bachelor's: 16 place nemistry) Bachelor's: Sho allocated according to th fully completed modules 2 (one third of places) nu	ould the number of ap ne following quotas: ; among applicants v Imber of subject sem	oplications exceed th Quota 1 (two thirds o vith the same averag esters of the respect	8 places. Selection process Bio- e number of available places, f places): current average gra- e grade, places will be allocated ive applicant; among applicants aiting list will be maintained and		

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places re-allocated as they become available. Selection process Biologie (Biology) Bachelor's: Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biologie (Biology) (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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#### Workload

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**Teaching cycle** 

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

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## Module appears in

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Module	title				Abbreviation	
Physiol	ogical	Chemistry 1			03-4S1PC-102-m01	
Module coordinator				Module offered by	<u> </u>	
holder o	of the C	hair of Physiological Cl	ir of Physiological Chemistry Faculty of Medicine			
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	numer	ical grade				
Duratio	n	Module level	Other prerequisites			
1 semes	ster	undergraduate		isite to assessment: pletion of the respec urse.	•	
Content	ts					
model s tion of [ on of se	System DNA an elected on of pr	my, physiology and dev s (zebrafish, medaka, X d RNA in single-cell em tissues and organs (ne roteins in-situ. Demons ctivity.	iphophorus) for biom bryos. Fluorescent mic ural tissues, cartilage	edical research. Pher croscopy-based bioir ). In-situ hybridisatio	notyping of mutants. naging techniques. \ n of mRNA. Immunh	Microinjec- Visualisati- istochemical
Intende	d learr	ing outcomes				
tempora types of	al and : f devel	ble to independently p spatial RNA and proteir opmental mutants. The c questions.	expression in situ, ap	opraise expression p	atterns and recognis	e pheno-
Courses	<b>s</b> (type,	number of weekly cont	act hours, language –	– if other than Germa	n)	
V + Ü (n	io infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)	
ster, inf	ormati	<b>essment</b> (type, scope, on on whether module	can be chosen to earn		tion offered — if not	every seme-
Langua	ge of a	nation (approx. 60 minu ssessment: German, En				
Allocati	ion of p	laces				
allocate logy) wi ces will 5% of p ject Bio themati ject Bio ble in of the othe places, courses dure, ap tive mod they be plicants of ECTS all mod themati firstly, a and, see positior	ed as for th 180 be allo laces ( logie (I ics and logy (a ne quo er quot there v s of a m oplican dule wi credits ule cor ik (Mat accordi condly n in a th	ces: 16. Should the nur ollows: Places will prima ECTS credits. Should the ocated to students of the a minimum of one parti Biology) with 60 ECTS c Mathematik (Mathema s well as potentially to ta exceed the number of a. Should there be, with vill be a uniform regular todule component that ts who already have su ill be given preferential vailable. Selection pro- ous academic achieven s they have achieved ar nponents in the subject hematics)) at the time of ng to their average grace , according to their tota hird ranking will be calc	arily be allocated to st be module be used in o e Bachelor's degree s cipant in total) will be redits and to students tics), each with 180 E students of other 'imp of applications, the ren in one module compo- tion for the courses of are concerned will be ccessfully completed consideration. A waiting tess group 1 (95%): Pl nents. For this purpose of their average grade to f Biologie (Biology) of application. This will be weighted according l number of ECTS cred ulated as the sum of t	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). She maining places will b onent, several course one module compor allocated in a standa at least one other mo ing list will be mainta aces will primarily be of all assessments t (excluding Chemie (C Il be done as follows: to the number of EC lits achieved (quantit these two rankings, a	or's degree subject l will be two quotas: ogy) with 180 ECTS c s of the Bachelor's c gree subjects Comp of the application-ori ould the number of p e allocated to applic es with a restricted n hent. In this case, pla ardised procedure. In odule component of and places re-a e allocated according ranked according to aken during their stu Chemistry), Physik (F First, applicants wil TS credits (qualitative ranking). The a	Biologie (Bio 95% of pla- redits and degree sub- utational Ma ented sub- olaces availa cants from umber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- l be ranked, ve ranking) applicants' ocated ac-
achelor's v	with 1 maj	or Biology (2010)		urg • generated 26-Aug-2024		page 12 / 252
			reg. data reco	ord Bachelor (180 ECTS) Biolog	gie - 2010	

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

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			Abbreviation		
Virology 1 03-4S1VL-101-m01					03-4S1VL-101-m01
Module coordinator			Module offered by		
holder of the Chair of Virology			Faculty of Medicine		
ECTS	1	od of grading	Only after succ. con	npl. of module(s)	
5		rical grade			
Durati		Module level	Other prerequisites		
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequi	sites are listed in the section on
Conte	nts				
What i How d	is the di o antivi	fference between viruses	and bacteria? Which	n viruses exist? What	e addressed: What is a virus? are their replication strategies? ition, the module will discuss
Intend	led lear	ning outcomes			
tion of ped a	f viruses knowlee	, virus-host cell interaction dge of the application of	ons and mechanisms cell and molecular te	of action of antivira chniques of virologic	
		, number of weekly conta			n) sted separately for each module
• Metho ster, in Asses	o3-4S1V od of ass nformati sment in	on on whether module can this module comprises	n on SWS (weekly co nguage — if other than an be chosen to earn the assessments in t	ntact hours) and cou an German, examina a bonus) he individual module	
vidual Asses Asses	assess sment in 1 ECTS, written of Languag sment in 1 ECTS, present Languag sment in 3 ECTS, written of Languag Only aft 03-4S1V Other pr	ments. <b>n module component o3-</b> Method of grading: nume examination (approx. 20 ge of assessment: Germa <b>n module component o3-</b> Method of grading: (not) ation (approx. 20 to 30 m ge of assessment: Germa <b>n module component o3-</b> Method of grading: nume examination (approx. 20 ge of assessment: Germa er successful completion 'L-1 and 03-4S1VL-2 is a p	<b>4S1VL-1-101:</b> General minutes) n or English <b>4S1VL-2-101:</b> Genera successfully complet inutes) n or English <b>4S1VL-3-101:</b> Practica erical grade minutes) or oral exar n or English of module compone orerequisite for partic	l Virology l Virology - Seminar ted al Course Virology nination (approx. 20 nts: Successful comp ipation in module co	minutes) pletion of module components
Biolog chemi places	Allocation of places Biologie (Biology) Bachelor's: 18 places. Biochemie (Biochemistry) Bachelor's: 12 places. Selection process Bio- chemie (Biochemistry) Bachelor's: Should the number of applications exceed the number of available places, places will be allocated according to the following quotas: Quota 1 (two thirds of places): current average gra- de of successfully completed modules; among applicants with the same average grade, places will be allocated				

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 14 / 252
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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. Selection process Biologie (Biology) Bachelor's: Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biologie (Biology) (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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**Teaching cycle** 

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 15 / 252
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Module	e title				Abbreviation
Immun	ology	2			03-5S2IM-102-m01
Module	e coord	inator		Module offered by	
holder of the Professorship of Immuno		genetics Faculty of Medicine			
ECTS	Method of grading Only after succ. co		Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i	
1 seme	ster	undergraduate	Admission prerequi	site to assessment:	regular attendance of lab course
			as specified at the b	beginning of the cour	rse.
Conton		^	<i>.</i>		

#### Contents

Specific problems in immunology such as immune modulation, immunogenetics, infection immunology, signal transduction in immune cells.

#### Intended learning outcomes

The students acquire specific competence about the functional mechanisms of the immune system. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature.

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

P (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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#### Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 17 / 252
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Module	title				Abbreviation
Clinical Biochemistry 1 / Laboratory Medicine				03-5S2KB-102-m01	
Module coordinator				Modulo offered by	
			istar and Dathahis	Module offered by	
chemist	try	hair of Clinical Biochem		Faculty of Medicine	
		d of grading	Only after succ. con	pl. of module(s)	
	r	ical grade			
Duratio		Module level	Other prerequisites		
1 semes	ster	undergraduate		as successful comp	regular attendance of exercises letion of the respective exercises rse.
Content	s				
present physiolo	ed by r ogical	neans of selected examp	oles. Pathological me cyte function, cardio	chanisms are compa	y and clinical biochemistry are ared to the respective regular ion) and the underlying bioche-
Intende	d learr	ing outcomes			
modern proach, design,	molec analys bench	ular biology and biocher e and interpret problem work, data analysis and	nistry and have deve s in clinical biochemi the presentation of s	loped a fundamenta stry. They also have scientific results both	=
Courses	<b>s</b> (type,	number of weekly conta	ct hours, language –	- if other than Germa	n)
Ü + S (n	o infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
c) oral e didates	methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course				
Allocati	on of p	laces			
allocate logy) wi ces will 5% of p ject Biol themati ject Biol ble in ou the othe places, courses dure, ap tive mod they bee plicants of ECTS all mod themati firstly, a	ed as for th 180 be allo laces ( logie (l cs and logy (a ne quo er quot there w of a m oplican dule w come a s' previ credits ule cor k (Mat	Allows: Places will primar ECTS credits. Should the potential of the students of the a minimum of one partic Biology) with 60 ECTS creater Mathematik (Mathematis well as potentially to state ta exceed the number of a. Should there be, within vill be a uniform regulation odule component that a ts who already have suc- curvailable. Selection proce- ous academic achievement they have achieved and they have achieved and they have achiev	ily be allocated to struct module be used in or Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 sudents of other 'imp applications, the ren n one module compo- on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla- ents. For this purpose I their average grade of Biologie (Biology) application. This will weighted according	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC	available places, places will be or's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) rative ranking). The applicants'

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 18 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 19 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation	
Clinica	al Neur	obiology 2			03-5S2KN-102-m01
Modul	e coord	linator		Module offered by	
holder	ofthe	Chair of Clinical Neur	obiology	Faculty of Medicine	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
10	nume	erical grade			
Duration Module level		Other prerequisite	Other prerequisites		
1 semester undergraduate		and seminar as we	Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.		
Conter	nts	-			
neurot the cel	Students who successfully completed this module will have acquired insights into the foundations of clinical neurobiology. In this module, the cellular and molecular mechanisms which are important for survival as well as the cell death of neurons and glial cells of vertebrates will be compared during development as well as under pathological conditions. The module will also focus on the function of neurons and glial cells, synaptic activity, pla-				

sticity as well as disturbances in these functions and diseases of the nervous system, comparison of physiological processes in pathological conditions of neurodegenerative disorders such as motoneuron disorders. Using distinct examples in neurobiology, molecular genetic and functional biochemical connections will be analysed.

#### Intended learning outcomes

Students who successfully complete this module will have a fair knowledge of the basic functions of the nervous system. Students will be able to independently work on a distinct project using techniques of modern neurobiology, to solve general problems and to understand the mechanisms of neurodegenerative disorders. They will be able to analyse data and to interpret it in the context of literature. They will also have developed skills in experimental design, bench work, data analysis and the presentation of scientific results both orally and in writing.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### Allocation of places

Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma-

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thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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#### Workload

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#### Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 21 / 252
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Module title			Abbreviation		
-		Chemistry 2			03-5S2PC-102-m01
Module	e coord	inator		Module offered by	
		Chairs of Physiological C emistry, Biochemistry and		Faculty of Medicine	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	and seminar as well		regular attendance of exercises letion of the respective exercises se.
Conten	ts				
from hu lecular mistry, Intende Studen	uman b geneti pathol ed lear ts have	iochemistry. Physiologica c and functional biochem biochemistry and cellular <b>ning outcomes</b> e developed the ability to	al processes are com ical networks are pre biochemistry. approach, analyse a	pared with examples esented using examp nd interpret general	based on selected questions s of pathological aberrations. Mo- oles from developmental bioche- problems in physiological che-
	so hav	e developed skills in exp			ular biology and biochemistry. sis and the presentation of
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	- if other than Germa	n)
Ü + S (r	no infoi	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		<b>sessment</b> (type, scope, la ion on whether module ca			tion offered — if not every seme-
c) oral e didates	examin 6 (appro	ation of one candidate ea	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of <b>j</b>	olaces			
Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject S Computational Ma thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their otal number of ECTS credits achieveed (quantitative ranking). The applicants'					

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position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 23 / 252
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Modu	Module title Abbreviation						
Struct	Structural Biology 2				03-5S2ST-102-m01		
Module coordinator			Module offered by				
		Chair of Structural Biolo		Faculty of Medicine			
ECTS	1	od of grading	Only after succ. con		:		
10		rical grade					
Durati		Module level	Other prerequisites				
1 sem	_	undergraduate			regular attendance o	of exercises	
				Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise			
				beginning of the cou			
Conte	nte			0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			
					ha muantida firm daman	tal biala aira	
			current research reflect damental concepts of s				
			biquitin-dependent pro				
			ructure-based design of				
Intend	led lear	ning outcomes					
			problems in structural	biology on the basi	s of individually assi	gned tasks	
			the fields of molecular				
			operiments, their perfor				
ten pr	esentati	on of scientific results.					
Cours	<b>es</b> (type	, number of weekly cor	itact hours, language –	- if other than Germa	an)		
Ü + S (	(no infoi	rmation on SWS (week	y contact hours) and co	ourse language avail	able)		
Metho	od of ass	sessment (type, scope,	language — if other the	an German, examina	tion offered — if not	every seme-	
			can be chosen to earn				
metho	ds of as	ssessment: a) written e	xamination (approx. 45	to 60 minutes) or b	) log (approx. 10 to 2	o pages) or	
			each (approx. 30 minu				
		-	didate) or e) presentati		minutes); students	will be infor-	
			f the assessment prior t	to the course			
	tion of <sub>l</sub>						
			nber of applications exe				
			arily be allocated to st			-	
			he module be used in o he Bachelor's degree si				
			ticipant in total) will be				
			credits and to students				
			atics), each with 180 E				
ject Bi	iology (a	is well as potentially to	students of other 'imp	orting' subjects). Sh	ould the number of p	olaces availa	
			of applications, the rer				
	•		thin one module compo				
	places, there will be a uniform regulation for the courses of one module component. In this case, places on all						
courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec-							
tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as							
they become available. Selection process group 1 (95%): Places will primarily be allocated according to the ap-							
plicants' previous academic achievements. For this purpose, applicants will be ranked according to the number							
	of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma-						
			of application. This wil				
			de weighted according				
			al number of ECTS cred				
		-	culated as the sum of t		_	• •	
Bachelor'	s with 1 ma	jor Biology (2010)	JMU Würzbu	rg • generated 26-Aug-2024	• exam.	page 24 / 252	
	reg. data record Bachelor (180 ECTS) Biologie - 2010						

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 25 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	title				Abbreviation	
Tissue e	engine	ering 2		-	03-5S2TE-102-m01	
Module coordinator				Module offered by		
holder o tal)	holder of the Chair of Tissue Engineering (University Hospi- Faculty of Medicine					
ECTS	Metho	d of grading	Only after succ. con	npl. of module(s)		
		rical grade		• • • •		
Duratio	n	Module level	Other prerequisites			
1 semes		undergraduate			regular attendance o	fexercises
		0		Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise		
				beginning of the cour	•	
Content	<u>ا</u>					
		(i			in addition discourse and	
		ssue culture for medica gical circumstances for			in which tissue grow	vs, simulati-
Intende	d learr	ing outcomes				
Student	s have	developed a fundame	ntal knowledge of cell	biology, cell culture,	tissue engineering a	and regene-
rative m	edicin	e. In addition, they hav	e acquired hands-on e	expertise in histologi	cal, molecular and b	
method	s for th	e quantitative and qua	litative characterisatio	on of cells and tissue		
Courses	i (type,	number of weekly con	tact hours, language –	- if other than Germa	ın)	
Ü + S (n	o infor	mation on SWS (weekly	/ contact hours) and co	ourse language avail	able)	
		essment (type, scope, on on whether module			tion offered — if not	every seme-
med abo Allocati	out the on of p		the assessment prior t	to the course		
Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of ECTS credits (qualitative ranking) and, secondly, according to their otal number of ECTS credits achieved according to the number of all module components in the subject of Biologie (Biology) (excluding Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their						
Bachelor's w	vith 1 maj	or Biology (2010)		rg • generated 26-Aug-2024		page 26 / 252
				rd Bachelor (180 ECTS) Biolo		

following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 27 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title Abbreviation					Abbreviation
Virology 2				-	03-5S2VL-102-m01
Modul	e coord	linator		Module offered by	
holder	ofthe	Chair of Virology		Faculty of Medicine	2
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of seminar
			and lab course as s	pecified at the begin	ning of the course.
Conte	nts				
treatm	ent of v	viral infections and the pa			lecular virology, prevention and
		ning outcomes			
		have acquired a specific guidance as well as to pre			e able to plan and perform experi- terature.
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V + S +	- P (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)
		<b>sessment</b> (type, scope, la ion on whether module c			ation offered — if not every seme-
writter	n exami	nation (approx. 45 minut	es)		
Alloca	tion of	places			
Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects. Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa-					

ect Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of

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places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

# Teaching cycle

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

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Module appears in

Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 29 / 252
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Module title					Abbreviation
Molecular Biology of Cells 2				-	03-5S2ZM-102-m01
Modul	Module coordinator			Module offered by	
Institu	te of M	edical Radiology and Cell	Research (MSZ)	Faculty of Medicine	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate Admission prerequis			and seminar as well	l as successful comp	regular attendance of exercises letion of the respective exercises se.
Contents					
In this module, current problems in the research areas of stem cell biology and cellular differentiation will be dis- cussed and specific solutions will be taught. With the help of selected examples, participants will acquire practi- cal molecular biological techniques.					

#### Intended learning outcomes

Students have developed the ability to approach, analyse and critically interpret current problems in cellular molecular biology based on individually assigned tasks, using techniques of modern molecular and cell biology. They also have developed skills in experimental design, bench work, data analysis and the presentation of scientific results both orally and in writing.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the

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qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

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Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 31 / 252
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Module title			Abbreviation		
Cellular Tumorbiology 2 03-5S2ZT-102-m01			03-5S2ZT-102-m01		
Module coordinator Mo			Module offered by		
Chair o ne	f Rudol	f Virchow Center for Expe	erimental Biomedici-	Faculty of Medicine	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
10		rical grade		1	
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			regular attendance of exercises
					letion of the respective exercises
			as specified at the b	eginning of the cour	rse.
Conten	ts				
		examples and applying	hoth biochemical and	alvtical procedures a	nd imaging techniques, this mo-
					y and will acquaint them with the
					module will explain fundamental
causal	relatio	nships and approaches.			•
Intende	ed lear	ning outcomes			
Studen	ts have	e developed the ability to	approach, analyse a	nd critically interpre	t general problems in tumour bio-
					ogy and, in particular, imaging
			ills in experimental d	lesign, bench work,	data analysis and the presentati-
		c results.			
		, number of weekly conta			
Ü + S (r	no info	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
					tion offered — if not every seme-
		on on whether module ca		· · · · · · · · · · · · · · · · · · ·	
					) log (approx. 10 to 20 pages) or
					nation in groups of up to 3 can-
	didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course				
Allocat					
			or of applications av	and the number of	wailable places, places will be
					available places, places will be or's degree subject Biologie (Bio-
			-		will be two quotas: 95% of pla-
					ogy) with 180 ECTS credits and
		· · · · · · · · · · · · · · · · · · ·			s of the Bachelor's degree sub-
					gree subjects Computational Ma-
		-	• •		of the application-oriented sub-
			-		ould the number of places availa-
ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of					
places, there will be a uniform regulation for the courses of one module component. In this case, places on all					
courses	courses of a module component that are concerned will be allocated in a standardised procedure. In this proce-				
	dure, applicants who already have successfully completed at least one other module component of the respec-				
				-	ained and places re-allocated as
					e allocated according to the ap- ranked according to the number
					aken during their studies or of
		-			Chemistry), Physik (Physics), Ma-
thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked,					
	firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking)				
and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants'					

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position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 33 / 252
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Module	e title					Abbreviation
Immun	ology	3				03-6S3IM-102-m01
Module	e coord	linator			Module offered by	
holder	ofthe	Professorship of Imm	unogenetics		Faculty of Medicine	2
ECTS	Meth	od of grading	Only after succ	Only after succ. compl. of module(s)		
15	nume	rical grade	e			
Duration Module level Oth		Other prerequis	Other prerequisites			
1 seme	ster	undergraduate	Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise as specified at the beginning of the course.			
Conten				•	- the mediate (11) -	Idress specific problems in im-

In 6-week lab courses that will be accompanied by seminars, the module will address specific problems in immunology such as immunomodulation, immunogenetics, infection immunology, signal transduction in immune cells.

#### Intended learning outcomes

The students acquire extended knowledge and skills in the area of immune functions. They are qualified to plan and perform experiments under supervision and present the data, taking into account current literature.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### Allocation of places

Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module

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components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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#### **Teaching cycle**

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

## Module appears in

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Module ti	tle			Abbreviation
Clinical Biochemistry 3 / Laboratory Medicine			03-6S3KB-102-m01	
Module coordinator Mo			Modulo offered by	
			Module offered by	·
holder of chemistry	the Chair of Clinical Biochemi ′	istry and Pathobio-	Faculty of Medicine	
	lethod of grading	Only after succ. com	pl. of module(s)	
15 n	umerical grade			
Duration	Module level	Other prerequisites		
1 semeste	er undergraduate	and seminar as well		regular attendance of exercises eletion of the respective exercises rse.
Contents				
means of processes		ical mechanisms are cardiovascular trans	compared to the res formation). Molecula	pective regular physiological ar genetic and functional bioche-
Intended	learning outcomes			
modern m proach, a	nolecular biology and biocher	nistry and have deve s in clinical biochemi	loped a fundamenta stry. They also have	hes that are commonly used in l understanding of how to ap- developed skills in experimental h orally and in writing.
Courses (	type, number of weekly conta	ct hours, language —	· if other than Germa	ın)
Ü + S (no	information on SWS (weekly of	contact hours) and co	ourse language avail	able)
	<b>f assessment</b> (type, scope, la mation on whether module ca			tion offered — if not every seme-
methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course				
Allocation	n of places	· · · · · ·		
allocated logy) with ces will be 5% of pla- ject Biolo thematics ject Biolo ble in one the other places, th courses o dure, app tive modu they beco plicants' µ of ECTS co all modul thematik firstly, acc	as follows: Places will primar 180 ECTS credits. Should the e allocated to students of the ces (a minimum of one partici gie (Biology) with 60 ECTS cre s and Mathematik (Mathemati gy (as well as potentially to st e quota exceed the number of quota. Should there be, within here will be a uniform regulation of a module component that a clicants who already have suc- ule will be given preferential come available. Selection proce- previous academic achievement e components in the subject of (Mathematics)) at the time of cording to their average grade	ily be allocated to stu module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 EG udents of other 'imper applications, the rem n one module composed on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla ents. For this purposed I their average grade of Biologie (Biology) ( application. This will e weighted according	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta acces will primarily be of all assessments t (excluding Chemie (C be done as follows: to the number of EC	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) tative ranking). The applicants'

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 36 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 37 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Clinica	l Neuro	biology 3			03-6S3KN-102-m01
Module coordinator				Module offered by	l
holder	of the (	Chair of Clinical Neurobic	ology	Faculty of Medicine	2
ECTS		od of grading	Only after succ. con	npl. of module(s)	
15	1	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ester	undergraduate		as successful comp	regular attendance of exercises pletion of the respective exercise rse.
Conter	nts				
the fur cesses ted exa	ndamen s will be amples	tal principles of as well a compared with patholog	as analytical techniqu gical conditions (e. g.	es used in clinical n Parkinson's and Alz	dule will acquaint students with eurobiology. Physiological pro- heimer's disease). Using selec- unctional biochemical correlati-
Intend	ed lear	ning outcomes			
dividua dents v pret th <b>Course</b>	al tasks will also eir data <b>es</b> (type	, using techniques of mo have a fair knowledge t and present their resea number of weekly conta	odern neurobiology to hat will enable them rch results both orally act hours, language –	solve, analyse and to plan and perform and in writing. - if other than Germa	
Ü + S (	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	lable)
		<b>essment</b> (type, scope, la on on whether module c			ation offered — if not every seme
c) oral didate	examin s (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor
Allocat	tion of p	olaces			
allocat logy) w ces wil 5% of j ject Bid thema ject Bid ble in o the oth places course dure, a tive mo they be plicant of ECTS all moo thema firstly,	ed as for vith 180 Il be allo places ( ologie ( tics and ology (a one quo ner quo ner quo there y s of a n opplicar odule w ecome a s' previ S credit dule con tik (Mat accord	bllows: Places will prima ECTS credits. Should the ocated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to s ota exceed the number of ta. Should there be, with will be a uniform regulatin nodule component that a sts who already have suc ill be given preferential of available. Selection proc ous academic achievem s they have achieved and mponents in the subject hematics)) at the time of ing to their average grade	rily be allocated to stree e module be used in or Bachelor's degree su- ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp f applications, the rer in one module compo- on for the courses of the concerned will be consideration. A waiti ess group 1 (95%): Pl- ents. For this purposed their average grade of Biologie (Biology) f application. This will e weighted according	udents of the Bache other subjects, there abject Biologie (Biol- allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo- ng list will be mainta aces will primarily be of all assessments to (excluding Chemie (C l be done as follows to the number of EC	available places, places will be lor's degree subject Biologie (Bio e will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma of the application-oriented sub- ould the number of places available allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number caken during their studies or of Chemistry), Physik (Physics), Ma : First, applicants will be ranked, its credits (qualitative ranking) tative ranking). The applicants'

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 38 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 39 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation	
Physio	Physiological Chemistry 3				03-6S3PC-102-m01	
Module coordinator			Module offered by	<u> </u>		
		Chair of Physiological Ch	nemistry	Faculty of Medicine	. <u></u>	
ECTS		od of grading	Only after succ. con		·	
15		rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate	Admission prerequi	site to assessment: as successful comp	letion of the respect	
Conten	ts					
questic erration mental	ons fron ns. Mol bioche	wledge and research-or n human biochemistry. ecular genetic and func mistry, pathobiochemis	Physiological process tional biochemical net	es are compared wit works are presented	h examples of patho	logical ab-
Intende	ed learr	ing outcomes				
mistry l They al	based o so have	developed the ability t on individually assigned e developed in-depth sk c results.	l tasks, using techniqu	ies of modern moleo	ular biology and bio	chemistry.
Course	<b>s</b> (type,	number of weekly cont	act hours, language —	- if other than Germa	ın)	
Ü + S (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)	
ster, in	formati	essment (type, scope, l on on whether module	can be chosen to earn	a bonus)		-
c) oral ( didates	examin 5 (appro	sessment: a) written ex ation of one candidate ox. 20 minutes per cand e method and length of	each (approx. 30 minu idate) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	nation in groups of u	up to 3 can-
Allocat	ion of p	olaces				
allocate logy) w ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicant of ECTS all mod themat firstly, a and, se	ed as fo ith 180 l be allo blaces ( blogie (l ics and blogy (a blogy (a one quo er quot there v s of a m pplican bdule w ecome a s' previ c credits fule cor ik (Mat accordi econdly	ces: 3. Should the num ollows: Places will prima ECTS credits. Should the bacted to students of the a minimum of one parti Biology) with 60 ECTS cred Mathematik (Mathema s well as potentially to se ta exceed the number of a. Should there be, with vill be a uniform regulat odule component that its who already have su ill be given preferential available. Selection proc ous academic achieven s they have achieved an inponents in the subject hematics)) at the time of ng to their average grad a according to their tota hird ranking will be calc	arily be allocated to stu e module be used in or e Bachelor's degree su cipant in total) will be redits and to students tics), each with 180 E0 students of other 'imp of applications, the ren in one module compo- ion for the courses of are concerned will be ccessfully completed a consideration. A waiti tess group 1 (95%): Pla nents. For this purpose d their average grade of Biologie (Biology) of application. This will e weighted according I number of ECTS cred	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (C l be done as follows) to the number of EC its achieved (quantit	or's degree subject will be two quotas: ogy) with 180 ECTS c s of the Bachelor's c gree subjects Comp of the application-ori ould the number of p e allocated to applic es with a restricted n nent. In this case, pla ardised procedure. In odule component of ained and places re-a e allocated according to aken during their stu Chemistry), Physik (F First, applicants wil TS credits (qualitativ cative ranking). The a	Biologie (Bio 95% of pla- redits and degree sub- utational Ma ented sub- olaces availa cants from umber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- l be ranked, ve ranking) applicants'
Bachelor's	with 1 maj	or Biology (2010)		rg • generated 26-Aug-2024 rd Bachelor (180 ECTS) Biolo		page 40 / 252

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 41 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation	
Physiology				03-6S3PH-102-m01	
Module coord	inator		Module offered by		
holder of the Chair of Physiology I			Faculty of Medicine		
	od of grading	Only after succ. con	· · · · · ·		
	rical grade				
Duration	Module level	Other prerequisites			
1 semester	undergraduate	and seminar as well	site to assessment: 1 as successful comp peginning of the cour	letion of the respect	
Contents					
res in physiolo diovascular di will explain th	e, students will become f ogy. Physiological proces sorders). Using selected e underlying physiologic	ses will be compared examples of physiolo	l with pathological construction of the second s	onditions (e.g. horm	nonal or car-
Intended learn					
on individually	e developed the ability to y assigned tasks, using t xperimental design, ben	echniques of modern	physiology and bio	chemistry. They also	have develo-
Courses (type,	, number of weekly conta	act hours, language –	- if other than Germa	n)	
Ü + S (no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)	
	e <b>ssment</b> (type, scope, la on on whether module c			tion offered — if not	every seme-
c) oral examin didates (appro	sessment: a) written exa ation of one candidate e ox. 20 minutes per candi e method and length of t	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	nation in groups of	up to 3 can-
Allocation of p	olaces				
allocated as fo logy) with 180 ces will be allo 5% of places ( ject Biologie (I thematics and ject Biology (a ble in one quo the other quot places, there w courses of a m dure, applican tive module w they become a plicants' previ of ECTS credits all module cor thematik (Mat firstly, accordi and, secondly position in a th	ces: 3. Should the numb ollows: Places will prima ECTS credits. Should the ocated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to s ta exceed the number of a. Should there be, with will be a uniform regulati nodule component that a sts who already have suc ill be given preferential of available. Selection proc ous academic achievem s they have achieved and mponents in the subject hematics)) at the time of ng to their average grade , according to their total hird ranking will be calcu s third ranking. Among ap	rily be allocated to strue e module be used in or Bachelor's degree su- ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the rer in one module compo- on for the courses of the concerned will be cessfully completed a consideration. A waiti ess group 1 (95%): Pla- ents. For this purpose d their average grade of Biologie (Biology) application. This will e weighted according number of ECTS cred alated as the sum of t	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). She naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit hese two rankings, a	or's degree subject will be two quotas: ogy) with 180 ECTS c is of the Bachelor's of gree subjects Comp of the application-ori ould the number of p e allocated to applic es with a restricted n hent. In this case, pla ardised procedure. In odule component of and places re- allocated according ranked according to aken during their stu Chemistry), Physik (F First, applicants will TS credits (qualitative ranking). The a and places will be all	Biologie (Bio- 95% of pla- redits and degree sub- utational Ma- ented sub- olaces availa- cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- ll be ranked, ve ranking) applicants' located ac-
Bachelor's with 1 maj	or Biology (2010)		rg • generated 26-Aug-2024		page 42 / 252
		reg. data reco	rd Bachelor (180 ECTS) Biolog	gie - 2010	

qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

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Teaching cycle

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

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### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 43 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Struct	le title				Abbreviation	
Structural Biology 3				03-6S3ST-102-m01		
Module coordinator				Module offered by	<u> </u>	
holder of the Chair of Structural Biology		J\/	Faculty of Medicine			
ECTS		od of grading	Only after succ. con	, ,		
15	_	rical grade				
Durati	_	Module level	Other prerequisites	<b>i</b>		
1 seme		undergraduate	Admission prerequi and seminar as wel	site to assessment: l as successful comp	oletion of the respect	
• •			as specified at the t	peginning of the cou	rse.	
Conte			_			
insigh from tl	its and t he follo	vill use examples from co o also illustrate the fund wing list: DNA repair, pro l structure-based design	lamental concepts of otein folding in the en	structural biology. S doplasmic reticulum	cientific projects ma	y be selected
Intend	led lear	ning outcomes				
emplo also a ten pre	oying dif cquire s esentati	gain the ability to solve ferent techniques from t kills in the design of exp ion of scientific results.	he fields of molecular periments, their perfor	biology, biochemist rmance and evaluati	try and crystallograp on as well as in the o	hy. They will
Course	<b>es</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	an)	
Ü + S (	(no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)	
metho	ods of as	ion on whether module o ssessment: a) written exa				
didate	es (appr	ation of one candidate e ox. 20 minutes per cand e method and length of t	each (approx. 30 minu idate) or e) presentati	utes) or d) oral exam on (approx. 20 to 30	ination in groups of	up to 3 can-
didate med a	es (approi	ox. 20 minutes per cand e method and length of t	each (approx. 30 minu idate) or e) presentati	utes) or d) oral exam on (approx. 20 to 30	ination in groups of	up to 3 can-
didate med a Alloca alloca logy) v ces wi 5% of ject Bi thema ject Bi ble in the oth places course dure, a tive m they b plican of ECT all mo thema firstly, and, s	es (appro- bout the bout the ted as for with 180 ill be alle places ( iologie ( atics and iology (a iology (a one quo s, there es of a n application odule w become a its' prev S credition dule co atik (Mat accord)	ox. 20 minutes per cand e method and length of t places aces: 3. Should the numb ollows: Places will prima o ECTS credits. Should th ocated to students of the (a minimum of one partie Biology) with 60 ECTS cr d Mathematik (Mathema as well as potentially to so the exceed the number of ta. Should there be, with will be a uniform regulat nodule component that a this who already have suc- rill be given preferential available. Selection pro- tious academic achievem s they have achieved an mponents in the subject thematics)) at the time o ing to their average grad a according to their total	each (approx. 30 minu- idate) or e) presentation the assessment prior per of applications ex- inity be allocated to st e module be used in or e Bachelor's degree su- cipant in total) will be edits and to students tics), each with 180 Er- students of other 'imp f applications, the rem- in one module compo- ion for the courses of are concerned will be ccessfully completed consideration. A waiti- tess group 1 (95%): Pl- nents. For this purposed their average grade of Biologie (Biology) f application. This will e weighted according number of ECTS cred	ates) or d) oral examination (approx. 20 to 30 to the course ceed the number of a udents of the Bache other subjects, there ubject Biologie (Biola allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will b onent, several course one module compor allocated in a standa at least one other mo ing list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows to the number of EC its achieved (quantit	available places, pla available places, pla lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's degree subjects Comp of the application-ori ould the number of be allocated to applie es with a restricted r nent. In this case, pla ardised procedure. If odule component of ained and places re- e allocated according to taken during their str Chemistry), Physik (I : First, applicants wi TS credits (qualitative tative ranking). The a	up to 3 can- will be infor- ices will be Biologie (Bio 95% of pla- credits and degree sub- outational Ma iented sub- places availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- ll be ranked, ve ranking) applicants'
didate med a <b>Alloca</b> logy) v ces wi 5% of ject Bi thema ject Bi ble in the oth places course dure, a tive m they b plican of ECT all mo thema firstly, and, s positio	es (appro- bout the <b>stion of j</b> er of pla ted as for with 180 ill be alle places ( atics and iology (a one quo s, there es of a n applican odule w become a is credit dule co atik (Mat accord secondly on in a t	ox. 20 minutes per cand e method and length of t places aces: 3. Should the numb ollows: Places will prima a ECTS credits. Should th ocated to students of the (a minimum of one partia Biology) with 60 ECTS cr d Mathematik (Mathema as well as potentially to so the exceed the number of the should there be, with will be a uniform regulat nodule component that a the who already have suc- vill be given preferential available. Selection pro- cious academic achievem s they have achieved an imponents in the subject thematics)) at the time o ing to their average grad	each (approx. 30 minu- idate) or e) presentation the assessment prior of per of applications ex- inity be allocated to st e module be used in of e Bachelor's degree su- cipant in total) will be redits and to students tics), each with 180 E- students of other 'imp f applications, the rem- in one module compo- ion for the courses of are concerned will be consideration. A waition tess group 1 (95%): Pla- nents. For this purpose d their average grade of Biologie (Biology) f application. This will e weighted according number of ECTS cred ulated as the sum of the constant of the sum of the sum of the constant of the sum of the sum of the sum of the sum of the constant of the sum of the s	ates) or d) oral examination (approx. 20 to 30 to the course ceed the number of a udents of the Bache other subjects, there ubject Biologie (Biola allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will b onent, several course one module compor allocated in a standa at least one other mo ing list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows to the number of EC its achieved (quantit	ination in groups of minutes); students available places, pla lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of gree subjects Comp of the application-or ould the number of be allocated to applie es with a restricted r nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated accordin ranked according to taken during their str Chemistry), Physik (I : First, applicants wi TS credits (qualitative tative ranking). The a	up to 3 can- will be infor beces will be Biologie (Bio 95% of pla- credits and degree sub- outational Ma iented sub- places availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma Il be ranked, ve ranking) applicants'

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 45 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation
Tissue engineering 3				03-6S3TE-102-m01
Module coordinator			Module offered by	
holder of the Chair of Tissue Engineering (University Hospi- Faculty of Medicine tal)				
ECTS Meth	od of grading	Only after succ. com	pl. of module(s)	
15 nume	rical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate		as successful comp	regular attendance of exercises letion of the respective exercises rse.
Contents				
	ssue culture for medical a ogical circumstances for c			in which tissue grows, simulati-
Intended lear	ning outcomes			
	have acquired knowledge hey are able to work on s		esearch in the field o	f tissue engineering and the me-
Courses (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)
Ü + S (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
	sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
c) oral examir didates (appr	ation of one candidate e ox. 20 minutes per candio	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	
Allocation of	places			
c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio- logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa- ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excludi				

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

### Additional information

Workload

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## **Teaching cycle**

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 47 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	title				Abbreviation
Virolog	у з				03-6S3VL-102-m01
Module	coord	inator		Module offered by	
holder	of the (	Chair of Virology		Faculty of Medicine	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
15	nume	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate		as successful comp	regular attendance of exercises letion of the respective exercises
Conten	ts				
ln 6-we blems i py.	ek lab in virolo	ogy and, in particular, qu			ldress specific and current pro- ted viruses and viral gene thera-
Intende	ed learn	ning outcomes			
vectors develog written	(retrov p skills presen	iral, adenoviral or AAV-b in experimental design, tation of scientific result	ased vectors) for gen the performance and s, taking into accoun	e therapy of innate of evaluation of experi t current literature.	r including the application of viral or acquired diseases. They also iments as well as in the oral and
		, number of weekly conta			
Ü + S (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
ster, in	formati	on on whether module ca	an be chosen to earn	a bonus)	tion offered — if not every seme- ) log (approx. 10 to 20 pages) or
c) oral e didates	examin 5 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	ination in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces			
allocate logy) wi ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themat firstly, a and, se position	ed as fo ith 180 l be allo blaces ( blogie (l ics and blogy (a one quo er quot there v s of a m pplicar dule w come a s' previ c credits lule cor ik (Mat accordi condly n in a t	ollows: Places will primar ECTS credits. Should the ocated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to st ta exceed the number of a. Should there be, within will be a uniform regulation odule component that a sts who already have suc- ill be given preferential c available. Selection proce ous academic achievements they have achieved and ponents in the subject hematics)) at the time of ng to their average grade , according to their total hird ranking will be calcu	ily be allocated to struct module be used in or Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the ren in one module composed on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla ents. For this purposed their average grade of Biologie (Biology) application. This will e weighted according number of ECTS cred lated as the sum of t	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Shi naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit hese two rankings, a	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and as of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) tative ranking). The applicants' and places will be allocated ac- vill be allocated according to the

 Bachelor's with 1 major Biology (2010)
 JMU Würzburg • generated 26-Aug-2024 • exam.
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 reg. data record Bachelor (180 ECTS) Biologie - 2010
 Page 48 / 252

qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

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Teaching cycle

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

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### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 49 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Cellular Molecular Biology 3				03-6S3ZM-102-m01	
Modul	e coord	linator		Module offered by	
Institu	te of M	edical Radiology and	Cell Research (MSZ)	Faculty of Medicine	2
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
15	nume	erical grade			
Durati	on	Module level	Other prerequisite	S	
1 seme	ester	undergraduate	and seminar as we		regular attendance of exercises oletion of the respective exercises rse.
Conter	nts				
		•		•,	cellular differentiation will be dis- s, participants will acquire practi-

cussed and specific solutions will be taught. With the help of selected examples, participants will acquire prace cal molecular biological techniques.

#### Intended learning outcomes

Students have developed the ability to approach, analyse and critically interpret current problems in cellular molecular biology based on individually assigned tasks, using techniques of modern molecular and cell biology. They also have developed skills in experimental design, bench work, data analysis and the presentation of scientific results both orally and in writing.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

### **Allocation of places**

Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the

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qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

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Teaching cycle

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

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### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 51 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Cellular Tumorbiology 3         og363ZT-102-m01           Module coordinator         Module offered by           Chair of Rudolf Virchow Center for Experimental Biomedici- re         Faculty of Medicine           ECT5         Method of grading         Only after succ. compl. of module(s)           15         inumerical grade         -           15         mumerical grade         -           15         mudergraduate         Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise: as specified at the beginning of the course.           Contents         Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with appraches in tumour biology.           Intended learning outcomes         Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods.           Courses (type, number of weekly contact hours, language — if other than German)         Ú + 5 (ninformation on SWS (weekly contact hours) and course language available)           Method of assessment (type, scope, language - if other than German, examination in groups of up to 3 can- iddates (approx. 20 minutes per candidate) or e) presentation (approx. 40 to 30 inputse); students will be infor med about the method and length of the assessment piror to the course           O rate axmination on whether module cane be chosen t	Module title				Abbreviation	
Chair of Rudolf Virchow Center for Experimental Biomedici-       Faculty of Medicine         RETS       Method of grading       Only after succ. compl. of module(s)         15       numerical grade       -         Duration       Module level       Other prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise: as specified at the beginning of the course.         Contents       Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with approaches in tumour biology.         Intended learning outcomes       Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentation of scientific results.         Courses (type, number of weekly contact hours, language — if other than German)       U + 5 (no information on SWS (weekly contact hours) and course language available)         Method of assessment (type, scope, language — if other than German)       U + 5 (no information on SWS (weekly contact hours) and course language available)         Method of assessment is a) written examination (approx. 4p to 6 ominutes) or b) log (approx. 1o to 2p ages) or c) col and examination on groups of up to 2 candidates (approx. 2o minutes) er candidates och (approx. 3o minutes) or b) log (approx. 1o to 2p ages) or c) col and examination on explores will be rinformed about the mumber of applic	Cellular Tum	orbiology 3			03-6S3ZT-102-m01	
Chair of Rudolf Virchow Center for Experimental Biomedici-       Faculty of Medicine         RETS       Method of grading       Only after succ. compl. of module(s)         15       numerical grade       -         Duration       Module level       Other prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise: as specified at the beginning of the course.         Contents       Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with approaches in tumour biology.         Intended learning outcomes       Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentation of scientific results.         Courses (type, number of weekly contact hours, language — if other than German)       U + 5 (no information on SWS (weekly contact hours) and course language available)         Method of assessment (type, scope, language — if other than German)       U + 5 (no information on SWS (weekly contact hours) and course language available)         Method of assessment is a) written examination (approx. 4p to 6 ominutes) or b) log (approx. 1o to 2p ages) or c) col and examination on groups of up to 2 candidates (approx. 2o minutes) er candidates och (approx. 3o minutes) or b) log (approx. 1o to 2p ages) or c) col and examination on explores will be rinformed about the mumber of applic	Module coor	dinator		Module offered by	<u> </u>	
ECTS         Method of grading         Only after succ. compl. of module(s)           15         inumerical grade            Duration         Module level         Other prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercise: as specified at the beginning of the course.           Contents         Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with approaches in tumour biology.           Intended learning outcomes         Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods.           They also have developed avanced skills in experimental design, bench work, data analysis and the presentation of scientific results.           Courses (type, number of weekly contact hours, language — if other than German)         U           U + S (no information on SWS (weekly contact hours) and course language available)           Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)           oc) cal examination of one candidate each (approx. 30 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) c) cal examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidate (approx. 20 minutes) or d) oral examination in groups of up to 3 candidate (approx. 20 minutes) or d) oral examination in groups of up to	Chair of Rud		perimental Biomedici-		2	
15         numerical grade		nod of grading	Only after succ. con	npl. of module(s)		
Duration         Module level         Other prerequisites           1 semester         undergraduate         Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.           Contents         Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with approaches in tumour biology.           Intended learning outcomes         Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentati on of scientific results.           Courses (type, number of weekly contact hours, language — if other than German)         O           Q + 5 (no information on SWS (weekly contact hours) and course language available)         Method of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. to to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx, 20 minutes per candidate) or e) presentation (approx, 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course           Allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated						
a semester         undergraduate         Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.           Contents         Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquain them with approaches in tumour biology.           Intended learning outcomes         Intended learning outcomes           Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentati on of scientific results.           Courses (type, number of weekly contact hours, language — if other than German)         Other exercises as seessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)           method of assessment: a) written examination (approx. 45 to 6 on inutes) or b) log (approx. to to 20 pages) or 0 cal examination of one candidate each (approx. 30 minutes) or d) cal examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course           Allocation of places:         3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will be allocated to students of the Bachelor's degree subject Sonydithe polaces, stree will be aui	-	-	Other prerequisites			
Discussing specific problems, this module will impart to students a more in-depth knowledge of tumour biology and will acquaint them with approaches in tumour biology. Intended learning outcomes Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentati on of scientific results. Courses (type, number of weekly contact hours, language — if other than German) U + S (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on sWS (weekly contact hours) and course language available) or ol cal examination of one candidate each (approx. 30 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course Allocation of places: Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio logy) with 180 ECTS credits. And o Students of the Bachelor's degree subjects computational Ma thematics and Mathematics), each with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availab be in one quota exceed the number of applications. He remaining places will be allocated to applicants from the other			Admission prerequi and seminar as wel	site to assessment: l as successful comp	oletion of the respect	
and will acquaint them with approaches in tumour biology. Intendel learning outcomes Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentati on of scientific results. <b>Courses</b> (type, number of weekly contact hours, language — if other than German) U + S (no information on SWS (weekly contact hours) and course language available) <b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on SWS (weekly contact hours) and course language available) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places:</b> Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subjects. Computational Ma thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of othe Fimporting' subjects). Should the number of places, there will be a uniform regulation for the courses of one module component. In this case, places availa ble in one quota exceed the number of applications. He remaining places will be allocat	Contents					
Students have developed the ability to approach, analyse and critically interpret specific problems in tumour biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentation of scientific results. Courses (type, number of weekly contact hours, language — if other than German)				udents a more in-dep	oth knowledge of tun	nour biology
biology based on individually assigned tasks, using modern techniques and, in particular, imaging methods. They also have developed advanced skills in experimental design, bench work, data analysis and the presentation on of scientific results. <b>Courses</b> (type, number of weekly contact hours, language — if other than German) Ü + S (no information on SWS (weekly contact hours) and course language available) <b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places:</b> <b>Number of places:</b> 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 480 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ses will be allocated to students of the Bachelor's degree subject Computational Ma thematics and Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of applications, there will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of ne module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce-	Intended lea	rning outcomes				
Ü + S (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 90 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course Allocation of places Allocation of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Ma thematics and Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biologie (Biology) with 60 ECTS credits and to students of one module component, in this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number	biology base They also ha on of scienti	d on individually assign ve developed advanced fic results.	ed tasks, using modern skills in experimental	n techniques and, in design, bench work,	particular, imaging data analysis and th	methods.
Method of assessment (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject S computational Ma thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biologie (Biology) with 60 ECTS credits of other 'importing' subjects). Should the number of places availa ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should thre be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courser of one module component of the respec- tive module will be given preferential consideration. A waiting list will be mantadineed and places re-allocated as or all module component that are concerned will be allocated in a standardised procedure. In this proce- dure, appli						
ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places</b> <b>Allocation of places</b> : 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subjects Computational Ma thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will be allocated according to the au- plicants' previous academic achievements. For this purpose, applicants will be ranked according to the au- plicants' previous academic achievements. For this purpose, applicants will be ranked according to the au- plicants' previous academic achieved and their average grade of all assessments taken during their studies or of all module comp						
c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Somputational Ma thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the ap- plicants' previous academic achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma- thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted ac					ition offered — if not	every seme-
Number of places: 3. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking. Among applicants with the same ranking, pl	c) oral exam didates (app	ination of one candidate rox. 20 minutes per cano	each (approx. 30 minu didate) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	ination in groups of (	up to 3 can-
allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 480 ECTS credits and to students of the Bachelor's degree subjects Computational Ma thematics and Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to the sace ording to their total number of ECTS credits ach	Allocation of	places				
	allocated as logy) with 18 ces will be a 5% of places ject Biologie thematics ar ject Biology ble in one qu the other qu places, there courses of a dure, applica tive module they become plicants' pre of ECTS cred all module c thematik (Ma firstly, accord position in a	follows: Places will prim o ECTS credits. Should the llocated to students of the G (a minimum of one part (Biology) with 60 ECTS of and Mathematik (Mathematik (as well as potentially to uota exceed the number ota. Should there be, with will be a uniform regular module component that ants who already have su will be given preferential e available. Selection provious academic achiever its they have achieved an omponents in the subject athematics)) at the time ding to their average grad third ranking will be call	arily be allocated to st he module be used in o he Bachelor's degree si icipant in total) will be tredits and to students atics), each with 180 Ef students of other 'imp of applications, the ren hin one module compo- tion for the courses of are concerned will be accessfully completed consideration. A waiti cess group 1 (95%): Pl ments. For this purpose and their average grade at of Biologie (Biology) of application. This will de weighted according al number of ECTS cred culated as the sum of t	udents of the Bachel other subjects, there ubject Biologie (Biole allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows to the number of EC its achieved (quantit hese two rankings, a	lor's degree subject will be two quotas: ogy) with 180 ECTS c ts of the Bachelor's c gree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted n nent. In this case, pla ardised procedure. In odule component of ained and places re- a allocated according ranked according to taken during their stu Chemistry), Physik (F : First, applicants wil TS credits (qualitativ tative ranking). The a	Biologie (Bio 95% of pla- redits and degree sub- utational Ma ented sub- olaces availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- ll be ranked, ve ranking) applicants' located ac-
			JMU Würzbı	Irg • generated 26-Aug-2024	• exam.	_

qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

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Teaching cycle

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

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### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 53 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation
Basic Career	Strategies			03-SQF-SBE-102-m01
Module coor	dinator		Module offered by	
holder of the	Chair of Molecular Infecti	on Biology	Faculty of Medicine	
	od of grading	Only after succ. con	npl. of module(s)	
3 num	erical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate			
Contents				
path that is r and non-acae ta, criteria fo	ight for them. Topics to be demic labour markets, how	discussed include: H w to attract funding fo management with a	now to successfully a or your own salary in particular emphasis	ill help them choose the career apply for jobs on the academic research, the presentation of da- on scientific projects, strategies tent.
Intended lea	rning outcomes			
know how to ve developed vely - in scier are thus able targets. They	attract physical and huma l enhanced skills in data p nce. Students are familiar to define targets that are are aware of the issue of ethodical knowledge and	an resources for resea presentation in both o with the fundamenta achievable in terms o interpersonal conflict	arch including fundir oral and written form ls for the strategic pl of timescales and sc ts and are familiar wi	ff from among applicants. They ng for their own salary. They ha- , in particular - but not exclusi- lanning of research projects and ope as well as to achieve these ith essential strategies to resolve students for leading a research
	e, number of weekly conta	ct hours, language –	- if other than Germa	n)
	ation on SWS (weekly cont			
	sessment (type, scope, la tion on whether module ca			tion offered — if not every seme-
written exam	ination (approx. 20 minut	es)		
Allocation of	places			
Number of pl allocated as logy) with 18 ces will be al 5% of places ject Biologie thematics an ject Biology ( ble in one qu the other quo places, there courses of a dure, applica tive module of they become plicants' prev of ECTS credi all module co thematik (Ma firstly, accord	aces: 40. Should the num follows: Places will primar o ECTS credits. Should the located to students of the (a minimum of one partic (Biology) with 60 ECTS cred d Mathematik (Mathemat as well as potentially to st ota exceed the number of ota. Should there be, withi will be a uniform regulation module component that a ants who already have suc vill be given preferential c available. Selection proce- vious academic achievement ts they have achieved and omponents in the subject othematics)) at the time of ling to their average grade y, according to their total	ily be allocated to stu e module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the ren in one module composed on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla ents. For this purposed their average grade of Biologie (Biology) application. This will e weighted according number of ECTS cred	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). She naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit	Favailable places, places will be or's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and its of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) rative ranking). The applicants' and places will be allocated ac-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 54 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

Module appears in

Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 55 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

From cells to			-	Abbreviation
NA 1 1	organisms			07-1A1ZO-102-m01
Module coor	linator		Module offered by	<u> </u>
	ies Biologie (Biology)		Faculty of Biology	
	od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	
	erical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate			isites are listed in the section or
1 Semester		assessments.	, additional prorequ	
Contents	1			
cal categorie ting with its r ferences and plants). The s and hypothes thods. Using to the phylog will acquire t organisms, w tents of the n so acquire ar <b>Intended lea</b> - Knowledge ledge of the s mal and plan liarity with th	s. Building on this known nacroscopic structure b similarities between pro- second part will address ses will be discussed and the examples of plants enetic diversity of euka he fundamental knowle ith morphology and cyth nodule are relevant for l ad practise some of the ming outcomes of the structures of pro- specific characteristics t cells Ability to recog e concepts of phylogen eristics and major repre	vledge, the course will the efore moving on to its moved on the intro- rokaryotic cells (bactering one of the central issues and animals, the subserverted of great edge necessary to under toology being discussed biological disciplines and fundamental preparation karyotic and eukaryotic of the intracellular and grise evolution as the dreat events of the subserverted etic relationships betw	then discuss the cell microscopic structur a, archaebacteria) a ues of biology: evolu oduced to major phy equent module com roups in the plant an rstand the forms and in an evolutionary a t all levels of biologi on skills bioscientist cells and their (biole extracellular structu riving force behind t een plants/animals.	blocks of life as well as biologi- l, the smallest unit of life, star- e. The course will point out dif- nd eukaryotic cells (animals, tion. Fundamental mechanisms logenetic reconstruction me- ponents will introduce students nd animal kingdoms, students d functions of animal and plant nd ecological context. The con- cal organisation. Students will a ts are often required to possess. ogical) macromolecules Know- res of prokaryotes as well as ani the phylogeny of species Fami- Familiarity with the distinguis- al kingdoms - Ability to select the
se plant and			articular scientific is	sues Familiarity with the comp
se plant and nents and fu		es Fundamental skills	articular scientific is in the interpretation	
se plant and nents and fur preparations	nctioning of microscope	es Fundamental skills undamental preparatio	articular scientific is in the interpretation n skills.	sues Familiarity with the component of macroscopic and histologic
se plant and nents and fur preparations <b>Courses</b> (type This module • 07-1A1	nctioning of microscope by light microscopy F e, number of weekly cor has 4 components; info	es Fundamental skills undamental preparatio ntact hours, language – prmation on courses list 2-072, 07-1A1ZO-4T-072	articular scientific is in the interpretation on skills. - if other than Germa ted separately for ea 2, and 07-1A1ZO-2E-	sues Familiarity with the compo n of macroscopic and histologic an)
se plant and nents and fur preparations <b>Courses</b> (type This module • 07-1A12 langua <b>Method of as</b>	nctioning of microscope by light microscopy F e, number of weekly cor has 4 components; info 20-1Z-072, 07-1A1ZO-3F ge and number of week	es Fundamental skills undamental preparatio ntact hours, language – ormation on courses list P-072, 07-1A1ZO-4T-072 ly contact hours availal , language — if other th	articular scientific is in the interpretation on skills. - if other than Germa ed separately for ea 2, and 07-1A1ZO-2E- ble) an German, examina	sues Familiarity with the component of macroscopic and histologic an) ch component.
se plant and nents and fur preparations <b>Courses</b> (type This module • 07-1A12 langua <b>Method of as</b> ster, informa This module	nctioning of microscope by light microscopy F e, number of weekly cor has 4 components; info 20-1Z-072, 07-1A1ZO-3F ge and number of week <b>sessment</b> (type, scope, tion on whether module	es Fundamental skills undamental preparatio ntact hours, language – prmation on courses list P-072, 07-1A1ZO-4T-072 ly contact hours availal , language — if other th e can be chosen to earn essment components. I	articular scientific is in the interpretation on skills. - if other than Germa ed separately for ea 2, and 07-1A1ZO-2E- ble) an German, examina a bonus) Jnless stated otherv	sues Familiarity with the comp n of macroscopic and histologic an) ch component. 102: V + Ü (no information on

## Allocation of places

### Additional information

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## Workload

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# Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 57 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Const	e title				Abbreviation
Genetic	cs, Neu	robiology, Behaviour			07-2A2GNV-072-m01
Module	e coord	inator		Module offered by	<u> </u>
Dean o	of Studi	es Biologie (Biology)		Faculty of Biology	
ECTS		od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	
6	nume	rical grade		•	
Duratio	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequ	isites are listed in the section on
Conten	nts				
Fundar	mental	principles of genetics, ne	eurobiology and beha	avioural biology.	
Intend	ed lear	ning outcomes			
bases o cal meo	of inhei chanisr	ritance.] [Version 2: Stud	ents will understand ed in animal behavio	that there are molec	iour to the molecular and formal ular, cellular and system biologi- o relate animal behaviour to the
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
• c	07-2A2( 07-2A2( 07-2A2(	GNV-2N-072: V + Ü (no inf GNV-3V-072: V + Ü (no inf	formation on SWS (we formation on SWS (we	ekly contact hours) a	and course language available) and course language available) and course language available)
ster, in Assess	iformati sment in	ion on whether module c n this module comprises	an be chosen to earn the assessments in t	a bonus) he individual modul	e components as specified be-
ster, in Assess low. Ur vidual <b>Assess</b> 2 • v	formation format	ion on whether module on In this module comprises ated otherwise, success ments. In module component o7 Method of grading: num examination (approx. 30	an be chosen to earn the assessments in t ful completion of the • <b>2A2GNV-1G-072:</b> Bas erical grade minutes)	a bonus) he individual modul module will require sic Genetics Basic Ge	e components as specified be- successful completion of all indi enetics
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## Teaching cycle

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

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Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2008) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Mathematics (2007) Bachelor' degree (1 major) Computational Mathematics (2009) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor' degree (1 major, 1 minor) Biology (Minor, 2008) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010) No final examination Special study offering (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 59 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation			
-	Physiology of Organisms 07-2A2PH-072-m01					
Module coordinator			Module offered by			
	of Studies Biologie (Biology)		Faculty of Biology			
ECTS	1	od of grading	Only after succ. compl. of module(s)			
9	I	rical grade				
Duratio	_	Module level	Other prerequisites			
1 seme	ester	undergraduate		, additional prerequ	isites are listed in th	e section on
Conter	Contents assessments.					
and wi ratory. metabo	ll provio The mc olic divo	vill acquaint students w de them with an opport dule will first address ersity. Subsequently, th of multicellular organis	unity to develop the fu he biochemistry of the ne module will discuss	ndamental skills for cell and will then m the physiological pr	working in a physiol ove on to discuss pr	logical labo- okaryotic
Intend	ed lear	ning outcomes				
		e developed an underst ndamental knowledge				
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)	
<ul> <li>This module comprises 3 module components. Information on courses will be listed separately for each module component.</li> <li>o7-2A2PH-1PR-072: V + Ü (no information on SWS (weekly contact hours) and course language available)</li> <li>o7-2A2PH-2PF-072: V + Ü (no information on SWS (weekly contact hours) and course language available)</li> <li>o7-2A2PH-3TI-072: V + Ü (no information on SWS (weekly contact hours) and course language available)</li> </ul>						
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)						
Assessment in this module comprises the assessments in the individual module components as specified be- low. Unless stated otherwise, successful completion of the module will require successful completion of all indi- vidual assessments.						
<ul> <li>Assessment in module component o7-2A2PH-1PR-o72: Basic Physiology of Prokaryotes Basic Physiology of Prokaryotes</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 60 minutes) including multiple choice questions</li> <li>Assessment in module component o7-2A2PH-2PF-o72: Plant Physiology Plant Physiology</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 45 minutes)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.</li> <li>Assessment in module component o7-2A2PH-3TI-o72: Animal Physiology Animal Physiology</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 60 minutes, word problems and/or multiple choice questions)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.</li> </ul>						
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Bachelor's	with 1 ma	or Biology (2010)		irg • generated 26-Aug-2024 rd Bachelor (180 ECTS) Biolog		page 60 / 252

# Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 61 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Mather	Mathematical Biology and Biostatistics				07-2BM-072-m01
Module coordinator				Module offered by	
holder of the Chair of Bioinformatics				Faculty of Biology	
ECTS		od of grading	Only after succ. com		
4	1	rical grade			
Duration Module level Other prerequisites					
1 seme	ster	undergraduate	Admission prerequi	pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Conten	ts				
Fundar	nental	principles of the most im	portant mathematica	l and statistical met	hods in biology.
Intende	ed lear	ning outcomes			
and nu	mbers	as well as the mathemat	cal description of bio	logical processes.	s, the interpretation of readings
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)
1) Ü + V	no infoi	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
ster, in	formati	on on whether module c	an be chosen to earn	a bonus)	tion offered — if not every seme-
		nation (approx. 45 minut	es) including multiple	e choice questions	
Allocat	ion of p	olaces			
Only as	s part o	f "spezielles Studienange	ebot": 30 places.		
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	ars in			
		ree (1 major) Biochemisti	V (2011)		
	-	ree (1 major) Biochemisti			
Bachel	or' deg	ree (1 major) Biology (20	11)		
	-	ree (1 major) Biology (200			
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-		
		ree (1 major) Computatio ree (1 major) Computatio			
		gree (1 major, 1 minor) Bi		1 <i>3)</i>	
		gree (1 major, 1 minor) Bi gree (1 major, 1 minor) Bi			
		ination Special study offe			
		. ,			

Biochemistry dinator Chair of Plant Physiology od of grading erical grade Module level undergraduate	Only after succ. com	Module offered by Faculty of Biology pl. of module(s)	07-3A3BC-102-m01	
Chair of Plant Physiology od of grading erical grade Module level	Only after succ. com	Faculty of Biology		
Chair of Plant Physiology od of grading erical grade Module level	Only after succ. com	Faculty of Biology		
od of grading erical grade Module level	Only after succ. com	· · · · · ·		
erical grade Module level				
Module level				
	Other prerequisites			
	Admission prerequis	site to assessment: ı pletion of the respec	regular attendance of exercises tive exercises as specified at the	
eper insights into the mo amiliar with fundamental nd the biochemistry of ca	plecular biology and b l principles of molecul arbohydrates, lipids, p iscussed in the lecture	iochemistry of proka lar biology (replicatio proteins and nucleic e. The exercise will c	nt, the lecture will provide stu- aryotes and eukaryotes. Students on, transcription, splicing and acids. Experiments will be per- over practical aspects of lab work protein isolation).	
ning outcomes				
familiar with the fundame	ental principles of bio	chemistry.		
e, number of weekly conta	act hours, language —	if other than Germa	n)	
rmation on SWS (weekly	contact hours) and cc	ourse language avail	able)	
ion on whether module c ination (approx. 30 to 60	an be chosen to earn	a bonus)	tion offered — if not every seme-	
places				
formation				
ormation				
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le				
	dette no forste solt			
LPOI (examination regu	liations for teaching-c	legree programmes)		
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ars in				
Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)				
			ree (1 major) Mathematics (2012)	

Module coor Dean of Stuc ECTS Meti	tal Biology of Plants and A	Animals	Module offered by	Abbreviation 07-3A3EBIO-102-m01
Dean of Stuc ECTS Metl			Module offered by	1
ECTS Metl	lies Biologie (Biology)			
			Faculty of Biology	
	nod of grading	Only after succ. con	npl. of module(s)	
8 num	erical grade			
Duration	Module level	Other prerequisites		
1 semester undergraduate By way of exception assessments.			, additional prerequ	iisites are listed in the section on
Contents		• •		
	le, students will acquire a pmental biology.	n overview of the the	oretical and practica	al fundamentals of animal and
Intended lea	rning outcomes			
Selected mo embryonic a:	lecular mechanisms that r	egulate determinatio	n and differentiation esis and organogen	of selected model organisms. 3. n processes. 4. Establishment of esis. 6. Interrelations between ses discussed.
Courses (typ	e, number of weekly conta	act hours, language –	- if other than Germa	an)
o7-3A3 Method of as	3EBIO-2-102: V + Ü (no info	ormation on SWS (wee anguage — if other the	ekly contact hours) a an German, examina	and course language available) and course language available) ation offered — if not every seme-
Assessment	in this module comprises stated otherwise, successi	the assessments in t	he individual modul	le components as specified be- successful completion of all indi-
of Animals • 4 ECTS • writter • Other cessfu	, Method of grading: num examination (approx. 30 prerequisites: Admission l completion of the respec	erical grade to 60 minutes) incluc prerequisite to asses tive exercises as spe	ding multiple choice ssment: regular atte cified at the beginni	endance of exercises and suc-
<ul><li> 4 ECTS</li><li> writter</li><li> Other</li></ul>	, Method of grading: num examination (approx. 30 prerequisites: Admission l completion of the respec	to 60 minutes) includ prerequisite to asses	ssment: regular atte	endance of exercises and suc-
Allocation of	places			
	formation			
Additional ir				
Additional ir				
Additional ir  Workload				
	-10			

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## Module appears in

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Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 65 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation				
Genes, Molecules, Technologies 07-3A3GMT-102-m01				07-3A3GMT-102-m01			
Module coordinator Module offered by							
Dean o	f Studie	es Biologie (Biology)	,	Faculty of Biology			
ECTS	· · · · ·	d of grading	Only after succ. com	pl. of module(s)			
6	numer	ical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	undergraduate					
Conten	ts						
section functio <i>Bioinfo</i> and pro structu <i>rung in</i> pics: hi nobiote microfl provide nent wi small n of a dru	The module component <i>Spezielle Genetik</i> ( <i>Special Genetics</i> ) will build on <i>Einführung in die Genetik</i> ( <i>Introduction to Genetics</i> ) and will deepen the students' knowledge of topics from the following areas: structure and evolution of the eukaryotic genome, regulatory RNA, epigenetically and evolutionarily significant genetic mechanisms. The section will also focus on methods of gene expression profiling, reverse genetics and modern methods of gene function and gene sequence analysis. In the module component <i>Einführung in die Bioinformatik</i> ( <i>Introduction to Bioinformatics</i> ), students will acquire an overview of major areas in the field of bioinformatics: protein sequence and protein domain analysis, phylogeny and evolution of sequences, protein structure, RNA/DNA sequences and structures, cellular networks (regulation, metabolism) and systems biology. In the module component <i>Einführung in die Biotechnologie</i> ( <i>Introduction to Biotechnology</i> ), students will acquire an overview of the following topics: history of biotechnology, DNA and RNA technologies, recombinant antibodies, molecular diagnostics, nanobiotechnology, biomaterials, bioprocess engineering, microbial biotechnology, transgenic animals and plants, microfluidics. The module component <i>Einführung in die Pharmakokinetik</i> ( <i>Introduction to Pharmacokinetics</i> ) will provide students with an overview of the rational development of drugs and active agents. The module component will discuss an important aspect for biologists in more detail: the optimisation of the pharmacokinetics of small molecules and proteins. Pharmacokinetics describes the uptake, distribution, metabolism and elimination of a drug or xenobiotic in an organism.						
		ning outcomes	Creation Corrections) Ad				
gulatio	n of ger	ne expression. Essential	knowledge on curren <i>n to Biotechnology</i> ):	t methods in genetic Students will acquire	on genome evolution and the re- cs. Module component <i>Einfüh</i> - e an overview of both traditional		

and modern methods in biotechnology and will become familiar with fundamental topics in biotechnology. Module component *Einführung in die Biotechnologie (Introduction to Biotechnology*): Students will acquire an overview of both traditional and modern methods in biotechnology and will become familiar with fundamental topics in biotechnology. Module component *Einführung in die Pharmakokinetik (Introduction to Pharmacokinetics*): Students will acquire an overview of the fundamental principles of the development and review of active agents in research, clinical practice and the pharmaceutical industry. Optimisation of active agents with regard to absorption, distribution, metabolism and elimination takes place during the early stages of active agent development. The course will equip students with fundamental knowledge that will enable them to predict, on the basis of the structure and physicochemical properties of a small molecule or protein, whether the molecule or protein is suitable as an active agent as well as to predict the fate of the respective active agent in an organism.

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

This module has 4 components; information on courses listed separately for each component.

• 07-3A3GMT-1-102, 07-3A3GMT-2-102, 07-3A3GMT-3-102, and 07-3A3GMT-4-102: V (no information on language and number of weekly contact hours available)

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

This module has the following 4 assessment components. Unless stated otherwise, students must pass all of these assessment components to pass the module as a whole.

Assessment in module component o7-3A3GMT-1-102: Genetik (Genetics), in module component o7-3A3GM-T-2-102: Bioinformatik (Bioinformatics), in module component o7-3A3GMT-3-102: Biotechnologie (Biotechnology), and in module component o7-3A3GMT-4-102: Pharmakokinetik (Pharmacokinetics) :

• 1.5 ECTS credits, numerical grading

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 66 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

• written examination (approx. 30 minutes, including multiple choice questions)

## Allocation of places

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# Additional information

Workload

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# **Teaching cycle**

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

# Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2010)

Bachelor' degree (1 major) Mathematics (2012)

Bachelor' degree (1 major) Mathematics (2013)

Bachelor' degree (1 major) Computational Mathematics (2012)

Bachelor' degree (1 major) Computational Mathematics (2013)

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 67 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation	
Plant a	Plant and Animal Ecology 07-3A30E-102-m01					
Module coordinator Modu			Module offered by	Module offered by		
Dean of Studies Biologie (Biology) Faculty of Bio			Faculty of Biology			
ECTS	-	od of grading	Only after succ. compl. of module(s)			
6	6 numerical grade					
Durati		Module level	Other prerequisites			
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequi	isites are listed in th	e section on
Conter	nts					
and bi as on t model	otic env he stru concep	vill provide students wit vironments. The module cture and dynamics of p ts of ecology, will beco edge necessary to deve	will focus on the func oopulations and ecosy me familiar with exam	tional adaptation to stems. Students will ples of research find	environmental cond be introduced to fur ings and will acquire	itions as well ndamental
Intend	ed lear	ning outcomes				
portan their e	t abioti	amiliar with the fundan c and biotic factors that nent. In addition, they u ues.	influence the distribu	tion and frequency o	of occurrence of orga	nisms in
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	n)	
compo • (	nent. 07-3A30	omprises 2 module con DE-1-102: V + Ü (no infor DE-2-102: V + Ü (no info	mation on SWS (week	ly contact hours) and	l course language av	vailable)
<ul> <li>o7-3A3OE-2-102: V + Ü (no information on SWS (weekly contact hours) and course language available)</li> <li>Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)</li> </ul>						
Assessment in this module comprises the assessments in the individual module components as specified be- low. Unless stated otherwise, successful completion of the module will require successful completion of all indi- vidual assessments.						
<ul> <li>Assessment in module component o7-3A3OE-1-102: Animal Ecology Animal Ecology</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 45 minutes)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.</li> <li>Assessment in module component o7-3A3OE-2-102: Plant Ecology Plant Ecology</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 45 minutes)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.</li> </ul>						
Alloca	tion of p	olaces				
Only a	s part o	f pool of general key sk	ills (ASQ): 15 places. P	laces will be allocate	ed by lot.	
Additional information						
Worklo	ad					
Teachi	ng cycl	e				
		-				
Bachelor's	with 1 ma	jor Biology (2010)		ırg ● generated 26-Aug-2024 ırd Bachelor (180 ECTS) Biolog		page 68 / 252

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

#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major, 1 minor) Biology (Minor, 2010) No final examination Special study offering (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 69 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

				Abbreviation			
		Germany			07-4A4FA-102-m01		
Module coordinator				Module offered by			
holder	of the (	Chair of Animal Ecology a	nd Tropical Biology	Faculty of Biology			
ECTS	-	od of grading	Only after succ. compl. of module(s)				
7	nume	rical grade					
Durati	on	Module level	Other prerequisites				
1 seme	ester	undergraduate	By way of exception, additional prerequisites are listed in the section on assessments.				
Conter	nts						
They w cordin will be provid tifying	vill acqu g of bio taxon-s e stude living s	ire a fundamental knowled diversity and will practise specific and will represen nts with an opportunity to pecimens including their	edge of the systemat e identifying species, t specific habitats or o consolidate the kno	ics and taxonomy as using specimens of lifestyles. Field exer owledge and skills th	to be found in Central Europe. well as on the quantitative re- animals. Selection of specimens cises in a variety of habitats will ney acquired in the lab by iden-		
Intend	ed lear	ning outcomes					
verteb their fa the bio	rates) a aunas a ology ar	nd use identification key nd phenology. On the ba	s. They are familiar w sis of the morphology	ith selected Central y and habitats of spe	ligenous fauna (vertebrates, in- European habitats as well as ecies, students are able to predict t whether they function as indica-		
Course	<b>es</b> (type	, number of weekly conta	ct hours, language —	- if other than Germa	n)		
Compo Metho ster, in Assess low. Un vidual Assess Fauna	onent. D7-4A4F D7-4A4F <b>d of ass</b> iformation sment in assess sment in of Germ	A-1-102: V + Ü (no inform A-2-102: E (no information consessment (type, scope, la on on whether module can this module comprises ated otherwise, successforments.	ation on SWS (weekly on on SWS (weekly co inguage — if other tha an be chosen to earn the assessments in t ful completion of the <b>4A4FA-1-102:</b> Introdu	y contact hours) and intact hours) and cou an German, examina a bonus) he individual module module will requires	sted separately for each module course language available) urse language available) tion offered — if not every seme- e components as specified be- successful completion of all indi-		
• / • ( Assess	weighte Assessr Other p cessful parium) <b>sment i</b> n 3 ECTS, og (app	d 1:1 nent offered: once a year rerequisites: Admission	, summer semester prerequisite to asses tive exercises (particu ning of the course. 4A4FA-2-102: Field Ex successfully complet d trip)	ssment: regular atte ular emphasis to be xcursions on the Fau	ignment (approx. 45 minutes), ndance of exercises and suc- placed on the setting up a her- na of Germany		
Alloca	tion of <sub>l</sub>	olaces					
allocat logy) w	ed as fo vith 180	ollows: Places will primar ECTS credits. Should the	ily be allocated to stu module be used in c	udents of the Bachel other subjects, there	of available places, places will be or's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and		

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 70 / 252
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5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 71 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title					Abbreviation	
The Flo	ra of G	ermany				07-4A4FL-102-m01
Module coordinator			M	Nodule offered by		
holder	of the (	Chair of Ecophysiology	and Vegetation Ecolo-	Fa	aculty of Biology	
gy		- · · ·	i		· · ·	
ECTS		od of grading	Only after succ. con	mpl	l. of module(s)	
7		rical grade				
		Module level	Other prerequisites			
		undergraduate	assessments.	way of exception, additional prerequisites are listed in the section of ressments		
Conten	ts		1			
racteris to typic commo cies-sp site. Ha cussed door fa Intendo Studen floweri up scie	stics an cal hab on as w ecific c abitat e . The m cilities ed learn ts have ng plar ntific h	d will become familiar itats in the Botanical Ga ell as scientific names of haracteristics of these cological, geobotanical nodule will also include and greenhouses to he <b>ning outcomes</b> e acquired knowledge a tts. They are familiar with perbaria.	with the respective ter arden and the vicinity of of the plants found and plants. Students will p l, climatic as well as co sessions at the Botan elp students acquire sp nd skills related to the th the terminology of p	mir of V d w prac ons iica oec e ec olar	nology. The modu Würzburg. Studen vill be introduced ctise using field g servation-relevant al Garden of the U cies identification cology, systematio nt morphology and	cs and taxonomy of indigenous d know how to use Floras and set
		, number of weekly con				
compo • c	nent. 17-4A4F	L-1-102: V + Ü (no infor	mation on SWS (weekl	ly c	contact hours) and	isted separately for each module l course language available) urse language available)
		sessment (type, scope, ion on whether module				ation offered — if not every seme-
low. Ur		ated otherwise, succes				e components as specified be- successful completion of all indi
of Gern • 4 • v v	nany ECTS, vritten veighte	Method of grading: nur examination (approx. 4	nerical grade 5 minutes) and practic			Germany Introduction to the Flora

• Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises (particular emphasis to be placed on the setting up a herbarium) as specified at the beginning of the course.

**Assessment in module component 07-4A4FL-2-102:** Field Excursions on the Flora of Germany

- 3 ECTS, Method of grading: (not) successfully completed
- log (approx. 1 to 2 pages per field trip)
- Assessment offered: once a year, summer semester

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## Allocation of places

Number of places: 180. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

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# Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Geography (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1	major Biology (	(2010)
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Module title				Abbreviation
Cell- and Dev	elopmental Biology for a	dvanced students		07-4BFMZ1-102-m01
Module coord	linator		Module offered by	<u> </u>
holder of the Chair of Cell Biology and Developmental Bio- logy				
ECTS Meth	od of grading	Only after succ. com	pl. of module(s)	
5 nume	rical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate		pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Contents				
animals. Parti		aced on providing stu	udents with an oppo	cular developmental biology of ortunity to become proficient in
Intended lear	ning outcomes			
Students are	able to use fundamental	methods to approach	simple problems in	animal developmental biology.
Courses (type	, number of weekly conta	ict hours, language —	if other than Germa	an)
V + Ü (no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
ster, informat	ion on whether module c	an be chosen to earn	a bonus)	tion offered — if not every seme-
c) oral examir didates (appr	nation of one candidate e ox. 20 minutes per candi	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor-
Allocation of	places			
med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 32. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio- logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Ma- thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa- ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemis (Chemistry), Physik (Physics), Ma- thematik (Mathematics)) at the				

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

Workload

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## **Teaching cycle**

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 75 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation	
Microbiology for advanced students					07-4BFMZ3-102-m01
Module coordinator Module offered by			·		
holder o	f the Q	Chair of Microbiology		Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratior	า	Module level	Other prerequisites		
1 semes	ter	undergraduate	Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.		
Content	s				

This module will acquaint students with the fundamental principles of the physiology and molecular biology of microorganisms.

## Intended learning outcomes

Students are able to use fundamental methods to approach simple problems in microbiology. They are familiar with topics in microbiology.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

# Allocation of places

Number of places: 40. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

 Bachelor's with 1 major Biology (2010)
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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

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# Teaching cycle

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

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# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 77 / 252
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Module	Module title Abbreviation					
Bioinformatics for advanced students					07-4BFMZ4-102-m01	
Modul	e coord	inator	Module offered by			
holder	ofthe	Chair of Bioinformatics	Faculty of Biology			
ECTS	Methe	od of grading	Only after succ. compl. of module(s)			
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i		
1 seme	ster	undergraduate	Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.			

#### Contents

The module will introduce students to the practice of bioinformatics and will cover the following topics: sequence analysis, structure analysis, genome analysis, cellular and metabolic networks as well as gene regulation.

## Intended learning outcomes

Students are able to use appropriate bioinformatic algorithms to address simple problems as well as to interpret their results.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

log (approx. 10 to 20 pages)

Language of assessment: German or English

#### **Allocation of places**

Number of places: 40. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant;

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among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

# Teaching cycle

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

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# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 79 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	Module title				Abbreviation
Biotec	Biotechnology 1 07-4BFMZ5-102-m01				
Modul	Module coordinator			Module offered by	
holder	nolder of the Chair of Biotechnology and Biophysics		d Biophysics	Faculty of Biology	
ECTS	-	od of grading	Only after succ. con	npl. of module(s)	
5		rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequi	sites are listed in the section on
Conter	nts		,		
of biot techno on to p ment, physio During severa	echnolo ology an ohoton a fluoreso ological the pra l experi	ogy, biophysics and micro d biophysics at the mole absorption, (UV/VIS) spe- cent labelling of proteins, techniques, osmoregulat	oscopic imaging. Stu cular and cellular lev ctroscopy, fluorescer circular dichroism, c ion in animal cells, d become familiar with	dents will gain an ins el. The following top nce anisotropy, time- confocal laser scanni lielectric analysis an	cialist knowledge in the areas sight into different topics in bio- ics will be covered: introducti- resolved fluorescence measure- ng microscopy (CLSM), electro- d electromanipulation of cells. d technologies and will perform
applica acquai chanis tools. I have d	ations t inted wi ms. Stu In the s elivered	hat will enable them to ir th - or, where necessary, Idents will have acquired	dependently review will be able to indep practical experience e acquired detailed t minutes) on one of t	relevant literature. Ir endently acquaint th performing experim heoretical knowledg the experiments they	•
		•			sted separately for each module
compo • (	onent. 07-4BFN	NZ5-1-102: P (no informat	ion on SWS (weekly o	contact hours) and co	ourse language available)
		<b>sessment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
low. U		ated otherwise, successf			e components as specified be- successful completion of all indi-
<ul> <li>Assessment in module component o7-4BFMZ5-1-102: Biotechnology 1 (practical course)</li> <li>4 ECTS, Method of grading: numerical grade</li> <li>log (approx. 10 to 20 pages)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of lab course as specified at the beginning of the course.</li> <li>Assessment in module component o7-4BFMZ5-2-102: Seminar Biotechnology 1</li> <li>1 ECTS, Method of grading: (not) successfully completed</li> <li>presentation (approx. 20 to 30 minutes)</li> <li>Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.</li> </ul>					
Alloca	tion of <sub>l</sub>	olaces			
allocat logy) w	ed as fo vith 180	ollows: Places will primar ECTS credits. Should the	ily be allocated to stu module be used in c	udents of the Bachel other subjects, there	available places, places will be or's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and

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5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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### Workload

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# Teaching cycle

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

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# Module appears in

Bachelor' degree (1 major) Biology (2010)

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation	
Neurobiology for advanced students				-	07-4BFNVO1-102-m01
Modul	e coord	inator		Module offered by	· · · · · · · · · · · · · · · · · · ·
holder	ofthe	Chair of Neurobiology an	d Genetics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i	
1 seme	ester	undergraduate	Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.		
Conter	nts	·			
The module <i>Neurobiologie für Fortgeschrittene (Neurobiology for Advanced Students</i> ) will comprise lectures,					

The module *Neurobiologie für Fortgeschrittene* (*Neurobiology for Advanced Students*) will comprise lectures, exercises and talks. The lecture will address different aspects of the human brain, and students will acquire a knowledge of the respective fundamental principles. A new aspect will be discussed each day. Wherever possible, parallels will be drawn with the neurobiology of the fruit fly, Drosophila melanogaster, and advantages and limitations of this model organism will be discussed. Students will deliver short talks to complement the lecture. The topics of these talks will have a connection with the topics covered in the lecture and will be assigned to students prior to the lab course. The module will also include small-scale exercises/experiments on the contents of each lecture.

#### Intended learning outcomes

Students have acquired an advanced knowledge in the area of neurobiology and recognise the relevance research findings in neurobiology have to medicine.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 40. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking)

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and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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# Teaching cycle

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

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# Module appears in

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Behavio	e title				Abbreviation	
Behavioral Physiology				07-4BFNV02-102-m	101	
Module coordinator Module offered by						
		Chair of Behavioral Phys	iology and Sociabia	Faculty of Biology		
logy	orthev	chail of benavioral Phys	lology and Sociobio-	Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
5	1	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme		undergraduate		site to assessment:	regular attendance o	of exercises
			and successful com	pletion of the respec	ctive exercises as sp	ecified at the
			beginning of the co	urse.		
Conten	ts					
		omparative animal phys	siology with a focus or	n neurophysiology, s	ensory physiology a	nd behaviou-
ral ecol		omparative annut prij.	slotogy with a locas of	r neurophysiology, s	ensery physiology a	
		ning outcomes				
		e acquired knowledge a	nd skills in the area of	behavioural physiol	ogy. They are familia	ar with hypo-
		e proficient in methods			egy. mey are fulfille	
		, number of weekly cont			n)	
		mation on SWS (weekly				
		sessment (type, scope, l				overv come-
		ion on whether module				every seme-
		ssessment: a) written ex		•	$\log(approx_{10} t_{0.2})$	o pages) or
		ation of one candidate				
		ox. 20 minutes per cand				
med ab	out the	e method and length of	the assessment prior	to the course		
Allocati	ion of i					
		olaces				
Numbe	r of pla	<b>places</b> ices: 36. Should the nur pllows: Places will prima				
Numbe allocate logy) wi	r of pla ed as fo ith 180	ices: 36. Should the nur ollows: Places will prima ECTS credits. Should th	arily be allocated to st the module be used in the	udents of the Bachel other subjects, there	or's degree subject will be two quotas:	Biologie (Bio 95% of pla-
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components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

Workload

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## **Teaching cycle**

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 85 / 252
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Basics in Ecology of Animals     07-4BFNV03-102-m01       Module coordinator     Module offered by				
Module coordinator Module offered by				
holder of the Chair of Animal Ecology and Tropical Biology Faculty of Biology				
ECTS Method of grading Only after succ. compl. of module(s)				
5 numerical grade				
Duration Module level Other prerequisites				
	and successful completion of the respective exercises as specified at the			
Contents				

Selected topics in autecology and synecology; experimental design, data collection and analysis in animal ecology.

#### Intended learning outcomes

Students have acquired an advanced knowledge in the area of animal ecology. They are able to design simple ecological lab and field experiments as well as to interpret and present their findings.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 40. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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 JMU Würzburg • generated 26-Aug-2024 • exam.
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 reg. data record Bachelor (180 ECTS) Biologie - 2010
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#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

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# Teaching cycle

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

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# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 87 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Molecu	lar Phy	siology for Advanced St	udents		07-4BFPS1-102-m01
Module	e coord	inator		Module offered by	
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Methe	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate		pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Conten	ts				

This module will equip students with the theoretical foundations of fundamental processes in plants, such as nitrogen and carbon metabolism. The methodological approaches in experimental plant physiology will be discussed and the molecular techniques for functional gene analysis (reverse genetics and other techniques) will be applied.

#### Intended learning outcomes

Students have acquired fundamental knowledge on plant nutrient cycles and are proficient in molecular and physiological methods in experimental plant physiology.

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

V +  $\ddot{U}$  (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

# **Allocation of places**

Number of places: 16. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the

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 reg. data record Bachelor (180 ECTS) Biologie - 2010
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following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

Teaching cycle

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

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# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 89 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Membranebiology for Advanced Students         Module coordinator         Module offered by           Indee coordinator         Faculty of Biology         Eaculty of Biology           ECTS         Method of grading         Only after succ. compl. of module(s)           5         numerical grade         -           1 semester         Undergraduate         Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.           Contents         In this module, students will acquire the general fundamentals of plant membrane transport and the biophysica methods with which it can be characterised. For this purpose, students will be introduced to modern methods of molecular biology and imaging as well as data collection and analysis.           Intended learning outcomes         Students understand basic membrane transport processes and are able to use experimental methods in experiments with intact plants, isolated plant cells as well as anination angroups systems.           Courses (type, number of weekly contact hours, language — if other than German)         V + 0 (on information on SWS (weekly contact hours) and course language available)           Method of sasessment (type, scope, language - if other than German, examination of groups of upit os assessment; a) written examination (approx. 4p to 6 on induces); students will be informed about the method and length of the assessment prior to the course           Motidie Geprox. 20 no upit systems is the assessment prior to the course         Students of the assessment prior to the cou	Module	title				Abbreviation
holder of the Chair of Plant Physiology and Biophysics         Faculty of Biology           ECTS         Method of grading         Only after succ. compl. of module(s)           5         numerical grade	Membra	anebio	logy for Advanced Stude	ents		07-4BFPS2-102-m01
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Number of places: 16. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject S Computational Ma thematics and Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be mantained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik, (Mathematics)) at the time of application. This will be done as follows	didates med abo	(appro out the	ox. 20 minutes per cand e method and length of t	idate) or e) presentati	on (approx. 20 to 30	
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following quotac. Quota 1 (50% of places), total number of ECTS credits already achieved in modules (medules)	allocate logy) wit ces will 5% of pl ject Biol thematic ject Biol ble in or the othe places, f courses dure, ap tive moo they bec plicants of ECTS all modu thematil firstly, a and, sec	d as for th 180 be allo laces ( logie (l cs and logy (a ne quot there w of a m oplican dule w come a ' previ credits ule cor k (Mat ccordi condly i n a t	ollows: Places will prima ECTS credits. Should the cated to students of the a minimum of one partic Biology) with 60 ECTS cr Mathematik (Mathema s well as potentially to se the exceed the number of a. Should there be, with will be a uniform regulat bodule component that a sts who already have suc available. Selection proc ous academic achievem s they have achieved an nponents in the subject hematics)) at the time o ng to their average grad , according to their total	rily be allocated to stu e module be used in or e Bachelor's degree su cipant in total) will be edits and to students tics), each with 180 EC students of other 'impo f applications, the ren in one module compo ion for the courses of are concerned will be consideration. A waiting ess group 1 (95%): Pla tents. For this purpose d their average grade of Biologie (Biology) ( f application. This will e weighted according number of ECTS credit	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (( be done as follows) to the number of EC ts achieved (quantit	lor's degree subject Biologie (Bio will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma of the application-oriented sub- ould the number of places availa be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number taken during their studies or of Chemistry), Physik (Physics), Ma- : First, applicants will be ranked, TS credits (qualitative ranking) tative ranking). The applicants'

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

Workload

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**Teaching cycle** 

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

Module appears in

Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 91 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modu	le title				Abbreviation
Bioch	emistry	and Protein Biochem	nistry for Advanced Stud	ents	07-4BFPS3-102-m01
Modu	le coorc	linator		Module offered by	
holde	r of the	Chair of Plant Physiol	logy and Biophysics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
5	nume	erical grade			
Durati	ion	Module level	Other prerequisites	5	
1 sem	ester	undergraduate		pletion of the respe	regular attendance of exercises ctive exercises as specified at the
Conte	nts				
recept	tors and	I will learn the fundar	•	piochemical and mol	t, biological and microbial photo- ecular biological methods for the on of receptors.
Intend	led lear	ning outcomes			
		familiar with the bioc se these using approp		ogy and function of l	biological photoreceptors and are
Cours	<b>es</b> (type	e, number of weekly c	ontact hours, language -	– if other than Germa	an)
V + Ü (	(no info	rmation on SWS (wee	ekly contact hours) and c	ourse language avai	lable)
			e, language — if other th Ile can be chosen to earr		ation offered — if not every seme-
metho	ods of a		examination (approx. 4		) log (approx. 10 to 20 pages) or

c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### Allocation of places

Number of places: 16. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

Workload

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**Teaching cycle** 

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

Module appears in

Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 93 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Basic plant Ecophysiology		07-4BFPS4-102-m01			
Module coordinator				Module offered by	
		Chair of Ecophysiology ar	nd Vegetation Ecolo-	Faculty of Biology	
gy					
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate		pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Conten	ts				
the inte	eractior		ir environment and w	/ill make students fa	the theoretical fundamentals of miliar with the molecular biologi- tigate this interaction.
Intende	ed lear	ning outcomes			
		pe able to recognise, des ple to perform basic expe			plants and their environment.
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	exami	nation (approx. 60 minut	es)		
Allocat	ion of p	olaces			
allocate logy) w ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themat firstly, a and, se positio cording qualita followin compol	ed as fo ith 180 l be allo places ( plogie (l ics and plogy (a one quo er quot there v s of a m pplicar odule w ecome a s' previ 5 credit: lule cor ik (Mat accordi condly n in a t g to this tive rar ng quot nents o	billows: Places will primar ECTS credits. Should the poated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to st ta exceed the number of a. Should there be, within will be a uniform regulation odule component that a ts who already have suc ill be given preferential c available. Selection proce ous academic achievement s they have achieved and ponents in the subject hematics)) at the time of ng to their average grade a cacording to their total hird ranking will be calcu third ranking. Among ap king or otherwise by lot. as: Quota 1 (50% of plac f the Faculty of Biology; a	ily be allocated to struct module be used in or Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the ren in one module compo- on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla- ents. For this purpose I their average grade of Biologie (Biology) application. This will weighted according number of ECTS credi- lated as the sum of to plicants with the sar Selection process gr es): total number of I among applicants with	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mod ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w ECTS credits already th the same number	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- te allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) cative ranking). The applicants' and places will be allocated ac- vill be allocated according to the achieved in modules/module of ECTS credits achieved, pla- ers of the respective applicant;

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

# Teaching cycle

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

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# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 95 / 252
	reg, data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Pharm	aceutic	al Bioanalytics			07-4BFPS5-102-m01
Modu	Module coordinator		Module offered by		
holder	older of the Chair of Pharmaceutical Biology		Faculty of Biology		
ECTS		od of grading	Only after succ. con	npl. of module(s)	
5		rical grade			
Durati		Module level	Other prerequisites		
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequi	isites are listed in the section on
Conte	nts		1		
analys compu	is. It wi Itationa	ll include an introduction	to chromatographic and quantitative anal	methods of analysis yses of active agents	nentals of drug and metabolite as well as modern methods in and metabolites will be perfor-
Intend	ed lear	ning outcomes			
		e developed fundamenta hromatographic methods		ls in the area of drug	and metabolite analysis and are
Course	<b>es</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)
compo • • Metho	<ul> <li>This module comprises 2 module components. Information on courses will be listed separately for each module component.</li> <li>o7-4BFPS5-1-102: P (no information on SWS (weekly contact hours) and course language available)</li> <li>o7-4BFPS5-2-102: S (no information on SWS (weekly contact hours) and course language available)</li> <li>Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)</li> </ul>				
Asses	4 ECTS, method pages) o of up to student Other pr at the b <b>sment i</b> 1 ECTS, present	n module component o7- Method of grading: nume s of assessment: a) writt or c) oral examination of o 3 candidates (approx. 20 s will be informed about rerequisites: Admission p eginning of the course. n module component o7- Method of grading: (not) ation (approx. 20 to 30 m	erical grade en examination (app ne candidate each (a o minutes per candid the method and leng rerequisite to assess <b>4BFPS5-2-102:</b> Semi successfully comple- ninutes)	prox. 45 to 60 minute pprox. 30 minutes) o ate) or e) presentation th of the assessmen ment: regular attend nar Pharmaceutical E ted	es) or b) log (approx. 10 to 20 r d) oral examination in groups on (approx. 20 to 30 minutes); t prior to the course ance of lab course as specified Bioanalytics
	• Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.				
Allocation of places Number of places: 30. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio- logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Ma- thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa- ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from					

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 96 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

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Teaching cycle

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

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# Module appears in

Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 97 / 252
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Module title					Abbreviation	
Basics	in Ligh	it- and Electron-Micro	oscopy		07-4S1MZ1-102-m01	
Modul	e coord	linator		Module offered by		
head o	of the D	epartment of Electror	nmicroscopy	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. cor	Only after succ. compl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	Other prerequisites		
1 semester       undergraduate       Admission prerequisite to assessment: regular attendanc and successful completion of the respective exercises as beginning of the course.		•				
Contents						
Fundamental principles of confocal laser scanning microscopy and electron microscopy.						
Intond	od loar	ning outcomes				

#### Intended learning outcomes

Students have acquired theoretical knowledge and practical skills in the area of light and electron microscopy.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

written examination (approx. 30 to 60 minutes)

## Allocation of places

Number of places: 18. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

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Additional information	
Workload	
Teaching cycle	
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)	
Module appears in	
Bachelor' degree (1 major) Biology (2011)	
Bachelor' degree (1 major) Biology (2010)	
Bachelor' degree (1 major) Mathematics (2012)	
Bachelor' degree (1 major) Mathematics (2013)	
Bachelor' degree (1 major) Physics (2010)	
Bachelor' degree (1 major) Nanostructure Technology (2010)	
Bachelor' degree (1 major) Nanostructure Technology (2012)	
Bachelor' degree (1 major) Computational Mathematics (2012)	
Bachelor' degree (1 major) Computational Mathematics (2013)	
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)	

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 99 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

Module title					Abbreviation
Analysis of Chromosomes					07-4S1MZ2-102-m01
Modul	e coord	linator		Module offered by	
head o	of the D	epartment of Electron	microscopy	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
5	nume	erical grade			
Durati	on	Module level	Other prerequisite	ites	
1 semester undergraduate Admi and s			npletion of the respe	regular attendance of exercises ctive exercises as specified at the	
Contents					
Overview of the structure of chromosomes of somatic and meiotic cells.					

## Intended learning outcomes

Students are able to analyse chromosomal structures.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

written examination (approx. 30 to 60 minutes)

## Allocation of places

Number of places: 18. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 100 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

# Additional information

Workload

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Teaching cycle

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

# Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 101 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Ecolog	y and D	evelopmental Biology	of marine organisms		07-4S1MZ3-092-m01
Modul	e coord	inator		Module offered by	,
head o	of the D	epartment of Electronn	nicroscopy	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	By way of exception assessments.	, additional prerequ	uisites are listed in the section on
Conter	nts				
					h an insight both into the organis e island of Helgoland in the North
Intend	ed lear	ning outcomes			
	nts are f e ecosys	•	nology, developmental l	biology, physiology	and ecology of organisms in a
Course	<b>es</b> (type	, number of weekly co	ntact hours, language –	- if other than Germ	an)
	07-4S1N				and course language available) and course language available)
ster, in Assess	format sment i	ion on whether module	e can be chosen to earn es the assessments in t	a bonus) he individual modu	ation offered — if not every seme le components as specified be- successful completion of all indi
nisms	4 ECTS, og (app Assessr Other p cessful <b>sment i</b> L ECTS,	Method of grading: nu prox. 10 to 20 pages) nent offered: once a ye rerequisites: Admissic completion of the resp <b>n module component o</b>	merical grade ear, summer semester on prerequisite to asse pective exercises as spe o <b>7-4S1MZ3-2MO-092:</b> S ot) successfully complet	ssment: regular att cified at the beginn eminar on Marine E	•
		nent offered: once a ye			
Allocat	tion of	places			
• c a t c c i c (	07-4S1N availabl he Bac other su degree n total) credits	AZ3-1MO-092: Number e places, places will helor's degree subject ubjects, there will be t subject Biologie (Biolo will be allocated to s	be allocated as follows Biologie (Biology) with wo quotas: 95% of plac gy) with 180 ECTS credi tudents of the Bachelo Bachelor's degree subj	the number of appl : Places will priman 180 ECTS credits. ces will be allocated ts and 5% of places r's degree subject E ects Computationa	lications exceed the number of rily be allocated to students of Should the module be used in d to students of the Bachelor's a (a minimum of one participant Biologie (Biology) with 60 ECTS I Mathematics and Mathematik

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 102 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

• 07-4S1MZ3-2MO-092: --

# Additional information

UNIVERSITÄT

WÜRZBURG

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Workload

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**Teaching cycle** 

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2007) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2007) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008) First state examination for the teaching degree Grundschule Biology (2009) First state examination for the teaching degree Hauptschule Biology (2009) First state examination for the teaching degree Realschule Biology (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Gymnasium Biology (2009) First state examination for the teaching degree Mittelschule Biology (2009)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	F
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Metho	ds in Bi	otechnology			07-4S1MZ4-102-m01
Module coordinator				Module offered by	
holder	of the (	Chair of Biotechnology ar	nd Biophysics	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate			
Conten	nts				
techno lysis of	ology an f biolog	d biomedicine and the u	nderlying physical pr ular and cellular level	inciples. It will discu l. These methods inc	trument-based methods in bio- lss modern methods for the ana- lude light microscopy, fluore- netry and microfluidics.
Intend	ed learı	ning outcomes			
		gain an overview of key n Il learn to decide what m			ctive advantages and disadvan- articular issue.
		, number of weekly conta			
This mo compo • c	odule c ment. 07-4S1N	omprises 2 module comp NZ4-1-102: V (no informat	oonents. Information ion on SWS (weekly o	on courses will be li contact hours) and c	sted separately for each module ourse language available) ourse language available)
Metho ster, in	<b>d of ass</b> Iformati	e <b>ssment</b> (type, scope, la on on whether module ca	nguage — if other th an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-
low. Ur		ated otherwise, successf			e components as specified be- successful completion of all indi-
• 3 • v Assess • 2	3 ECTS, written 6 sment in 2 ECTS,	<b>n module component 07-</b> Method of grading: nume examination (approx. 30 <b>n module component 07-</b> Method of grading: (not) ation (approx. 15 to 20 m	erical grade minutes) <b>4S1MZ4-2-102:</b> Meth successfully comple	ods in Biotechnolog	
Allocat	tion of p	olaces			
Number allocat logy) w ces wil 5% of p ject Bio themat ject Bio ble in o the oth places course dure, a tive mo they be plicant	er of pla ed as fo <i>i</i> th 180 ll be allo places ( blogie ( tics and blogy (a blogy (a	ces: 25. Should the num ollows: Places will primar ECTS credits. Should the potated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to st ta exceed the number of a. Should there be, withi will be a uniform regulation odule component that a sts who already have suc ill be given preferential c available. Selection proce ous academic achieveme	ily be allocated to stand to stand to stand to students of other 'imp applications, the rereation of the courses of reconcerned will be cessfully completed onsideration. A waition of the stand to students of the students o	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be	available places, places will be for's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 104 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

Workload

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Teaching cycle

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

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# Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Physics (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 105 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation	
Aspect	Aspects of molecular Biotechnology 07-4S1MZ5-102-m01			
Module	e coordinator		Module offered by	
holder	of the Chair of Biotechnology	<u> </u>	Faculty of Biology	
ECTS	Method of grading	Only after succ. con	npl. of module(s)	
5	numerical grade			
Duratio		Other prerequisites	i	
1 seme	ster undergraduate			
Conten	ts			
mes, p sor des		lecular biology, recom	binant DNA technolo	nobilisation of cells and enzy- ogy, protein engineering, biosen- ibodies, hybridoma technology,
Intende	ed learning outcomes			
ges and Studen dently to inde	d disadvantages. They will lear its will acquire a knowledge of review relevant literature. In ac pendently acquaint themselve	n to decide what meth fundamental methods Idition, they will becon s with - relevant mech	nod is most suitable s in biotechnology th me acquainted with - anisms.	logy and their respective advanta- for addressing a particular issue. at will enable them to indepen- • or, where necessary, will be able
Course	<b>s</b> (type, number of weekly cont	act hours, language –	- if other than Germa	in)
compo • c • c	nent. 07-4S1MZ5-1-102: V (no informa 07-4S1MZ5-2-102: S (no informa	tion on SWS (weekly ation on SWS (weekly	contact hours) and co contact hours) and c	ourse language available)
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)				
low. Ur				e components as specified be- successful completion of all indi-
<ul> <li>Assessment in module component o7-4S1MZ5-1-102: Aspects of molecular Biotechnology         <ul> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 30 minutes)</li> </ul> </li> <li>Assessment in module component o7-4S1MZ5-2-102: Molecular Biotechnology - Seminar         <ul> <li>2 ECTS, Method of grading: (not) successfully completed</li> </ul> </li> </ul>				
	resentation (approx. 15 to 20 r <b>ion of places</b>			
Numbe allocat logy) w ces wil 5% of p ject Bic themat ject Bic ble in c the oth places, course dure, a	er of places: XX1. Should the nu ed as follows: Places will prima ith 180 ECTS credits. Should the l be allocated to students of the places (a minimum of one parti plogie (Biology) with 60 ECTS c cics and Mathematik (Mathematic plogy (as well as potentially to one quota exceed the number of the quota. Should there be, with there will be a uniform regular s of a module component that pplicants who already have su	arily be allocated to st be module be used in or e Bachelor's degree st cipant in total) will be redits and to students tics), each with 180 Er students of other 'imp of applications, the rem nin one module compo- cion for the courses of are concerned will be ccessfully completed	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part o orting' subjects). Sho maining places will b onent, several course one module compor allocated in a standa at least one other mo	s of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 106 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1. XX2: XX3 places. Places will be allocated by lot.

## Additional information

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Workload

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Teaching cycle

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

# Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Master's degree (1 major) Functional Materials (2012)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 107 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Specia	l Bioin	formatics 1			07-4S1MZ6-102-m01
Module	e coord	linator		Module offered by	^
holder	ofthe	Chair of Bioinformatics		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i	
1 seme	ster	undergraduate	Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.		
Conten	its				

Fundamental principles of the tree of life, fundamental principles of phylogenetics (methods and markers), fundamental principles of evolutionary biology (concepts), sequence analysis, RNA structure prediction, phylogenetic reconstruction.

## Intended learning outcomes

Students are able to use software and databases for sequence analysis, RNA structure prediction and phylogenetic reconstruction.

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

 $V + \ddot{U}$  (no information on SWS (weekly contact hours) and course language available)

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

log (approx. 10 to 20 pages)

Language of assessment: German or English

# Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant;

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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#### Workload

Teaching cycle

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

# Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2010)

Bachelor' degree (1 major) Mathematics (2012)

Bachelor' degree (1 major) Mathematics (2013)

Bachelor' degree (1 major) Physics (2010)

Bachelor' degree (1 major) Nanostructure Technology (2010)

Bachelor' degree (1 major) Nanostructure Technology (2012)

Bachelor' degree (1 major) Computational Mathematics (2012)

Bachelor' degree (1 major) Computational Mathematics (2013)

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 109 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul					Abbreviation
Specif	ic Cell-	and Developmental Biol	0gy 1		07-4S1MZ7-102-m01
Module coordinator Module offered by			<u> </u>		
		Chair of Cell Biology and	Developmental Bio-	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate		pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Conter	nts				
ference dule w phila, l work w to prov	e will bo ill prov Hydra, vith urcl vide you	e used to make processe ide you with an opportur Trypanosoma and mamn hins - this is virtually a m	s visible as well as to hity to use transgenic halian cells as model ust at the Theodor-Bo	manipulate and dig c. elegans, Chlamyd organisms. Hopefull overi-Institute. The m	situ hybridisation and RNA inter- itally document these. This mo- omonas, Dictyostelium, Droso- y, we will also get a chance to nain aim of this practical course is selected fundamental concepts o
Intend	ed lear	ning outcomes			
Ability	to use	basic and advanced met	hods to approach sim	ple problems in ani	mal developmental biology.
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	in)
V + Ü (	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
c) oral didate	examir s (appr	ation of one candidate e	each (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor-
	tion of		•		
allocat logy) w ces wil 5% of j ject Bid thema ject Bid ble in of the oth places course dure, a tive mo they be plicant of ECTS all moo thema	ed as fi vith 180 Il be all places blogie ( tics and blogy (a blogy (a blog	ollows: Places will prima ECTS credits. Should the ocated to students of the (a minimum of one partice Biology) with 60 ECTS cred Mathematik (Mathematice is well as potentially to so ota exceed the number of ta. Should there be, with will be a uniform regulation nodule component that a not swho already have succ ill be given preferential of available. Selection proce ious academic achievem is they have achieved an imponents in the subject thematics)) at the time o	rily be allocated to str e module be used in or e Bachelor's degree su- cipant in total) will be edits and to students tics), each with 180 E0 tudents of other 'imp f applications, the rer in one module compo- tion for the courses of are concerned will be ccessfully completed consideration. A waiti ess group 1 (95%): Pl ents. For this purpose d their average grade of Biologie (Biology) f application. This wil	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie ( l be done as follows:	f available places, places will be lor's degree subject Biologie (Bio will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma of the application-oriented sub- ould the number of places availa be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number saken during their studies or of Chemistry), Physik (Physics), Ma- : First, applicants will be ranked, TS credits (qualitative ranking)

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and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 111 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Specific Methods in Proteinbiochemistry and Cell Biology			try and Cell Biology		07-4S1MZ8-102-m01
Modul	e coord	linator		Module offered by	
holder logy	ofthe	Chair of Cell Biology and	Developmental Bio-	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i i i i i i i i i i i i i i i i i i i	
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises
			and successful completion of the respective exercises as specified		ctive exercises as specified at the
			beginning of the cou	urse.	
		l			

#### Contents

Fundamental principles, theory and application of modern methods in cell biology. Since many of these methods are based on molecular biology and protein chemistry approaches, we will also discuss these techniques. Using practical examples, this course will acquaint students with the following methods: - cell fractionation - protein separation by one- and two-dimensional gel electrophoresis - identification of proteins and protein complexes with immunoblots - immunoprecipitation - overlay techniques or pull-down experiment - intracellular localisation of proteins by immunofluorescence microscopy - preparing cultivated cells and tissues for immunofluorescence microscopy - whole-mount immunolocalisation for the analysis of the expression pattern of a protein in the Xenopus embryo - whole-mount in situ hybridisation for the analysis of the expression pattern of an mRNA in the Xenopus embryo - investigation of the dynamic behaviour of proteins in living cells: expression of a fluorescent (GFP) fusion protein in human cells after transfection with a DNA vector - determination of the subclass of antibodies by immunodiffusion (Ouchterlony test). Basic experiments in molecular biology.

#### Intended learning outcomes

Students will be familiar with the methods discussed in class and will know what problems in cell biology may be addressed with these methods.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## **Allocation of places**

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number

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 JMU Würzburg • generated 26-Aug-2024 • exam.
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 reg. data record Bachelor (180 ECTS) Biologie - 2010
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of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to their total number of ECTS credits allocated according to the qualitative ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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#### Workload

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#### Teaching cycle

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 113 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Neurob	e title				Abbreviation
	iology	1			07-4S1NVO1-102-m01
Module	e coord	inator		Module offered by	<u> </u>
holder of the Chair of Genetics Faculty of Biology					
ECTS	Method of grading     Only after succ. compl. of module(s)				
5	-	rical grade		1	
Duratio	n	Module level	Other prerequisites	6	
1 seme	ster	undergraduate			regular attendance of lab cours
			as specified at the b	beginning of the cou	rse.
Conten	ts		-		
Neurob	iology	and methods in neurob	iology, using Drosoph	ila as a neurogenetio	c model system.
		ning outcomes	<u></u>		
			knowledge of the neu	robiology of a mode	l organism and are able to appl
		ethods in neurobiology			t organishi and are able to appl
		, number of weekly con		- if other than Germa	an)
		tion on SWS (weekly con			
		· · · · · · · · · · · · · · · · · · ·			e) ation offered — if not every sem
		ion on whether module			ation oncred — If not every selling
					) log (approx. 10 to 20 pages) o
					ination in groups of up to 3 can
didates	s (appro	ox. 20 minutes per cano	lidate) or e) presentati	on (approx. 20 to 30	minutes); students will be info
med ab	out the	e method and length of	the assessment prior	to the course	
Allocat	ion of <sub>l</sub>	olaces			
logy) w ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themat firstly, a and, se position	ith 180 l be allo blaces ( blogie ( ics and blogy (a one quo cre quo there s of a n pplicar bdule w come a s' previ credit lule con ik (Mat accordi condly n in a t g to this	ECTS credits. Should the context of	ne module be used in o e Bachelor's degree su icipant in total) will be redits and to students atics), each with 180 E students of other 'imp of applications, the ren hin one module compo- tion for the courses of are concerned will be accessfully completed consideration. A waiti cess group 1 (95%): Pl nents. For this purpose to f Biologie (Biology) of application. This will de weighted according l number of ECTS cred	other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows to the number of EC its achieved (quantit hese two rankings, a	lor's degree subject Biologie (B e will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational <i>N</i> of the application-oriented sub- ould the number of places avai be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce odule component of the respec- ained and places re-allocated a e allocated according to the ap- ranked according to the number saken during their studies or of Chemistry), Physik (Physics), M : First, applicants will be ranked TS credits (qualitative ranking) tative ranking). The applicants' and places will be allocated ac-
qualita followir compor ces will	ng quo nents c l be alle	nking or otherwise by lo tas: Quota 1 (50% of pla of the Faculty of Biology ocated by lot. Quota 2 (	aces): total number of ; among applicants wi 25% of places): numbe	oup 2 (5%): Places v ECTS credits already th the same number er of subject semeste	vill be allocated according to the vill be allocated according to the achieved in modules/module of ECTS credits achieved, pla- ers of the respective applicant; llocated by lot. Quota 3 (25% of

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 115 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation	
Integra	tive Be	havioral Biology			07-4S1NVO2-102-m01	
Module coordinator Module offered by						
holder of the Chair of Behavioral Physiology and Sociobio- logy						
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5		rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate	and successful com	mission prerequisite to assessment: regular attendance of exercises d successful completion of the respective exercises as specified at the ginning of the course.		
Conten	Its					
sing of	olfacto		anisation of behaviou		oment, perception and proces- behaviour, reproductive beha-	
Intend	ed lear	ning outcomes				
		e acquired an advanced l current studies on releva		a of behavioural biol	ogy and are able to deliver pre-	
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)	
V + S (r	no infoi	mation on SWS (weekly	contact hours) and co	ourse language avail	able)	
		s <b>essment</b> (type, scope, la on on whether module c			tion offered — if not every seme-	
c) oral didates	examin s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor-	
Allocat	ion of <sub>l</sub>	olaces				
allocat	ed as fo ith 180	ces: 20. Should the num ollows: Places will prima ECTS credits. Should the				

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following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2010)

Bachelor' degree (1 major) Mathematics (2012)

Bachelor' degree (1 major) Mathematics (2013)

Bachelor' degree (1 major) Computational Mathematics (2012)

Bachelor' degree (1 major) Computational Mathematics (2013)

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 117 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	<b> </b>

Module	title				Abbreviation	
Functio	nal Mo	orphology of arthropod	S		07-4S1NVO3-092-m01	
Module	e coord	inator		Module offered by		
holder	ofthe	Chair of Zoology III		Faculty of Biology		
ECTS	Methe	od of grading	Only after succ. compl. of module(s)			
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate	and successful com	dmission prerequisite to assessment: regular attendance of exercises nd successful completion of the respective exercises as specified at the eginning of the course.		
Conten	ts	1				

Morphology, anatomy, phylogeny and ecology of arthropods.

#### Intended learning outcomes

Students are able to explain arthropod radiations in a functional context as well as to explain the importance of arthropods to ecosystems.

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

term paper (approx. 5 to 10 pages)

#### Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Bachelor's with 1 major Biology (2010)

Additional information	
Workload	
Teaching cycle	
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)	
Module appears in	
Bachelor' degree (1 major) Biology (2011)	
Bachelor' degree (1 major) Biology (2007)	
Bachelor' degree (1 major) Biology (2010)	
Bachelor' degree (1 major) Mathematics (2012)	
Bachelor' degree (1 major) Mathematics (2013)	
Bachelor' degree (1 major) Mathematics (2007)	
Bachelor' degree (1 major) Computational Mathematics (2012)	
Bachelor' degree (1 major) Computational Mathematics (2013)	
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008)	
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)	

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 119 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

Module title Abbreviation						
Basic Population Ecology					07-4S1NVO5-102-m01	
Module coordinator				Module offered by		
holder	ofthe	Chair of Animal Ecolo	gy and Tropical Biology	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 semesterundergraduateAdmission prerequisite to assessmen and successful completion of the resp beginning of the course.				pletion of the respec	•	
Contents						
More in-depth discussion of the structure and dynamics of human and animal populations; regulation of popula- tion density; management.						

#### Intended learning outcomes

Students are able to interpret the structure and dynamics of populations and metapopulations on the basis of model concepts in population ecology and to apply more advanced methods of quantitative analysis to these.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## Allocation of places

Number of places: 15. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 121 / 252
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Module title Abbreviation						
Molecu	ılar mo	delling - From DNA to pro	otein		07-4S1PS1-102-m01	
Module coordinator Module offered by						
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	Other prerequisites		
1 semester undergraduate		Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.				
Conten	Its					
This module will equip students with advanced knowledge on the structure and function of nucleic acids and proteins as well as on the search for and analysis and modelling of plant macromolecules using databases and specific software.						
Intende	ed lear	ning outcomes				
		e acquired a specialist kr rk with relevant databas		ture-function relatior	nships of macromolecules and	

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

V + Ü (no information on SWS (weekly contact hours) and course language available)

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

computerised practical examination (approx. 6 hours)

#### Allocation of places

Number of places: 18. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of

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places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 123 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	Abbreviation					
Introduction to Methods in Plant Ecophysiology 07-4S1PS2-102-m01						
Modul	e coord	inator		Module offered by		
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Durati	on	Module level	Other prerequisites	6		
1 seme	ester	undergraduate	and seminar as wel		regular attendance of exercises pletion of the respective exercises rse.	
Conter	nts	~				
	•	eriments to introduce stu perimental findings in a		•	lant ecophysiology as well as dis-	
Intend	led lear	ning outcomes				
		able to use current meth in a scientific context.	ods in plant ecophysi	ology as well as to d	locument experimental findings	
Course	<b>es</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	an)	
Ü + S (	(no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	lable)	
		sessment (type, scope, l ion on whether module o			ation offered — if not every seme-	
log (approx. 10 to 20 pages)						
Allocation of places						
Number of places: 15. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla-						

ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of

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places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 125 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title					Abbreviation	
Pharm	aceutio	al Drugs in Plants			07-4S1PS3-102-m01	
Modul	e coord	linator		Module offered by		
holder	of the	Chair of Pharmaceutic	al Biology	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites	<b>;</b>		
1 seme	ester	undergraduate	and seminar as wel	Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.		
Conter	nts	•				
cals as	well a	s to their application i	, .	c and phytochemica	nal plants and phytopharmaceuti- l analyses will be performed and ed.	
Intend	ed lear	ning outcomes				
			t knowledge on active ag and analytical methods		l plants and phytopharmaceuti- eia.	
Course	es (type	, number of weekly co	ontact hours, language –	– if other than Germa	an)	
Ü + S (	no info	rmation on SWS (wee	kly contact hours) and co	ourse language avai	lable)	
<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)						
methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 can- didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be infor- med about the method and length of the assessment prior to the course						

#### **Allocation of places**

Number of places: 6. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 126 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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### Teaching cycle

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

## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Mathematics (2012) Bachelor' degree (1 major) Mathematics (2013) Bachelor' degree (1 major) Computational Mathematics (2012) Bachelor' degree (1 major) Computational Mathematics (2013)

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 127 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

Module title Abbreviation					
Basic M	Nethod	s in Pharmaceutical Biol	ogy		07-4S1PS4-102-m01
Module	e coord	inator		Module offered by	· · · · · · · · · · · · · · · · · · ·
holder of the Chair of Pharmaceutical Biology			Biology	Faculty of Biology	
ECTS	Methe	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate		Admission prerequisite to assessment: regular attendance of exercises and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.			
Conten	te				

#### Contents

This module will provide students with a theoretical and methodological introduction to fundamental techniques in molecular biology and drug analysis. (For more information, please refer to www.pbio.biozentrum.uni-wuerz-burg.de.)

#### Intended learning outcomes

Students are able to analyse groups of drugs, using a variety of methods.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## Allocation of places

Number of places: 15. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 129 / 252
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Module					Abbreviation	
Practic	al Coui	se as Exchange Student		07-5AP-102-m01		
Module	e coord	inator		Module offered by		
Coordi	nator B	ioCareers		Faculty of Biology		
ECTS		od of grading	Only after succ. com	pl. of module(s)		
10	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate		eginning of the cour	regular attendance of lab course rse; please consult with acade-	
Conten	ts					
change <i>Biowiss</i>	progra	ammes such as Erasmus	etc. Contents of the c	ourse should corres	e this course in the context of ex- pond to the contents of <i>Spezielle</i> ent coordinator in advance.	
Studen	ts are f				an Germany. They have develo-	
Course	<b>s</b> (type	, number of weekly conta	ict hours, language —	if other than Germa	n)	
P (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
c) oral ( didates	examin 5 (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-	
Allocat	ion of <sub>l</sub>	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Module	e appea	ars in				
	-	ree (1 major) Biology (20:				
Bachel	or' deg	ree (1 major) Biology (20:	10)			

Bac	hel	or'	S	wi	th	1	ma	jor	Bio	ol	ogy	(2010)	)

Module	title				Abbreviation	
Externa	l Pract	ical Course		07-5EP-102-m01		
Module	coordi	inator		Module offered by		
		oCareers		Faculty of Biology		
		od of grading	Only after succ. com	· · · · · ·		
		rical grade				
Duratio	r	Module level	Other prerequisites			
1 semes		undergraduate		site to assessment: I	regular attendance of lab course	
					rse; please consult with acade-	
			mic advisory service			
Content	ts					
		complete a placement at red by the respective ins		niversity research in	stitution or a business. Contents	
-		ing outcomes				
		-	es of external instituti	ons and businesses	and have developed skills which	
		o work in their professior				
Courses	<b>s</b> (type,	number of weekly conta	ct hours, language —	· if other than Germa	ın)	
P (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)	
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-	
method	s of as	sessment: a) written exa	mination (approx. 45	to 60 minutes) or b)	) log (approx. 10 to 20 pages) or	
c) oral e	examin	ation of one candidate e	ach (approx. 30 minu	tes) or d) oral exami	ination in groups of up to 3 can-	
					minutes); students will be infor-	
Allocati		e method and length of th				
Allocall		naces				
Additio	nal info	ormation				
Auditio						
Workloa	ad					
Teachin	g cycle	9				
	<u> </u>					
Referre	d to in	LPO I (examination regu	lations for teaching-o	legree programmes)	I. Contraction of the second se	
Module	appea	rs in				
Bachelo	or' degr	ree (1 major) Biology (201	11)			
	-	ree (1 major) Biology (201				
	-	ree (1 major) Mathematic				
	-	ee (1 major) Mathematic	-			
	-	ree (1 major) Computatio				
	-	ree (1 major) Computatio		13)		
васпеіо	or s aeg	gree (1 major, 1 minor) Bi	ology (Minor, 2010)			

Module					Abbreviation		
Specifi	c Cell- a	and Developmental Bio	Biology 2 07-5S2MZ1-102-m01			1	
Module	coord	inator		Module offered by			
		Chair of Cell Biology and	l Developmental Bio-	Faculty of Biology			
ECTS	Metho	od of grading	Only after succ. con	pl. of module(s)			
10		rical grade		•			
Duratio	n	Module level	Other prerequisites				
1 seme	ster	undergraduate	and seminar as well		regular attendance o letion of the respect rse.		
Conten	ts						
cell cyc del orga compor ments t include sign se	le cont anisms nents r co answ lecture ries of	and developmental bio rol and the part the cell ranging from bacteria a edistributed during the ver these and other func- es, eLectures and, in pa experiments. The metho- electron microscopy to	cycle plays in the dev and yeasts to frogs and cell cycle? What contro damental questions. In riticular, virtual experi- ods you will use range	elopment of organis d mammals. How is g ols mitosis and repli addition to the prac ments that will teach from in vitro fertilisa	ms. We will offer a va growth controlled? H cation? We will perfo ctical part, the cours you how to indepen tion as well as quan	ariety of mo- ow are cell orm experi- e will also idently de- titative fluo-	
Intende	ed leari	ning outcomes					
		e acquired knowledge a endently perform scient		s and methods of mo	olecular and cell biol	ogy. They are	
	<u> </u>	, number of weekly con		- if other than Germa	in)		
		mation on SWS (weekly					
		essment (type, scope, on on whether module			ition offered — if not	every seme-	
c) oral ( didates	examin 6 (appro	sessment: a) written ex ation of one candidate ox. 20 minutes per canc e method and length of	each (approx. 30 minu lidate) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	ination in groups of ι	up to 3 can-	
Allocat	ion of p	olaces					
allocate logy) w ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod	ed as fo ith 180 be allo laces ( logie (l ics and logy (a ne quo there v s of a m pplicar dule w come a s' previ credit: ule con	ces: 20. Should the num pllows: Places will prime ECTS credits. Should the pattern of one part Biology) with 60 ECTS c Mathematik (Mathema s well as potentially to the exceed the number of a. Should there be, wit will be a uniform regula nodule component that this who already have su ill be given preferential available. Selection pro ous academic achiever s they have achieved an mponents in the subject hematics)) at the time of	arily be allocated to strain the module be used in or e Bachelor's degree su- icipant in total) will be redits and to students atics), each with 180 E0 students of other 'imp of applications, the rer hin one module compo- tion for the courses of are concerned will be accessfully completed consideration. A waiti cess group 1 (95%): Planents. For this purpose and their average grade t of Biologie (Biology)	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (	lor's degree subject l will be two quotas: ogy) with 180 ECTS c ts of the Bachelor's c gree subjects Compo of the application-ori ould the number of p be allocated to applic es with a restricted n nent. In this case, pla ardised procedure. In odule component of ained and places re- a e allocated according ranked according to aken during their stu Chemistry), Physik (F	Biologie (Bio 95% of pla- redits and legree sub- utational Ma ented sub- blaces availa cants from umber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma-	
		or Biology (2010)	11		·		

firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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#### Workload

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## Teaching cycle

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 133 / 252
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Modul	e title				Abbreviation	
Specif	ic Micro	biology 2			07-5S2MZ2-102-mc	01
Modul	e coord	inator		Module offered by		
		Chair of Microbiology		Faculty of Biology		
ECTS	1	od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·		
10	-	rical grade				
Durati	on	Module level	Other prerequisites	i		
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance o	of exercises
				l as successful comp	•	tive exercises
			as specified at the l	peginning of the cou	rse.	
Conter	nts					
croorg	anisms. Ieir hos	Students will investig	gate relevant problems ate interactions of oblig lisation of pathogens b	gate intracellular and	d facultative intracel	lular bacteria
Intend	ed lear	ning outcomes				
epithe action	lial cell s by ligł	culture, infecting these nt microscopy, confoca	I methods in cell and n e host cells with pathog I laser scanning fluores virulence such as adhe	genic microorganism scence microscopy, f	s, analysing host-pa low cytometry, West	thogen inter- ern blot and
Course	<b>es</b> (type	, number of weekly cor	ntact hours, language –	- if other than Germa	an)	
Ü + S (	no info	mation on SWS (week	y contact hours) and c	ourse language avail	able)	
ster, in	formati	on on whether module	language — if other th can be chosen to earn	a bonus)		
c) oral didate	examin s (appro	ation of one candidate ox. 20 minutes per can	xamination (approx. 45 each (approx. 30 minu didate) or e) presentati f the assessment prior	ites) or d) oral exami on (approx. 20 to 30	ination in groups of	up to 3 can-
Alloca	tion of <sub>l</sub>	olaces				
allocat logy) w ces wil 5% of J ject Bid thema ject Bid ble in o the oth places course dure, a tive mo they bo plicant of ECTS all moo thema firstly, and, so	ted as for vith 180 ll be all places ( ologie ( tics and ology (a one quo tics and ology (a one quo tics and ology (a one quo tis of a n applicar odule w ecome a ts' previs S credit dule con tik (Mat accordi econdly	ollows: Places will prim ECTS credits. Should to cated to students of to a minimum of one par Biology) with 60 ECTS I Mathematik (Mathem is well as potentially to the exceed the number ta. Should there be, wi will be a uniform regula nodule component that its who already have s ill be given preferentia available. Selection pre- ous academic achieve s they have achieved a mponents in the subje- hematics)) at the time ing to their average gra- a according to their tot	imber of applications e harily be allocated to st he module be used in o he Bachelor's degree si ticipant in total) will be credits and to students atics), each with 180 E students of other 'imp of applications, the ren thin one module compo- ation for the courses of t are concerned will be uccessfully completed l consideration. A waition ocess group 1 (95%): Pl ments. For this purpose nd their average grade ct of Biologie (Biology) of application. This will de weighted according al number of ECTS cred culated as the sum of t	udents of the Bachel other subjects, there ubject Biologie (Biole allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other me ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows to the number of EC its achieved (quantit	lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of gree subjects Comp of the application-ori ould the number of p or allocated to applic es with a restricted r nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated according to taken during their stu Chemistry), Physik (I : First, applicants wi TS credits (qualitative tative ranking). The a	Biologie (Bio- 95% of pla- redits and degree sub- utational Ma- ented sub- olaces availa- cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- ll be ranked, ve ranking) applicants'
Bachelor's	with 1 ma	jor Biology (2010)		Irg • generated 26-Aug-2024		page 134 / 252
			reg. data reco	rd Bachelor (180 ECTS) Biolo	gie - 2010	

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 135 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation	
Specif	ic Bioin	formatics 2		07-5S2MZ3-102-m01		
Modul	e coord	linator		Module offered by		
holder	ofthe	Chair of Bioinformati	cs	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)		
10	nume	rical grade				
Durati	on	Module level	Other prerequisites	i		
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises	
			and successful com	pletion of the respe	ctive exercises as specified at the	
			beginning of the co	urse.		
Conter	nts					
quence	e analy	•	d evolution - gene expres		from the following list: - se- ein structure analysis - program-	
Intend	ed lear	ning outcomes				
		e acquired knowledg oerform scientific lab		s and methods of bi	oinformatics. They are able to in-	
Course	es (type	, number of weekly c	ontact hours, language –	- if other than Germa	an)	
V + Ü (	no info	rmation on SWS (wee	ekly contact hours) and co	ourse language avai	lable)	
			e, language — if other th Ile can be chosen to earn		ation offered — if not every seme-	
c) oral didate	examir s (appr	nation of one candida ox. 20 minutes per ca	ite each (approx. 30 mini	utes) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be infor-	

#### Allocation of places

Number of places: 16. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module

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components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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### **Teaching cycle**

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

## Module appears in

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 18. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking)

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and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Nanostructure Technology (2010) Bachelor' degree (1 major) Nanostructure Technology (2012)

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Module title					Abbreviation
Neurol	oiology	2			07-5S2NVO1-102-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	ofthe	Chair of Neurobiology and	d Genetics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate		Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.			
Conter	nts				
tain an practic tations Intend Studer	overvi al exer on the ed lear	ew of current research fo cises on the contents of t experiments performed ning outcomes	cuses at the Universi he lecture as well as during exercises or w	ty of Würzburg. The r a seminar during wh vill present and discu	linical neurobiology and will ob- nodule will comprise a lecture, nich students will deliver presen- uss literature on individual topics vanced topics in neurobiology, ta
		, number of weekly conta	act hours language -	- if other than Germa	n
		mation on SWS (weekly			
Metho	d of as	•	anguage — if other th	an German, examina	tion offered — if not every seme
c) oral didate	examir s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor
Allocat	tion of	places			
	•				f available places, places will be lor's degree subject Biologie (Bi

logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking)

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and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

-	title				Abbreviation	
Integrati	ive Be	havioural Biology 2			07-5S2NVO2-102-m	101
Module coordinator				Module offered by	<u>I</u>	
holder of the Chair of Behavioral Physiology and Sociobio- logy						
	Metho	d of grading	Only after succ. con	nnl. of module(s)		
		ical grade				
Duration	r	Module level	Other prerequisites			
		undergraduate			regular attendance o	fexercises
1 semester undergraduate		undergraduite		pletion of the respec	ctive exercises as sp	
Contents	s					
		, students will acquire s on the biology of soc	an in-depth insight int ial insects.	o behavioural physic	ology and sociobiolo	gy with a
Intended	d learn	ing outcomes				
Students	s have	acquired knowledge a	and skills in the areas of ficient in methods use			gy. They are
Courses	(type,	number of weekly con	tact hours, language –	- if other than Germa	in)	
V + Ü (no	o infor	mation on SWS (weekl	y contact hours) and co	ourse language avail	able)	
			language — if other th can be chosen to earn		ition offered — if not	every seme-
	out the	method and length of	didate) or e) presentati the assessment prior t		minutes); students	will be infor-
Number allocated logy) wit ces will l 5% of pla ject Biold thematic ject Biold ble in on the othe places, t courses dure, ap tive mod they bec plicants' of ECTS of all modu thematik firstly, ad	of plac d as fo th 180 be allo aces (a ogie (E cs and ogy (as there w of a m oplican dule wi come a ' previo credits ule con k (Math ccordin condly,	ces: 18. Should the nu llows: Places will prim ECTS credits. Should t cated to students of th a minimum of one part Biology) with 60 ECTS of Mathematik (Mathem s well as potentially to ta exceed the number a. Should there be, with vill be a uniform regulat odule component that ts who already have so ll be given preferentia vailable. Selection pro- cous academic achieve they have achieved a nponents in the subjec- nematics)) at the time ng to their average gra	mber of applications exarily be allocated to stine module be used in one Bachelor's degree succeptuant in total) will be credits and to students attics), each with 180 Equations, the rest students of other 'implof applications, the rest in one module composition for the courses of a reconcerned will be uccessfully completed at consideration. A waition consideration. A waition consideration. A waition for the success group 1 (95%): Plements. For this purpose and their average grade at of Biologie (Biology) of application. This will de weighted according al number of ECTS cred	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (C l be done as follows) to the number of EC its achieved (quantit	lor's degree subject l will be two quotas: ogy) with 180 ECTS c ts of the Bachelor's c gree subjects Composite of the application-ori ould the number of p be allocated to applic es with a restricted n nent. In this case, pla ardised procedure. In odule component of ained and places re-a e allocated according ranked according to aken during their stu Chemistry), Physik (F First, applicants wil TS credits (qualitativ	Biologie (Bio 95% of pla- redits and legree sub- utational Ma ented sub- blaces availa cants from umber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- l be ranked, ve ranking)
position cording t qualitati	to this ive ran	nird ranking will be cal third ranking. Among king or otherwise by lo	culated as the sum of t applicants with the sar ot. Selection process gr aces): total number of	ne ranking, places w oup 2 (5%): Places v	vill be allocated acco vill be allocated acco	ocated ac- rding to the ording to the

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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### **Teaching cycle**

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

## Module appears in

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title					Abbreviation	
Animal Ecology 2 07-5S2NV03-102-m01						101
Modul	e coord	inator		Module offered by	<u> </u>	
holder	holder of the Chair of Animal Ecology and Tropical Biology Faculty of Biology					
ECTS	1	od of grading	Only after succ. compl. of module(s)			
10		rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate	1	site to assessment: I	regular attendance o	fevercises
1 Scine	- Ster	undergraduate		as successful comp	-	
				beginning of the cour	•	
Conter	ntc		us specified at the t		50.	
		-tudanta uilla anima				
		e, students will acquire a gn. The module will com				
•		pportunity to put their ac	•		•	ch students
		ning outcomes			•	
	_	able to design appropriat	te experiments to add	lress a scientific iccu	le as well as to analy	se precent
		he results.	te experiments to dut		ie as well as to analy	, se, present
	-	, number of weekly conta	act hours, language –	- if other than Germa	n)	
		nformation on SWS (wee				
		essment (type, scope, la				overv come-
		on on whether module c				every serife-
		sessment: a) written exa		-	log (approx, 10 to 2	o nages) or
		ation of one candidate e				
		ox. 20 minutes per candi				
med al	bout the	e method and length of t	he assessment prior	to the course		
Allocat	tion of p	olaces				
Numbe	er of pla	ces: 20. Should the num	ber of applications e	xceed the number of	available places, p	laces will be
allocat	ted as fo	ollows: Places will prima	rily be allocated to st	udents of the Bachel	or's degree subject	Biologie (Bio
		ECTS credits. Should the				
		ocated to students of the				
		a minimum of one partic				
	-	Biology) with 60 ECTS cro Mathematik (Mathemat				
		s well as potentially to s				
		ta exceed the number of	-		-	
		a. Should there be, with				
places	, there v	will be a uniform regulati	on for the courses of	one module compor	ent. In this case, pla	aces on all
course	es of a m	odule component that a	re concerned will be	allocated in a standa	ardised procedure. In	n this proce-
		its who already have suc				
tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as						
they become available. Selection process group 1 (95%): Places will primarily be allocated according to the ap-						
plicants' previous academic achievements. For this purpose, applicants will be ranked according to the number						
of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma-						
thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked,						
firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking)						
and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants'						
position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated ac-						
	-	third ranking. Among a	-			-
qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the						
following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module						
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			reg. data reco	rd Bachelor (180 ECTS) Biolog	gie - 2010	

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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#### **Teaching cycle**

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 145 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module tit	le			Abbreviation
Physiolog	y of Membrane Transpor	t Mechanisms		07-5S2PS1-102-m01
Module co	ordinator		Module offered by	1
holder of t	he Chair of Plant Physiol	ogy and Biophysics	Faculty of Biology	
ECTS M	ethod of grading	Only after succ. cor	npl. of module(s)	
10 nu	merical grade			
Duration	Module level	Other prerequisites	5	
1 semeste	r undergraduate	Admission prerequi	isite to assessment:	regular attendance of exercises
		and seminar as wel	l as successful comp	oletion of the respective exercises
		as specified at the l	beginning of the cou	rse.
Contents				
biological		s. On the basis of curren		ransport with modern molecular ons, different aspects of plant
Intended l	earning outcomes			
		research in the field of pl d deliver presentations o		port as well as with the methods ions.
Courses (t	ype, number of weekly c	ontact hours, language –	– if other than Germa	an)
Ü + S (no i	nformation on SWS (wee	ekly contact hours) and c	ourse language avai	lable)
		e, language — if other th Ile can be chosen to earn		ation offered — if not every seme-
candidate minutes p	each (approx. 30 minute	es) or d) oral examination ntation (approx. 20 to 30	n in groups (groups c	ges) or c) oral examination of one of 2 or 3 candidates, approx. 20 will be informed about the me-

#### **Allocation of places**

Number of places: 5. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biologie gy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module compon-

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ents of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

Workload

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**Teaching cycle** 

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

Module appears in

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Molecu	ılar Bio	logy of Plants		-	07-5S2PS2-102-m01
Module	e coord	inator		Module offered by	·
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Methe	od of grading	Only after succ. compl. of module(s)		
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 semester undergraduate Admission prereq		Admission prerequi	site to assessment:	regular attendance of exercises	
and seminar		and seminar as well	l as successful comp	letion of the respective exercises	
			as specified at the beginning of the course.		
Conten	ts				

In this module, students will acquire advanced knowledge and skills in techniques of molecular biology for questions of plant physiology. Every student will perform a physiological experiment that will be analysed using the methods the students have learned. Current scientific publications in the field of plant physiology will be presented and discussed in English.

#### Intended learning outcomes

Students are able to perform advanced experiments in plant physiology as well as to interpret and deliver presentations on scientific publications.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## Allocation of places

Number of places: 5. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biologie gy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one guota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the followi-

Bachelor's with 1 major Biology (2010) JMU Würzburg • generated 26-Aug-2024 • exam. page 148 / 252 reg. data record Bachelor (180 ECTS) Biologie - 2010

ng quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 149 / 252
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Modul	le title				Abbreviation
Protei	n bioch	emistry and expressior	n of recombinant prote	ins	07-5S2PS3-102-m01
Modul	le coord	inator		Module offered by	
holder	r of the	Chair of Plant Physiolog	y and Biophysics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)	
10	nume	rical grade			
Durati	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises
			and seminar as wel	l as successful comp	oletion of the respective exercises
			as specified at the l	peginning of the cou	rse.
Conte	nts				
tion ar	nd prote	•	as the biophysical and	biochemical analysi	protein expression, protein isola- is of proteins. Current scientific
Intend	led lear	ning outcomes			
					in expression and subsequent esentations on scientific publica-
Course	<b>es</b> (type	, number of weekly con	tact hours, language –	– if other than Germa	an)
Ü + S (	(no info	rmation on SWS (weekl	y contact hours) and c	ourse language avai	lable)
		sessment (type, scope, ion on whether module			ation offered — if not every seme-
					) log (approx. 10 to 20 pages) or ination in groups of up to 3 can-

c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## Allocation of places

Number of places: 5. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biologie gy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the followi-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 150 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

ng quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 151 / 252
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Module title					Abbreviation
Advan	ced Pla	nt Ecophysiology		-	07-5S2PS4-102-m01
Modul	e coord	inator		Module offered by	<u> </u>
holder	of the	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	1 semester undergraduate Admission prerequisite to assessment: regular attendance of e and seminar as well as successful completion of the respectiv as specified at the beginning of the course.		letion of the respective exercises		
Conter	nts	1	, ·		
ecolog	ical me				biological, chemical analytical or ocumented in the context of the
Intend	ed lear	ning outcomes			
		able to independently pe in the context of the curr			plant ecophysiology, to interpret ent these.
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	in)
Ü.C.	na infa	mation on CNIC (wookly	contact hours) and a		abla)

 $\ddot{U}$  + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### Allocation of places

Number of places: 15. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module

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components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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#### **Teaching cycle**

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 153 / 252
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Molecular B				Abbreviation
	Molecular Biological Methods in Pharmaceutical Biology			07-5S2PS5-102-m01
Module coordinator			Module offered by	
holder of the	Chair of Pharmaceutica	al Biology	Faculty of Biology	
	hod of grading	Only after succ. con		
	erical grade			
Duration	Module level	Other prerequisites		
1 semester	undergraduate			regular attendance of exercises
				pletion of the respective exercise
		as specified at the b		•
Contents	1		0 0	
	ed in a current research	nroiect students will h	ecome proficient in	advanced methods in molecular
	ecular biochemistry or r			
	rning outcomes	,		
		methods in pharmaceu	tical biology with a	focus on molecular biology or mo
				in the context of research pro-
jects.	· · ·	-	-	•
Courses (typ	e, number of weekly co	ntact hours, language –	- if other than Germa	an)
Ü + S (no inf	ormation on SWS (week	ly contact hours) and co	ourse language avai	lable)
Method of a	ssessment (type, scope	, language — if other th	an German, examina	ation offered — if not every seme
		e can be chosen to earn		,
c) oral exam didates (app	ination of one candidate rox. 20 minutes per car	e each (approx. 30 minu	utes) or d) oral exam on (approx. 20 to 30	<ul> <li>b) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be infor</li> </ul>
c) oral exam didates (app med about t <b>Allocation o</b>	ination of one candidate rox. 20 minutes per car he method and length o f <b>places</b>	e each (approx. 30 minundidate) or e) presentati of the assessment prior t	utes) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 154 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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#### **Teaching cycle**

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

## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 155 / 252
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Module	e title				Abbreviation
Thesis Biology					07-6BT-102-m01
Module coordinator				Module offered by	
chairpe	erson o	f examination committee	Biologie (Biology)	Faculty of Biology	
ECTS		od of grading	Only after succ. con	· · · · ·	
12	nume	rical grade		•	
Duratio	on	Module level	Other prerequisites	5	
1 seme	ster	undergraduate			
Conten	ts				
and pe	rform e pic in a	xperiments, collect data 1 seminar. For more infori	and present it in a th	esis and will deliver	scientific question. They will plar a presentation on and discuss Ise refer to www.biostudium.u-
Intend	ed learı	ning outcomes			
ring to	the prir	nciples of good scientific	practice. They will be	e able to document t	n time frame (10 weeks), adhe- neir findings in both written and present knowledge in the field.
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
no cou	rses as	signed			
		e <b>ssment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
written	thesis	(approx. 20 to 40 pages)			
Allocat	ion of p	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
		<u> </u>			
Module	e appea	in in			
mouun					
	or' deg	ree (1 major) Biology (20:	11)		
Bachel	-	ree (1 major) Biology (20: ree (1 major) Biology (20:	-		

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 156 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	
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Module	e title				Abbreviation
Specifi	c Cell-	and Developmental Biolo	ogy 3		07-6S3MZ1-102-m01
Module	e coord	inator		Module offered by	<u> </u>
holder logy	of the (	Chair of Cell Biology and	Developmental Bio-	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
15	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	and seminar as well		regular attendance of exercises letion of the respective exercises rse.
Conten	ts				
		e, students will acquire a oply methods in cell biol			ethods in cell biology. Students
Intend	ed lear	ning outcomes			
					ell biology, using appropriate me- e, present and interpret the re-
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	in)
Ü + S (r	no infoi	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		s <b>essment</b> (type, scope, la on on whether module c			tion offered — if not every seme-
c) oral didates	examin 5 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces			
allocat logy) w ces wil 5% of p ject Bio themat ject Bio	ed as fo ith 180 l be allo blaces ( blogie ( ics and blogy (a	ollows: Places will priman ECTS credits. Should the ocated to students of the a minimum of one partic	rily be allocated to str e module be used in o Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part o	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma-

following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 158 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Specif	ic Micro	obiology 3			07-6S3MZ3-102-m01
Module coordinator			Module offered by	<u> </u>	
holder	ofthe	Chair of Microbiology		Faculty of Biology	
ECTS	1	od of grading	Only after succ. con		
15	nume	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises
			and seminar as wel	l as successful comp	oletion of the respective exercise
	4		as specified at the b	beginning of the cou	rse.
Conter	nts				
		perform their research w nt manner under supervis			ne topic of microbiology in a larg
Intend	ed lear	ning outcomes			
		•			gy, using appropriate methods. ent and interpret the results.
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
Ü + S (	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	lable)
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme
c) oral didate	examir s (appr	nation of one candidate e	each (approx. 30 minu date) or e) presentati	ites) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be infor
Allocat	tion of	places			
allocat logy) w ces wil 5% of j ject Bio themat ject Bio	ed as f vith 180 Il be all places ologie ( tics and ology (a	ollows: Places will prima ECTS credits. Should the ocated to students of the (a minimum of one partic Biology) with 60 ECTS cr d Mathematik (Mathemat as well as potentially to s	rily be allocated to st e module be used in o Bachelor's degree st cipant in total) will be edits and to students tics), each with 180 E tudents of other 'imp	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de CTS credits, as part o orting' subjects). Sh	f available places, places will be lor's degree subject Biologie (Bi- e will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma of the application-oriented sub- ould the number of places avail- be allocated to applicants from

the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 159 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 160 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

	itle			Abbreviation
Specific F	Biotechnology 3			07-6S3MZ4-102-m01
Module c	oordinator		Module offered by	
nolder of	the Chair of Biotechnology a	nd Biophysics	Faculty of Biology	
ECTS N	Nethod of grading	Only after succ. cor	npl. of module(s)	
15 n	umerical grade			
Duration	Module level	Other prerequisites	5	
l semeste	er undergraduate	Admission prerequi	isite to assessment:	regular attendance of exercises
		and seminar as wel	l as successful com	pletion of the respective exercise
		as specified at the	beginning of the cou	irse.
Contents				
biosenso ion of ce and instru- dently on vill help t <b>ntended</b> Students hey will develop a heoretica	rs, high-resolution fluorescer Ils. Performing experiments u uments. Over the duration of current research topics. Wor them select a topic for their E learning outcomes will become acquainted with be able to independently wo	nce microscopy, fluor under expert guidance the course, students k on current research Bachelor's thesis. modern biophysical rk on scientific proble of biophysical mecha s and will give short p	escence spectrosco e, students will becc will then be require topics will spark th methods and their ems, to independent anisms. In the semir resentations on exp	s biotechnology, biomaterials an py, analysis and electromanipula ome acquainted with techniques d to work increasingly indepen- e students' interest in topics and applications in biotechnology. Ily study relevant literature and t har, students will acquire further eriments performed.
	information on SWS (weekly	contact hours) and c		
Ü + S (no Method o		anguage — if other th	ourse language avai an German, examin	lable)
Ü + S (no <b>Method o</b> ster, infor methods c) oral ex didates (a	<b>If assessment</b> (type, scope, la rmation on whether module of of assessment: a) written exa amination of one candidate e	anguage — if other th can be chosen to earr amination (approx. 4 each (approx. 30 minu idate) or e) presentat	ourse language avai an German, examin a a bonus) 5 to 60 minutes) or b utes) or d) oral exam ion (approx. 20 to 30	
Ü + S (no Method o ster, infor methods c) oral ex didates (a med about	of assessment (type, scope, la rmation on whether module of of assessment: a) written exa amination of one candidate e approx. 20 minutes per candi ut the method and length of t n of places	anguage — if other th can be chosen to earr amination (approx. 4 <u>4</u> each (approx. 30 minu idate) or e) presentat he assessment prior	ourse language avai an German, examin a a bonus) 5 to 60 minutes) or b utes) or d) oral exam ion (approx. 20 to 30 to the course	lable) ation offered — if not every seme )) log (approx. 10 to 20 pages) or ination in groups of up to 3 can-

dure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma-

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thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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#### Workload

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## Teaching cycle

1

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

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## Module appears in

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	e title				Abbreviation	
Specific Bioinformatics 3					07-6S3MZ5-102-m01	
Module coordinator Module offered by						
holder	of the (	Chair of Bioinformatics		Faculty of Biology		
ECTS		od of grading	Only after succ. con	1 / -/		
15		rical grade				
Duratio		Module level	Other prerequisites			
1 seme		undergraduate	1 1		regular attendance of exercises	
1 Seine	Ster				-	
				and seminar as well as successful completion of the respective exercises as specified at the beginning of the course.		
<b>C</b>	4-	<u> </u>			130.	
Conten				· · ·		
					nethods in bioinformatics. Stu-	
		n to address a scientific	problem in bioinform	iatics.		
Intend	ed lear	ning outcomes				
					ics, using appropriate methods.	
					ent and interpret the results.	
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	– if other than Germa	an)	
Ü + S (r	no info	rmation on SWS (weekly	contact hours) and co	ourse language avai	lable)	
Metho	d of ass	sessment (type, scope, la	anguage — if other th	an German, examina	ation offered — if not every seme	
		ion on whether module c				
				1 4 5 5 1 4 5 7		
method	ds of as	sessment: a) written exa	mination (approx. 45		) log (approx, 10 to 20 pages) or	
				5 to 60 minutes) or b	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can-	
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cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

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Module title					Abbreviation	
Neurobiology 3					07-6S3NVO1-102-m01	
Module	e coord	inator		Module offered by	· · · · · · · · · · · · · · · · · · ·	
holder	ofthe	Chair of Neurobiology	and Genetics	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
15	nume	rical grade				
Duratio	n	Module level	Other prerequisites	5		
1 semester undergraduate Admiss and ser			and seminar as wel		regular attendance of exercises letion of the respective exercises rse.	
Conten	ts					
In this i	In this module, students will acquire specific insights into topics, approaches and methods in neurobiology. Stu-					

In this module, students will acquire specific insights into topics, approaches and methods in neurobiology. Students will also be involved in current research projects.

#### Intended learning outcomes

Students will be proficient in the theory and practice of research in the field of neurobiology and will have developed skills required for a career in research.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

## Allocation of places

Number of places: 16. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, pla-

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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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## Teaching cycle

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

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## Module appears in

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Module title					Abbreviation
Integrative Behavioural Biology 3					07-6S3NVO2-102-m01
Module	e coord	inator		Module offered by	·
holder of the Chair of Behavioral Physiology and Sociol logy		siology and Sociobio-	Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
15	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	1 semester       undergraduate       Admission prerequisite to assessment: regular attendance of exercis and seminar as well as successful completion of the respective exercis as specified at the beginning of the course.				letion of the respective exercises
Conten					
In this	In this module, students will acquire specific insights into tonics, approaches and methods in integrative beha-				

In this module, students will acquire specific insights into topics, approaches and methods in integrative behavioural biology. Students will also be involved in current research projects in the area of experimental behavioural physiology and sociobiology.

#### Intended learning outcomes

Students will be proficient in the theory and practice of research in the field of integrative behavioural biology and will have developed skills required for a career in research.

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

Ü + S (no information on SWS (weekly contact hours) and course language available)

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

methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will be informed about the method and length of the assessment prior to the course

#### **Allocation of places**

Number of places: 18. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the

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following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

Teaching cycle

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

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## Module appears in

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Module title					Abbreviation
Animal	Animal Ecology 3 07-6S3NV03-102-m01				
Module coordinator				Module offered by	
holder	of the (	Chair of Animal Ecology a	nd Tropical Biology	Faculty of Biology	
ECTS		od of grading	Only after succ. com	npl. of module(s)	
15	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	By way of exception assessments.	, additional prerequi	isites are listed in the section on
Conten	Its				
Studer	nts will a		nt research projects. I		ods in special animal ecology. 07-6S3NVO3-1 is mandatory. Out
Intend	ed lear	ning outcomes			
	yse the				ial animal ecology. They are able ese in the context of current pu-
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	- if other than Germa	in)
• c • c • c • c • c • c	07-6S3N 07-6S3N 07-6S3N 07-6S3N d of ass formati	IVO3-2-102: V + Ü + S (no IVO3-3-102: V + S + E (no IVO3-4-102: V + S (no info sessment (type, scope, la on on whether module ca	information on langu information on langu ormation on language nguage — if other tha an be chosen to earn	age and number of w age and number of w e and number of wee an German, examina a bonus)	ekly contact hours available) veekly contact hours available) veekly contact hours available) ekly contact hours available) tion offered — if not every seme-
the firs	t asses	sment component and o	ne of the remaining t	hree.	as a whole students must pass (Advanced Animal Ecology 3)
• 1 • [4 • A r c <b>Assess</b>	o ECTS og (app Additior ninar as course.	credits, numerical gradir rox. 10 to 30 pages) nal prerequisites: admiss s well as successful com n module component o7-	ng ion prerequisite to as pletion of the respec 6 <b>S3NVO3-2-102:</b> Mod	sessment: regular a tive exercises as sp dellierung in der Ökc	ttendance of exercises and se- ecified at the beginning of the plogie (Ecological Modelling), <b>in</b> ion Biology), and <b>in module com</b> -
<b>ponent</b> • 5 • v • <i>P</i>	t <b>o7-6S</b> ECTS o vritten o Additior	<b>3NVO3-4-102:</b> Tropenbio redits, numerical grading examination (approx. 30 nal prerequisites: admiss	logie (Tropical Biolog g to 60 minutes) ion prerequisite to a	y) : ssessment: regular ;	attendance of seminar as well
	-	essful completion of the i	espective exercises a	as specified at the b	eginning of the course.
Allocat	ion of p	olaces			
allocat logy) w ces wil 5% of p logie (E matics Biology	ed as fo vith 180 l be allo blaces ( Biology) and Ma y (as we	ECTS credits. Should the ECTS credits. Should the ocated to students of the a minimum of one place with 60 ECTS credits an athematik (Mathematics) ell as potentially to stude	ily be allocated to stu module be used in o Bachelor's degree su in total) will be alloca d to students of the E , each with 180 ECTS nts of other 'importin	udents of the Bachel other subjects, there ubject Biologie (Biolo ated to students of th Bachelor's degree su credits, as part of th g' subjects). Should	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and he Bachelor's degree subject Bio- bjects Computational Mathe- he application-oriented subject the number of places available located to applicants from the

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other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

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# Module appears in

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Modul					Abbreviation	
Specific Aspects in Plant Molecular Biology 3 07-65					07-6S3PS1-102-mo	1
Module coordinator				Module offered by		
holder of the Chair of Plant Physiology and Bi		y and Biophysics	Faculty of Biology			
ECTS		od of grading	Only after succ. compl. of module(s)			
15	nume	rical grade		-		
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate		site to assessment: I	-	
				as successful comp		ive exercises
			as specified at the b	beginning of the cour	rse.	
Conter	nts					
scienti ting ar will be	ific prac nd comn e involve	mples of topics in content tice, including planning nunicating research fin ed in ongoing research s. In addition they will a	g research strategies, p dings in the form of a p and will learn how to ir	erforming complex e resentation, a public dependently apply a	experiments as well cation or a term pap advanced methods in	as documen- er. Students n modern
•	ed lear	ning outcomes				
		able to independently L		in plant molecular b	iology. They are able	e to indepen-
	addres	s and document questi				
Course	<b>es</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)	
Ü + S (	(no info	rmation on SWS (weekl	y contact hours) and co	ourse language avail	able)	
		<b>sessment</b> (type, scope, on on whether module			tion offered — if not	every seme-
c) oral didate	examin s (appro	sessment: a) written e ation of one candidate ox. 20 minutes per can e method and length of	each (approx. 30 minu didate) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	nation in groups of u	up to 3 can-
Alloca	tion of p	olaces				
<b>Allocation of places</b> Number of places: 5. Should the number of applications exceed the number of available places, places will be a located as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the anybicants' previous academic achievements. For this purpose, applicants will be ranked according to the anybicants' previous academic achievements. For this purpose, applicants will be ranked according to the anneber of ECTS credits they have achieved and their average grade of all assessments taken						
Bachelor's	s with 1 ma	jor Biology (2010)		rg • generated 26-Aug-2024		page 171 / 252
			reg. data reco	rd Bachelor (180 ECTS) Bioloខ្	gie - 2010	

on in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

Teaching cycle

reaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 172 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	Í Í

Module title				Abbreviation	
Proteir	1 Chem	istry in Biosensorics 3			07-6S3PS2-102-m01
Module coordinator			Module offered by	<u> </u>	
holder	of the (	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
15	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises
					oletion of the respective exercise
			as specified at the b	beginning of the cou	rse.
Conter	nts				
will be proteir	involve 1 chemi	ed in ongoing research ar	nd will learn to indepo l acquire an advance	endently apply adva d knowledge of the r	cation or a term paper. Students nced methods in biophysics and mechanisms and structure-funct
Intend	ed lear	ning outcomes			
le to in	depend				istry of biosensors. They are ab- gy, adhering to the principles of
-		, number of weekly conta	act hours, language –	- if other than Germa	in)
		mation on SWS (weekly			
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme
c) oral didate:	examin s (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor
Allocat	tion of p	olaces			
located gy) wit will be places logie (f tics an logy (a	d as foll h 180 E allocat (a mini Biology) d Math s well a	lows: Places will primaril CTS credits. Should the r ed to students of the Bac mum of one participant ) with 60 ECTS credits an ematik (Mathematics), e is potentially to students	y be allocated to stud nodule be used in oth chelor's degree subje in total) will be alloca d to students of the E ach with 180 ECTS cre of other 'importing' s	dents of the Bachelo her subjects, there w ct Biologie (Biology) ited to students of th Bachelor's degree su edits, as part of the a subjects). Should the	available places, places will be a r's degree subject Biologie (Biolo vill be two quotas: 95% of places with 180 ECTS credits and 5% o be Bachelor's degree subject Bio- bjects Computational Mathema- application-oriented subject Bio- e number of places available in cated to applicants from the othe

one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' positi-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 173 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

on in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 174 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module coordin       older of the Ch       CTS     Method       5     numerid       Puration     I	nator	insport Mechanisms		07-6S2PS2-102-m01
older of the Ch CTS Method 5 numerio Puration I			Experimental Biology of Membrane Transport Mechanisms         07-6S3PS3-102-m	
CTSMethod5numerioourationI	hair of Plant Physiology	Module coordinator		
5 numerio	iun or r tunt i nysiotosy	and Biophysics	Faculty of Biology	
uration /	l of grading	Only after succ. com	pl. of module(s)	
	cal grade			
	Module level	Other prerequisites		
	undergraduate			regular attendance of exercises
				oletion of the respective exercise
		as specified at the b		•
ontents				uced to the concepts of good
ng and commu vill be involved	unicating research findi I in ongoing research an	ngs in the form of a p d will learn how to in	resentation, a publi dependently apply	experiments as well as docume ication or a term paper. Student advanced methods in molecula f membrane transport in particu
ntended learni	ng outcomes			
hey are able to				l biology of membrane transport plant biology, adhering to the
·	number of weekly conta	ct hours, language –	- if other than Germa	an)
	nation on SWS (weekly o			
	e <b>ssment</b> (type, scope, la n on whether module ca			ation offered — if not every seme
) oral examina idates (approx	tion of one candidate ea	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be info
llocation of pl	aces	· · ·		
ocated as follo y) with 180 EC vill be allocated laces (a minimo ogie (Biology) v cs and Mather ogy (as well as ne quota exce uota. Should t e will be a unif module comp cants who alree e will be given ome available revious acade redits they hav	ws: Places will primarily TS credits. Should the n d to students of the Bac num of one participant i with 60 ECTS credits and matik (Mathematics), ea potentially to students ed the number of applic there be, within one more form regulation for the co- conent that are concerne eady have successfully of preferential considerati . Selection process grou mic achievements. For the content of and their av	y be allocated to stud hodule be used in oth helor's degree subje n total) will be alloca d to students of the E ach with 180 ECTS cree of other 'importing' s cations, the remainin dule component, sev ourses of one module ed will be allocated in completed at least or on. A waiting list will up 1 (95%): Places will his purpose, applica verage grade of all as	lents of the Bachelo ner subjects, there w ct Biologie (Biology) ted to students of th Bachelor's degree su edits, as part of the a subjects). Should th g places will be allo eral courses with a te component. In this n a standardised pro- be maintained and ll primarily be alloca nts will be ranked a sessments taken du	available places, places will be a or's degree subject Biologie (Biol vill be two quotas: 95% of places ) with 180 ECTS credits and 5% of ne Bachelor's degree subject Bio ubjects Computational Mathema application-oriented subject Bio- e number of places available in cated to applicants from the oth restricted number of places, the s case, places on all courses of ocedure. In this procedure, app- nponent of the respective modu- places re-allocated as they be- ated according to the applicants' ccording to the number of ECTS uring their studies or of all modu y), Physik (Physics), Mathema-

on in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 176 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Scientific Work in Plant Ecophysiology       07-653P54-102-m01         Module coordinator       Module offered by         holder of the Chair of Plant Physiology and Biophysics       Faculty of Biology         ECTS       Method of grading       Only after succ. compl. of module(s)         15       numerical grade          Duration       Module level       Other prerequisite to assessment: regular attendance of expression precequisite to assessment: as well as during and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in ecology, analytical chemistry or molecular biology.         Intended learning outcomes       Extended of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on SWS (weekly contact hours) and course language available)         Method of assessment: a) written examination (approx. 4s to 50 minutes) or b) log (approx. 1o to 20 pa c) or al examination of one candidate each (approx. 30 minutes) or d	dule titl	le			Abbreviation	
holder of the Chair of Plant Physiology and Biophysics         Faculty of Biology           ECTS         Method of grading         Only after succ. compl. of module(s)           15         numerical grade	entific V	Work in Plant Ecophysiolo	gy		07-6S3PS4-102-mo	1
holder of the Chair of Plant Physiology and Biophysics         Faculty of Biology           ECTS         Method of grading         Only after succ. compl. of module(s)           15         numerical grade	Module coordinator			Module offered by	<u> </u>	
Method of grading         Only after succ. compl. of module(s)           15         numerical grade            Duration         Module level         Other prerequisites           1 semester         undergraduate         Admission prerequisite to assessment: regular attendance of exc project and seminar as well as successful completion of the resp exercises as specified at the beginning of the course.           Contents         Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as de ting and communicating research and will learn how to independently apply advanced methods in ecc logy, analytical chemistry or molecular biology.           Intended learning outcomes         Intended learning outcomes           Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice.           Courses (type, number of weekly contact hours, language — if other than German)         Ú           U + R + 5 (no information on SWS (weekly contact hours) and course language available)           Method of assessment (type, scope, language — if other than German, examination offered — if not even ster, information on whether module can be chosen to earn a bonus)           methods of assessment: a) written examination (approx. 45 to 6 minutes) or b) log (approx. 10 to 20 p c) oral examination of one candidate each (approx, 20 to 30 minutes) or b) log (appr			my and Pianhysics	1		
numerical grade		, , , ,				
Duration         Module level         Other prerequisites           1 semester         undergraduate         Admission prerequisite to assessment: regular attendance of exercises as specified at the beginning of the course.           Contents         exercises as specified at the beginning of the course.           Using the examples of topics in contemporary research, students will be involuced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as dting and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology.           Intended learning outcomes         Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good spractice.           Courses (type, number of weekly contact hours, language — if other than German)         Ü + R + S (no information on SWS (weekly contact hours) and course language available)           Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on whether module can be chosen to earn a bonus)           methods of assessment: a) written examination (approx. 25 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of ne candidate each (approx. 20 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will limed about the method an length of the assessme						
1 semester       undergraduate       Admission prerequisite to assessment: regular attendance of exercises as specified at the beginning of the course.         Contents         Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as d ting and communicating research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology.         Intended learning outcomes         Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice.         Courses (type, number of weekly contact hours, language — if other than German)            Ü + R + S (no information on SWS (weekly contact hours) and course language available)         Method of assessment (type, scope, language — if other than German, examination of fored — if not even ster, information on on whether module can be chosen to earn a bonus)         methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) or al examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the courses         Allocation of places: 15. Should the number of applications exceed the number of available places, places allocated to st		-	Other prerequisites			
project and seminar as well as successful completion of the resp exercises as specified at the beginning of the course.           Contents           Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as diting and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology.           Intended learning outcomes         Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice.           Courses (type, number of weekly contact hours, language — if other than German)         U           U + R > (no information on SWS (weekly contact hours) and course language available)           Method of assessment (type, scope, language — if other than German, examination offered — if not every ster, information on whether module can be chosen to earn a bonus)           methods of assessment: a) written examination (approx. 45 to 6 om inutes) or b) log (approx. 10 to 20 pa c) or al examination of one candidate each (approx. 30 minutes) or d) or al examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will me adbout the method and length of the assessment prior to the course           Allocation of places         Should the number of applications exceed the number of available places, places allocated to stude					regular attendance o	of exercises.
exercises as specified at the beginning of the course.           Contents           Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as d ting and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology.           Intended learning outcomes           Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice.           Courses (type, number of weekly contact hours, language — if other than German)           Ü + R + S (no information on SWS (weekly contact hours) and course language available)           Method of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course           Allocation of places         Should the number of applications exceed the number of available places, places will primarily be allocated to students of the Bachelor's degree subject Biology with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject	linester				-	
Contents Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as d ting and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology. Intended learning outcomes Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice. Courses (type, number of weekly contact hours, language — if other than German) Ü + R + S (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. to to 20 pa c) oral examination of one candidate (approx. 30 minutes) or d) aral examination in groups of up to c) and examination of places Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo (bgy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. and to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. And the matter), each with 180 ECTS credits, as part of the application-oriente ipect Biology (as well as potentially to students of other 'importing' subjects). Should there module component, several courses will are abler's degree subject						
Using the examples of topics in contemporary research, students will be introduced to the concepts of g scientific practice, including planning research strategies, performing complex experiments as well as du ting and communicating research findings in the form of a presentation, a publication or a term paper. S will be involved in ongoing research and will learn how to independently apply advanced methods in eco logy, analytical chemistry or molecular biology. Intended learning outcomes Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice. Courses (type, number of weekly contact hours, language — if other than German) Ü + R + S (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on on e candidate each (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course Allocation of places Number of places: 15. Should the number of applications exceed the number of available places, places sellocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 40 ECTS credits and to students of the Bachelor's degree subject Somutation the maticis and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biologie (Biology) with 60 ECTS credits an	tents	<b>I</b>				
Students are able to independently conduct research on the ecophysiology of plants. They are able to in dently address and document questions in the field of plant biology, adhering to the principles of good s practice. Courses (type, number of weekly contact hours, language — if other than German) Ü + R + S (no information on SWS (weekly contact hours) and course language available) Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course Allocation of places Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% or places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Scomputat thematics and Mathematic(Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of ther "importing" subjects). Should the number of applications the remaining places will be allocated to applicants the other quota. Should there be, within one module component, several courses with a restricted numb for applications, there will be allocated to applicants the other guota. Should the number of applications, theremaining places will be allocated to applicants the other quota. Should the number of applications, the remaining places will be allocated to applicants the other quota.	entific p g and co be invo	practice, including plannin ommunicating research fin olved in ongoing research	g research strategies, p dings in the form of a p and will learn how to in	performing complex operforming complex operation, a publi	experiments as well cation or a term pap	as documen er. Students
dently address and document questions in the field of plant biology, adhering to the principles of good s practice. <b>Courses</b> (type, number of weekly contact hours, language — if other than German) Ü + R + S (no information on SWS (weekly contact hours) and course language available) <b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not even ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolc logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computatit thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-orientet ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of applications, the remaining places will be allocated to applicant the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully comple	ended le	earning outcomes				
<ul> <li>Û + R + S (no information on SWS (weekly contact hours) and course language available)</li> <li>Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on whether module can be chosen to earn a bonus)</li> <li>methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course</li> <li>Allocation of places</li> <li>Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo (gliology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Siologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects. Should the number of applications, the remaining places will be allocated to application-oriente ject Biologi (a well as potentially to students of other 'importing' subjects). Should the number of places the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the rise one other module component of the real places in the standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the rise module</li></ul>	ıtly addı					
Method of assessment (type, scope, language — if other than German, examination offered — if not ever ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will 1 med about the method and length of the assessment prior to the course Allocation of places Mumber of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and to students of the Bachelor's degree subject Somutation-oriente ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places ble in one quota exceed the number of applications, the remaining places will be allocated to applicantes the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the re- tive module will be given preferential consideration. A waiting list will be maintained and places re-alloc	<b>irses</b> (ty	ype, number of weekly cor	ntact hours, language –	– if other than Germa	an)	
ster, information on whether module can be chosen to earn a bonus) methods of assessment: a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pa c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and to students of the Bachelor's degree subjects Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the tive module will be given preferential consideration. A waiting list will be maintained and places re-alloc	R + S (n	no information on SWS (w	eekly contact hours) ar	nd course language a	vailable)	
c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to didates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes); students will med about the method and length of the assessment prior to the course <b>Allocation of places</b> Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects. Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places the other quota exceed the number of applications, the remaining places will be allocated to applicants the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the re- tive module will be given preferential consideration. A waiting list will be maintained and places re-alloc	r, inform	nation on whether module	e can be chosen to earn	ı a bonus)		
<b>Allocation of places</b> Number of places: 15. Should the number of applications exceed the number of available places, places allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects. Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places ble in one quota exceed the number of applications, the remaining places will be allocated to applicants the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the real other module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the real other module component of the real other module will be given preferential consideration. A waiting list will be maintained and places re-alloc	oral exar ates (ap	mination of one candidate pprox. 20 minutes per can	e each (approx. 30 minu didate) or e) presentat	utes) or d) oral exam ion (approx. 20 to 30	ination in groups of	up to 3 can-
allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biolo logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credit 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computati thematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriente ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of place ble in one quota exceed the number of applications, the remaining places will be allocated to applicants the other quota. Should there be, within one module component, several courses with a restricted numb places, there will be a uniform regulation for the courses of one module component. In this case, places courses of a module component that are concerned will be allocated in a standardised procedure. In this dure, applicants who already have successfully completed at least one other module component of the re- tive module will be given preferential consideration. A waiting list will be maintained and places re-alloc			· ·			
plicants' previous academic achievements. For this purpose, applicants will be ranked according to the r of ECTS credits they have achieved and their average grade of all assessments taken during their studies all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physi thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ra and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The appli position in a third ranking will be calculated as the sum of these two rankings, and places will be allocat	ocated a will be of place Biologi matics a Biology in one c other q ces, the reses of e, appli module y becom ants' pr CCTS cre module matik (A tly, acco d, secon	as follows: Places will prim 180 ECTS credits. Should t allocated to students of the se (a minimum of one part fie (Biology) with 60 ECTS of and Mathematik (Mathem ty (as well as potentially to quota exceed the number quota. Should there be, with the will be a uniform regula a module component that icants who already have so le will be given preferentia me available. Selection pro- previous academic achieve edits they have achieved a e components in the subject Mathematics)) at the time ording to their average gra ndly, according to their total	harily be allocated to st the module be used in the he Bachelor's degree s ticipant in total) will be credits and to students atics), each with 180 E of applications, the relation of applications, the relation thin one module completed tare concerned will be uccessfully completed l consideration. A waition ocess group 1 (95%): Pl ments. For this purposend their average grade ct of Biologie (Biology) of application. This will de weighted according al number of ECTS cred	udents of the Bache other subjects, there ubject Biologie (Biol allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will b onent, several course one module compor allocated in a standa at least one other main ing list will be mainta aces will primarily be of all assessments t (excluding Chemie ( Il be done as follows to the number of EC lits achieved (quantit	lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of gree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted r nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated according to taken during their stu Chemistry), Physik (I : First, applicants wi TS credits (qualitativ tative ranking). The a	Biologie (Bio 95% of pla- redits and degree sub- utational Ma ented sub- olaces availa cants from sumber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- il be ranked, ve ranking) applicants'
Bachelor's with 1 major Biology (2010) JMU Würzburg • generated 26-Aug-2024 • exam. pag reg. data record Bachelor (180 ECTS) Biologie - 2010	elor's with 1	1 major Biology (2010)				page 177 / 252

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 178 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Resear	e title				Abbreviation
	rch Proj	ect in Pharmaceutical Bi	iology with Focus on	Molecular Biology	07-6S3PS5-102-m01
Module coordinator Module of		Module offered by			
holder	of the (	Chair of Pharmaceutical I	Biology	Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con		
15	nume	rical grade		<b>-</b>	
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate	Admission prerequi and seminar as well	site to assessment:	regular attendance of exercises pletion of the respective exercise rse.
Conter	nts				
scienti ting an will be	fic prac Id comr involve	tice, including planning nunicating research find	research strategies, p ings in the form of a p nd will learn how to ir	performing complex or presentation, a publi	uced to the concepts of good experiments as well as documen ication or a term paper. Students specific methods in pharmaceuti
Intend	ed lear	ning outcomes			
on mol	lecular	biology. They are able to			rmaceutical biology with a focus uestions in the field of plant bio-
<b>Courses</b> (type, number of weekly contact hours, language — if other than German)					
			act hours, language –	- if other than Germa	an)
Course	<b>es</b> (type				
Course Ü + S ( Metho	es (type no infoi <b>d of ass</b>	, number of weekly conta rmation on SWS (weekly	contact hours) and co anguage — if other th	ourse language avail an German, examina	
Course Ü + S ( Metho ster, in metho c) oral didate	es (type no infor d of ass iformati ds of as examin s (appro	, number of weekly conta rmation on SWS (weekly sessment (type, scope, la ion on whether module c ssessment: a) written exa- nation of one candidate e	contact hours) and co anguage — if other the can be chosen to earn amination (approx. 45 each (approx. 30 minu idate) or e) presentati	ourse language avail an German, examina a bonus) 5 to 60 minutes) or b 1tes) or d) oral exam on (approx. 20 to 30	lable)
Course Ü + S ( Metho ster, in metho c) oral didate med al	es (type no infor d of ass iformati ds of as examin s (appro	, number of weekly conta rmation on SWS (weekly sessment (type, scope, la ion on whether module c ssessment: a) written exa- tation of one candidate e ox. 20 minutes per candi e method and length of t	contact hours) and co anguage — if other the can be chosen to earn amination (approx. 45 each (approx. 30 minu idate) or e) presentati	ourse language avail an German, examina a bonus) 5 to 60 minutes) or b 1tes) or d) oral exam on (approx. 20 to 30	lable) ation offered — if not every seme ) log (approx. 10 to 20 pages) or ination in groups of up to 3 can-

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 179 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 180 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul				_	Abbreviation	
	•	ect in Pharmaceutical	Biology with Focus on	Molecular Bioche-	07-6S3PS6-102-mo	1
mistry						
Modul	e coord	inator		Module offered by		
holder	of the (	Chair of Pharmaceutica	l Biology	Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
15	nume	rical grade				
Durati	on	Module level	Other prerequisites	6		
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance o	f exercises
			and seminar as wel	l as successful comp	oletion of the respect	ive exercises
			as specified at the b	peginning of the cou	rse.	
Conter	nts					
scienti ting an will be	fic prac d comr involve	mples of topics in content tice, including planning nunicating research fin ed in ongoing research th a focus on moleculat	g research strategies, p dings in the form of a p and will learn how to ir	performing complex or presentation, a publi	experiments as well cation or a term pap	as documen er. Students
Intend	ed lear	ning outcomes				
Studer on mo	nts are a lecular	able to independently p biochemistry. They are ring to the principles of	able to independently	address and docum		
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	– if other than Germa	an)	
Ü + S (	no infoi	mation on SWS (weekl	y contact hours) and co	ourse language avai	lable)	
Metho	d of ass	essment (type, scope,	language — if other th	an German, examina	ation offered — if not	every seme-
		on on whether module				,
c) oral didate	examin s (appro	sessment: a) written e ation of one candidate ox. 20 minutes per can e method and length of	each (approx. 30 minu didate) or e) presentati	utes) or d) oral exam ion (approx. 20 to 30	ination in groups of (	up to 3 can-
Allocat	tion of p	olaces				
allocat logy) w ces wil 5% of J ject Bid thema ject Bid ble in o the oth places course dure, a tive mo they bo plicant of ECTS all moo thema firstly, and, so	ed as for ith 180 l be allo olaces ( ologie ( tics and ology (a one quo ter qu	ces: 8. Should the num bllows: Places will prim ECTS credits. Should t bcated to students of the a minimum of one part Biology) with 60 ECTS of Mathematik (Mathem s well as potentially to bta exceed the number ca. Should there be, with will be a uniform regulat nodule component that the given preferentia available. Selection pro- ous academic achiever s they have achieved a mponents in the subject hematics)) at the time ng to their average gra , according to their tota hird ranking will be cal	arily be allocated to st he module be used in o he Bachelor's degree st icipant in total) will be credits and to students atics), each with 180 Er students of other 'imp of applications, the ren- thin one module compo- tion for the courses of are concerned will be uccessfully completed consideration. A waition ocess group 1 (95%): Pl ments. For this purpose and their average grade of application. This will de weighted according al number of ECTS cred	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will b onent, several course one module compose allocated in a stand at least one other m ing list will be mainta aces will primarily b e, applicants will be of all assessments to (excluding Chemie ( l be done as follows to the number of EC its achieved (quanti	lor's degree subject will be two quotas: ogy) with 180 ECTS c ts of the Bachelor's c egree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted n nent. In this case, pla ardised procedure. In odule component of ained and places re- a e allocated according to taken during their stu Chemistry), Physik (F : First, applicants will TS credits (qualitativ tative ranking). The a	Biologie (Bio 95% of pla- redits and legree sub- utational Ma ented sub- olaces availa cants from umber of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma- l be ranked, re ranking) upplicants'
•		or Biology (2010)		urg • generated 26-Aug-2024	•	page 181 / 252
				ord Bachelor (180 ECTS) Biolo		

cording to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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Teaching cycle

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

#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 182 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Modul	e title				Abbreviation
Excurs	ion I				07-S1-Ex1-102-m01
Module	e coord	inator		Module offered by	Į
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate	1		regular attendance of field trip as
			specified at the beg	inning of the course	; please consult with academic
			advisory service in a	advance.	
Conten	ts	1	1 ·		
Conten	ts of th	e field trip to be determi	ined by the respective	institution.	
Intend	ed lear	ning outcomes			
Studer	its have	e developed skills which	qualify them to work	in their profession.	
Course	<b>s</b> (type	, number of weekly cont	act hours, language –	- if other than Germa	an)
E (no ir	nformat	tion on SWS (weekly con	tact hours) and cours	e language available	e)
Metho	d of as	sessment (type, scope, b	anguage — if other tha	an German, examina	ation offered — if not every seme-
		ion on whether module o			,
didates med al	s (appr pout th	ox. 20 minutes per cand e method and length of t	idate) or e) presentati	on (approx. 20 to 30	ination in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of	places			
			_		
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
			_		
Referre	ed to in	LPOI (examination reg	ulations for teaching-o	legree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Biology (20			
	-	ree (1 major) Biology (20			
	-	ree (1 major) Mathemati			
Bachel	-	ree (1 major) Mathemati	cs (2013)		
_ ·	or' dog				
	-	ree (1 major) Computatio			
Bachel	or' deg	ree (1 major) Computatio ree (1 major) Computatio gree (1 major, 1 minor) B	onal Mathematics (20		

	<u>e title</u>				Abbreviation
Interdi	sciplin	ary Project I			07-S1-IP1-102-m01
Modul	e coord	linator		Module offered by	
Coordi	nator B	lioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	1	rical grade		•	
Duratio	on	Module level	Other prerequisites	5	
1 seme	ster	undergraduate	Admission prerequi	site to assessment:	regular attendance of project se
			sions as specified a	it the beginning of th	e course; please consult with
			academic advisory	service in advance.	
Conten	nts	•	-		
		ne project to be determin	ned by the competent	coordinators; conter	nts will vary according to topic.
		ning outcomes			
Studer	nts hav	e developed skills which	n qualify them to work	in their profession.	
Course	es (type	, number of weekly cont	tact hours, language –	- if other than Germa	an)
		tion on SWS (weekly cor			
		· · · · · · · · · · · · · · · · · · ·			ation offered — if not every seme
		ion on whether module			
didates med al	s (appr	ox. 20 minutes per cand			ination in groups of up to 3 can-
AII 1		_	the assessment prior		o minutes); students will be info
Allocat	tion of	_			) minutes); students will be info
		places			o minutes); students will be info
		_			o minutes); students will be info
		places			o minutes); students will be info
 Additic	onal inf	places			o minutes); students will be info
 Additic	onal inf	places			
	onal inf oad	ormation			o minutes); students will be info
 Additic  Worklo	onal inf oad	ormation			o minutes); students will be info
 Additic  Worklo  Teachi	onal inf oad ng cycl	ormation	the assessment prior	to the course	
 Additic  Worklo  Teachi	onal inf oad ng cycl	ormation	the assessment prior	to the course	
 Additio  Worklo  Teachi  Referre	onal inf oad ng cycl ed to in	ormation	the assessment prior	to the course	
 Additic  Worklo  Teachi  Referre  Bachel	onal inf oad ng cycl ed to in e appea or' deg	places Formation le LPO I (examination reg ars in gree (1 major) Biology (20	the assessment prior	to the course	
 Worklo  Teachi  Referre  Bachel Bachel	onal inf oad ng cycl ed to in e appea or' deg or' deg	ree (1 major) Biology (20 ree (1 major) Biology (20)	the assessment prior	to the course	
 Additic  Workld  Teachi  Referre  Bachel Bachel Bachel Bachel	onal inf oad ng cycl ed to in e appea or' deg or' deg or' deg	places formation formation le LPO I (examination reg ars in gree (1 major) Biology (20 gree (1 major) Biology (20 gree (1 major) Biology (20	the assessment prior gulations for teaching- point poi	to the course	
 Additic  Worklo  Teachi  Referre  Bachel Bachel Bachel Bachel Bachel Bachel	onal inf oad ng cycl ed to in e appea or' deg or' deg or' deg or' deg	places formation le LPOI (examination reg ars in gree (1 major) Biology (20 gree (1 major) Biology (20 gree (1 major) Mathemat gree (1 major) Mathemat	the assessment prior ulations for teaching- o11) o10) ics (2012) ics (2013)	to the course	
 Additic  Worklo  Teachi  Referre Bachel Bachel Bachel Bachel Bachel Bachel Bachel	onal inf oad ng cycl ed to in e appea or' deg or' deg or' deg or' deg or' deg	places formation le LPO I (examination reg ars in gree (1 major) Biology (20 gree (1 major) Biology (20 gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Mathemat gree (1 major) Computati	the assessment prior ulations for teaching- 011) 010) ics (2012) ics (2013) onal Mathematics (20	to the course degree programmes)	
 Additic  Worklo  Teachi  Referre Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	onal inf oad ng cycl ed to in e appea or' deg or' deg or' deg or' deg or' deg or' deg	places formation le LPOI (examination reg ars in gree (1 major) Biology (20 gree (1 major) Biology (20 gree (1 major) Mathemat gree (1 major) Mathemat	the assessment prior gulations for teaching- point poi	to the course degree programmes)	

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Module ti	itle			Abbreviation
Laborato	ry practical course I			07-S1-LP1-102-m01
Modulo c	oordinator		Module offered by	
	tor BioCareers			
	Nethod of grading	Only after succ. com	Faculty of Biology	
	umerical grade			
Duration	Module level	Other prerequisites		
1 semeste			site to assessment.	regular attendance of lab course
1 Semest				rse; please consult with acade-
		mic advisory service		ise, preuse consult min acade
Contents		,		
	tical coursed is offered by an i	nstitution that is par	t of the University. C	ontents to be determined by the
respectiv	e institution.			
Intended	learning outcomes			
Students	have developed skills which o	qualify them to work	in their profession.	
Courses (	type, number of weekly conta	ct hours, language —	· if other than Germa	an)
P (no info	ormation on SWS (weekly cont	act hours) and cours	e language available	2)
	· · · · · ·			ition offered — if not every seme-
	rmation on whether module ca			
methods	of assessment: a) written exa	mination (approx. 45	to 60 minutes) or b)	) log (approx. 10 to 20 pages) or
				ination in groups of up to 3 can-
	approx. 20 minutes per candic ut the method and length of th			minutes); students will be infor-
	n of places			
Allocation	ii oi piaces			
	1. 6			
Additiona	al information			
Workload				
Teaching	cycle			
Referred	to in LPO I (examination regu	lations for teaching-o	legree programmes)	
Module a	ppears in			
Bachelor'	degree (1 major) Biology (201	.1)		
	degree (1 major) Biology (201			
	degree (1 major) Mathematic			
	degree (1 major) Mathematic		<b>`</b>	
	degree (1 major) Computation			
	degree (1 major) Computation		13)	
Bachelor	s degree (1 major, 1 minor) Bi	ology (Milliof, 2010)		

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 185 / 252
Dachelor 5 with 1 major Diology (2010)	Jino Walzbarg - Scherated 20 Aug 2024 - exam.	page 105 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Excursi	ion II				07-S2-EX2-102-m01
Module	<u> </u>	inator		Module offered by	
		ioCareers		Faculty of Biology	
ECTS	-	od of grading	Only after succ. com	, .,	
10		rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate		site to assessment:	regular attendance of field trip as
			specified at the beg	inning of the course	; please consult with academic
			advisory service in a	dvance.	
Conten	ts				
[Versio	n 1: Co	ntents of the field trip to	be determined by the	respective institution	on.] [Version 2: Contents of the
project	to be o	letermined by the compe	tent coordinators; co	ntents will vary acco	ording to topic.]
Intende	ed lear	ning outcomes			
Studen	ts have	e developed skills which	qualify them to work	in their profession.	
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	an)
E (no ir	format	ion on SWS (weekly cont	act hours) and course	e language available	2)
		· · · · ·			ation offered — if not every seme-
		on on whether module ca			
method	ds of as	sessment: a) written exa	mination (approx. 45	to 60 minutes) or b	) log (approx. 10 to 20 pages) or
					ination in groups of up to 3 can-
					minutes); students will be infor-
		e method and length of th	le assessment pror t	o the course	
Allocat	ion of j	Diaces			
Additio	nal inf	ormation			
Worklo	ad				
	-				
Teachiı	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
	_				
Module	e appea	urs in			
Bachel	or' deg	ree (1 major) Biology (201	11)		
	-	ree (1 major) Biology (201			
Bachel		ree (1 major) Mathematic	5 (2012)		
Bachel	-	ree (1 major) Mathematic	s (2013)		
Bachel Bachel	or' deg	ree (1 major) Mathematic ree (1 major) Computatio ree (1 major) Computatio	s (2013) nal Mathematics (20:		

Module	e title				Abbreviation
Interdi	sciplin	ary Project II			07-S2-IP2-102-m01
Module	e coord	inator		Module offered by	<u> </u>
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
10	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			regular attendance of project ses
					e course; please consult with
			academic advisory s	service in advance.	
Conten	lts				
Conten	ts of th	e project to be determine	ed by the competent	coordinators; conter	nts will vary according to topic.
Intend	ed lear	ning outcomes			
Studen	its have	e developed skills which	qualify them to work	in their profession.	
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	in)
		tion on SWS (weekly cont			
					tion offered — if not every seme-
		ion on whether module ca			·····, ····
med at	pout th	e method and length of th			minutes); students will be infor-
Allocat	ion of	places			
Additio	onal inf	ormation			
Worklo	ad				
	-				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-	12)	
	-	ree (1 major) Computatio ree (1 major) Computatio			
	-	gree (1 major, 1 minor) Bi		<i>ر</i> د.	
Sachet	51 5 ac				

Module	e title				Abbreviation
Labora	tory Pra	actical Course II			07-S2-LP2-102-m01
Modul	a coord	inator		Module offered by	
		ioCareers		Faculty of Biology	
ECTS	r	od of grading	Only after succ. com	· · · · ·	
10		rical grade			
Duratio	·	Module level	Other prorequisites		
1 seme		undergraduate	Other prerequisites		regular attendance of lab course
1 Seme	5101	undergraduate			rse; please consult with acade-
			mic advisory service		ise, please consult with acade
Conten	ts				
		coursed is offered by an	inctitution that is not	t of the University C	ontants to be determined by the
		titution.	msulution that is par	t of the University. C	ontents to be determined by the
		ning outcomes			
			o of intownal in attent	and have develo	and glillo which and the there to
		amiliar with the structure profession.	es of internal institution	ons and have develo	oped skills which qualify them to
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	- if other than Germa	an)
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)
Metho	d of ass	<b>essment</b> (type, scope, la	inguage — if other tha	an German, examina	ntion offered — if not every seme-
		on on whether module c			
metho	ds of as	sessment: a) written exa	mination (approx. 45	to 60 minutes) or b)	) log (approx. 10 to 20 pages) or
					ination in groups of up to 3 can-
					minutes); students will be infor-
		e method and length of th	le assessment pror t		
Allocat	ion of p	Diaces			
Additio	onal info	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
		· · · · · · · · · · · · · · · · · · ·			
Module	e appea	in in			
Bachel	or' deg	ree (1 major) Biology (20:	11)		
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-		
	-	ree (1 major) Computatio			
	-	ree (1 major) Computatio		13)	
васнеl	or's de	gree (1 major, 1 minor) Bi	010gy (Minor, 2010)		

Module	e title				Abbreviation	
Excursi	ion III				07-S3-Ex3-102-m01	
Module	e coord	inator		Module offered by		
Coordi	nator B	ioCareers		Faculty of Biology		
ECTS		od of grading	Only after succ. com	pl. of module(s)		
15	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate			regular attendance of field trip as	
				-	please consult with academic	
			advisory service in a	idvance.		
Conten	ts					
		ne field trip to be determin nesses or fieldwork in the			may include visits to instituti-	
Intend	ed lear	ning outcomes				
learn a	bout a		spects of careers in b	biology. Fieldwork in	ve first-hand information and will the area of organismic biology ata in the field.	
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
E (no ir	nformat	tion on SWS (weekly cont	act hours) and cours	e language available	)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
c) oral didates	examir 5 (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-	
Allocat			· · ·			
Additio	nal inf	ormation				
Worklo	ad					
WUIKIU						
 Teachi		0				
	ig cycl	C				
Referre	d to in	LPO I (examination regu	lations for teaching	legree programmer)		
Module	appe	ars in				
			11)			
Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)						

В	ac	he	lor'	S	wit	h	1	maj	jor	Bio	logy	(2010	)

Modul	e title				Abbreviation
Interd	isciplina	ary Project III			07-S3-IP3-102-m01
Module coordinator				Module offered by	<u> </u>
		ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. con	· · · · ·	
15	_	rical grade			
Durati	on	Module level	Other prerequisites		
1 seme	ester	undergraduate		t the beginning of th	regular attendance of project ses- e course; please consult with
Conte	nts				
Conte	nts of th	e project to be determine	ed by the competent	coordinators; conter	nts will vary according to topic.
Intend	led lear	ning outcomes			
Stude	nts have	e developed skills which	qualify them to work	in their profession.	
Course	<b>es</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	in)
R (no i	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		e <b>ssment</b> (type, scope, la on on whether module c			tion offered — if not every seme-
c) oral didate	examin s (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor-
	tion of p		· · ·		
Additi	onal inf	ormation			
Workl	oad				
Teachi	ing cycl	e			
Referr	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	e appea	irs in			
		ree (1 major) Biology (20:	11)		
	-	ree (1 major) Biology (20			

Module	e title				Abbreviation
Labora	tory Pr	actical Course III			07-S3-LP3-102-m01
Module	e coord	inator		Module offered by	
		ioCareers		Faculty of Biology	
ECTS	1	od of grading	Only after succ. con	, ,	
15	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate		beginning of the cour	regular attendance of lab course rse; please consult with acade-
Conten	ts				
		coursed is offered by an titution.	institution that is par	t of the University. C	ontents to be determined by the
Intende	ed lear	ning outcomes			
		amiliar with the structure rofession.	es of internal instituti	ons and have develo	pped skills which qualify them to
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
P (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		s <b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
c) oral ( didates	examin 5 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teaching cycle					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)					
Module	e appea	irs in			
	-	ree (1 major) Biology (20: ree (1 major) Biology (20:	-		

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.
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Module title					Abbreviation
Biotec	hnolog	y and Social Acceptance			07-SQF-BGA-102-m01
Module	e coord	inator		Module offered by	
holder	ofthe	Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. compl. of module(s)		
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Contents					
Applica bility.	Applications of green biotechnology; biological background, economic interests, ecological risks, social accepta- bility.				

#### Intended learning outcomes

Students are able to discuss/evaluate society's views of biotechnology. They know how to conduct a literature search and are able to critically review scientific publications as well as issues raised by society. Students have enhanced their oral and written presentation skills and are able to use these to present the data they have collected.

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

V + S (no information on SWS (weekly contact hours) and course language available)

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

term paper or preparing educational materials (approx. 5 to 10 pages) and presentation (approx. 20 to 30 minutes)

#### Allocation of places

Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of

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places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

# Teaching cycle

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

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Modul			<u>.</u>	Abbreviation	
Compu	utertools for Molecular Biology			07-SQF-CTA-102-m	01
Module coordinator			Module offered by	1	
holder	of the Chair of Bioinformatics		Faculty of Biology		
ECTS	Method of grading	Only after succ. con	npl. of module(s)		
2	(not) successfully completed				
Durati		Other prerequisites	i		
1 seme	ester undergraduate				
Conter	nts				
Studer	nts know how simple and free to	ools for molecular bio	logical analysis work	κ.	
Intend	ed learning outcomes				
	nts will be familiar with the met nese methods.	hods discussed in cla	ss and will know wh	at problems may be	addressed
Course	<b>es</b> (type, number of weekly cont	act hours, language –	- if other than Germa	an)	
V + Ü (	no information on SWS (weekly	contact hours) and co	ourse language avai	able)	
	d of assessment (type, scope, nformation on whether module			ation offered — if not	every seme
writter	n examination or practical exam	ination (approx. 30 m	inutes)		
Alloca	tion of places				
allocat logy) w ces wil 5% of ject Bi	ted as follows: Places will prima vith 180 ECTS credits. Should th Il be allocated to students of th places (a minimum of one parti ologie (Biology) with 60 ECTS cr tics and Mathematik (Mathema	e module be used in o e Bachelor's degree so cipant in total) will be redits and to students	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de	will be two quotas: ogy) with 180 ECTS c ts of the Bachelor's c gree subjects Comp	Biologie (Bio 95% of pla- redits and degree sub- utational Ma
allocat logy) w ces wil 5% of ject Bi- thema ject Bi- ble in o the oth places course dure, a tive mo they b- plicant of ECT all moo thema firstly, and, so positic cordin qualita followi compo glaces	with 180 ECTS credits. Should the ll be allocated to students of the places (a minimum of one parti- ologie (Biology) with 60 ECTS cre- tics and Mathematik (Mathema- ology (as well as potentially to one quota exceed the number of her quota. Should there be, with s, there will be a uniform regulate s of a module component that applicants who already have su- odule will be given preferential ecome available. Selection pro- ts' previous academic achieven S credits they have achieved are dule components in the subject tik (Mathematics)) at the time of according to their average grade econdly, according to their tota on in a third ranking will be calco g to this third ranking. Among a ative ranking or otherwise by lot ing quotas: Quota 1 (50% of pla onents of the Faculty of Biology; Il be allocated by lot. Quota 2 (a gapplicants with the same num s): allocation by lot. Should the	the module be used in a e Bachelor's degree su cipant in total) will be redits and to students tics), each with 180 Ed students of other 'imp of applications, the ren in one module compo- tion for the courses of are concerned will be ccessfully completed consideration. A waiti cess group 1 (95%): Pl nents. For this purpose of their average grade to f Biologie (Biology) of application. This will le weighted according l number of ECTS cred ulated as the sum of t applicants with the san t. Selection process gr ces): total number of among applicants with the sen subject semest module be used only in	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will be onent, several cours one module compose allocated in a stand at least one other m ing list will be maints aces will primarily b e, applicants will be of all assessments to (excluding Chemie ( l be done as follows to the number of EC its achieved (quanti these two rankings, a me ranking, places w roup 2 (5%): Places w ECTS credits already th the same number er of subject semest ers, places will be a in the Bachelor's des	lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of egree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted m nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated according ranked according to taken during their stu Chemistry), Physik (F : First, applicants will tative ranking). The a and places will be allocated accord will be allocated accord will be allocated accord in get the respective located by lot. Quota gree subject Biologie	Biologie (Bio 95% of pla- redits and degree sub- utational Ma iented sub- places availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma Il be ranked, ve ranking) applicants' located ac- ording to the ording to the s/module eved, pla- applicant; a 3 (25% of
allocat logy) w ces wil 5% of ject Bid thema ject Bid ble in of the oth places dure, a tive mo they be plicant of ECTS all moo thema firstly, and, so positic cordin qualita followi compo ces wil among places with 18	with 180 ECTS credits. Should the ll be allocated to students of the places (a minimum of one parti- ologie (Biology) with 60 ECTS cre- tics and Mathematik (Mathema- ology (as well as potentially to one quota exceed the number of her quota. Should there be, with s, there will be a uniform regulate es of a module component that applicants who already have su- odule will be given preferential ecome available. Selection pro- ts' previous academic achieven S credits they have achieved are dule components in the subject tik (Mathematics)) at the time of according to their average grace econdly, according to their tota on in a third ranking will be calco g to this third ranking. Among a ative ranking or otherwise by lot ing quotas: Quota 1 (50% of pla- onents of the Faculty of Biology; Il be allocated by lot. Quota 2 (a gapplicants with the same num s): allocation by lot. Should the BOECTS credits, places will be a	the module be used in a e Bachelor's degree su cipant in total) will be redits and to students tics), each with 180 Ed students of other 'imp of applications, the ren in one module compo- tion for the courses of are concerned will be ccessfully completed consideration. A waiti cess group 1 (95%): Pl nents. For this purpose of their average grade to f Biologie (Biology) of application. This will le weighted according l number of ECTS cred ulated as the sum of t applicants with the san t. Selection process gr ces): total number of among applicants with the sen subject semest module be used only in	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will be onent, several cours one module compose allocated in a stand at least one other m ing list will be maints aces will primarily b e, applicants will be of all assessments to (excluding Chemie ( l be done as follows to the number of EC its achieved (quanti these two rankings, a me ranking, places w roup 2 (5%): Places w ECTS credits already th the same number er of subject semest ers, places will be a in the Bachelor's des	lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of egree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted m nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated according ranked according to taken during their stu Chemistry), Physik (F : First, applicants will tative ranking). The a and places will be allocated accord will be allocated accord will be allocated accord in get the respective located by lot. Quota gree subject Biologie	Biologie (Bio 95% of pla- redits and degree sub- utational Ma iented sub- places availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma Il be ranked, ve ranking) applicants' located ac- ording to the ording to the s/module eved, pla- applicant; a 3 (25% of
allocat logy) w ces wil 5% of ject Bid thema ject Bid ble in of the oth places dure, a tive mo they be plicant of ECTS all moo thema firstly, and, so positic cordin qualita followi compo ces wil among places with 18	with 180 ECTS credits. Should the ll be allocated to students of the places (a minimum of one parti- ologie (Biology) with 60 ECTS cre- tics and Mathematik (Mathema- ology (as well as potentially to one quota exceed the number of her quota. Should there be, with s, there will be a uniform regulate s of a module component that applicants who already have su- odule will be given preferential ecome available. Selection pro- ts' previous academic achieven S credits they have achieved are dule components in the subject tik (Mathematics)) at the time of according to their average grade econdly, according to their tota on in a third ranking will be calco g to this third ranking. Among a ative ranking or otherwise by lot ing quotas: Quota 1 (50% of pla onents of the Faculty of Biology; Il be allocated by lot. Quota 2 (a gapplicants with the same num s): allocation by lot. Should the	the module be used in a e Bachelor's degree su cipant in total) will be redits and to students tics), each with 180 Ed students of other 'imp of applications, the ren in one module compo- tion for the courses of are concerned will be ccessfully completed consideration. A waiti cess group 1 (95%): Pl nents. For this purpose of their average grade to f Biologie (Biology) of application. This will le weighted according l number of ECTS cred ulated as the sum of t applicants with the san t. Selection process gr ces): total number of among applicants with the sen subject semest module be used only in	udents of the Bache other subjects, there ubject Biologie (Biol allocated to studen of the Bachelor's de CTS credits, as part of orting' subjects). Sh maining places will be onent, several cours one module compose allocated in a stand at least one other m ing list will be maints aces will primarily b e, applicants will be of all assessments to (excluding Chemie ( l be done as follows to the number of EC its achieved (quanti these two rankings, a me ranking, places w roup 2 (5%): Places w ECTS credits already th the same number er of subject semest ers, places will be a in the Bachelor's des	lor's degree subject will be two quotas: ogy) with 180 ECTS of the Bachelor's of egree subjects Comp of the application-ori ould the number of p be allocated to applic es with a restricted m nent. In this case, pla ardised procedure. In odule component of ained and places re- e allocated according ranked according to taken during their stu Chemistry), Physik (F : First, applicants will tative ranking). The a and places will be allocated accord will be allocated accord will be allocated accord in get the respective located by lot. Quota gree subject Biologie	Biologie (Bio 95% of pla- redits and degree sub- utational Ma iented sub- places availa cants from number of aces on all n this proce- the respec- allocated as g to the ap- the number udies or of Physics), Ma Il be ranked, ve ranking) applicants' located ac- ording to the ording to the s/module eved, pla- applicant; a 3 (25% of

### Workload

Teaching cycle

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

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### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 195 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Basic Data Processing					07-SQF-EDV-102-m01
Module coordinator				Module offered by	
holder	of the (	Chair of Bioinformatics		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
3	<u> </u>	rical grade			
Duratio		Module level	Other prerequisites		
1 seme		undergraduate			
Conten	ts				
logy: - ι Windov dents w and dat	up-to-d vs and vill be r tabase	ate information on hardw Linux operating systems equired to work with dur	vare and software, da - in the area of softwa ing their university str e course will focus or	ta protection and da are, the course will f udies: word process	ntial not only for students of bio- ta security - basic information on ocus on Office applications stu- ing, spreadsheets, presentation as of communication technolo-
		ning outcomes			
re for b protect how to with too	ioscien data. S search ols for f	itists. They have gained a Students are able to use a for information on the in these purposes. Students	n overview of prevale NS Office-like softwa ternet. They know ho s are proficient in ima	ent operating system re to address in part w to create and main ge editing software	area of computers and softwa- is and know how to backup and icular scientific issues and know ntain web pages and are familiar and techniques and know how to o when writing scientific publica-
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
Ü (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
		<b>sessment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
c) oral e didates	examin 6 (appro	ation of one candidate ea	ach (approx. 30 minu date) or e) presentatio	tes) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teaching cycle					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)					
Module	appea	urs in			
		ree (1 major) Biology (201	11)		
Bachel	Bachelor' degree (1 major) Biology (2010)				

			Abbreviation	
Basic Pri	nciples for Laboratory Work		_	07-SQF-GGL-102-m01
Module c	coordinator		Module offered by	
Coordina	tor BioCareers		Faculty of Biology	
ECTS N	Method of grading	Only after succ. con	npl. of module(s)	
3 n	numerical grade			
Duration	Module level	Other prerequisites		
1 semest	er undergraduate			
Contents	<b>i</b>			
sensible equipme copy. In a	use of checks, keeping lab no nt, handling of radioactivity; b	tebooks, handling of background knowledg ss fundamental cell o	reagents, storage a ge on electrophoresi culture techniques (e	e.g. designing experiments, the nd disposal, maintenance of lab s, centrifugation and light micros- eukaryotic and bacterial) as well nd proteins.
Intended	learning outcomes			
of finding		up experiments if init		sign through to the publication gest certain findings, and to pro-
Courses	(type, number of weekly conta	ict hours, language –	- if other than Germa	in)
V + Ü (no	information on SWS (weekly o	contact hours) and co	ourse language avail	able)
	of assessment (type, scope, la rmation on whether module ca			tion offered — if not every seme-
	xamination or practical examin			
	n of places			
allocated logy) with ces will b 5% of pla ject Biolo thematics ject Biolo ble in one the other places, th courses of dure, app tive modu they becc plicants' of ECTS c all modul thematik firstly, ac and, secc position i cording to qualitativ following compone	as follows: Places will primar h 180 ECTS credits. Should the be allocated to students of the aces (a minimum of one particle ogie (Biology) with 60 ECTS creaters and Mathematik (Mathematic ogy (as well as potentially to ste e quota exceed the number of r quota. Should there be, within here will be a uniform regulation of a module component that a colicants who already have suc- ule will be given preferential come available. Selection proce- previous academic achievement credits they have achieved and le components in the subject of (Mathematics)) at the time of cording to their average grader ondly, according to their total in a third ranking will be calcur o this third ranking. Among ap we ranking or otherwise by lot. g quotas: Quota 1 (50% of plac- ents of the Faculty of Biology; a	ily be allocated to stra module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the ren in one module compo- on for the courses of re concerned will be cessfully completed onsideration. A waiti ess group 1 (95%): PL ents. For this purpose I their average grade of Biologie (Biology) application. This will weighted according number of ECTS cred lated as the sum of to policants with the sar Selection process gr es): total number of among applicants with	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantif hese two rankings, a ne ranking, places w oup 2 (5%): Places v ECTS credits already th the same number	Favailable places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking) cative ranking). The applicants' and places will be allocated ac- vill be allocated according to the achieved in modules/module of ECTS credits achieved, pla- ers of the respective applicant;

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 197 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

### Additional information

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Workload

# Teaching cycle

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 198 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module					Abbreviation
Global	Acting	in Globally and Locally li	inked Decision Proce	sses	07-SQF-GHE-102-m01
Module coordinator				Module offered by	<u> </u>
		hair of Bioinformatics		Faculty of Biology	
ECTS		d of grading	Only after succ. com	, .,	
3		ical grade		•	
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
differen will refl the righ as an e	nt fields ect the nt decis xample	of biology and/or bioted latest trends and develo ion Decision making a of "ecology vs. economy	chnology with regard pments. Topics that i nd disposal Decisio	to their socio-politic might be covered in	course will discuss findings fror cal relevance. Topics will vary an clude: - Global threats making s of social insects Ecosystems
		ing outcomes			nd requirements and will under-
sues an to spec ecology blems r	nd will h ific loca , socio relevan	be better qualified to ada al conditions as well as t biology), the course will t to society and develop	opt the opportunities o implement these. W have acquainted stud approaches to solution	and/or necessities a Vith the help of topic dents with principles	deeper awareness of complex is associated with global challenge cal examples from nature (e.g. s that may help understand pro-
		number of weekly conta			
		ion on SWS (weekly cont			
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
log (apj	prox. 10	o to 20 pages)			
Allocati	ion of p	laces			
allocate logy) wi ces will 5% of p ject Bio themati ject Bio ble in o the othe places, courses dure, ap tive mo they be plicants of ECTS all mod themati firstly, a	ed as fc ith 180 l be allc blaces ( blogie (l ics and blogy (a one quo er quot there v s of a m pplican dule wi ccome a s' previ s credits lule cor ik (Mat accordi	Allows: Places will primar ECTS credits. Should the ocated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to st ta exceed the number of a. Should there be, withi vill be a uniform regulation odule component that a ts who already have suc Il be given preferential c vailable. Selection proce ous academic achievement they have achieved and they have achieved and they have achieved and they have the subject of the matics)) at the time of	ily be allocated to stue module be used in or Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 EC udents of other 'impo applications, the ren n one module compo on for the courses of re concerned will be a cessfully completed a onsideration. A waitin ess group 1 (95%): Pla ents. For this purpose I their average grade of Biologie (Biology) ( application. This will e weighted according	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie ( be done as follows to the number of EC	available places, places will be lor's degree subject Biologie (Bio will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma of the application-oriented sub- ould the number of places availa- te allocated to applicants from the application oriented sub- ould the number of places availa- te allocated to applicants from the application of places availa- te allocated to applicants from the application of places availa- te allocated to applicants from the application of the respec- alined and places re-allocated as the allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma the first, applicants will be ranked, TS credits (qualitative ranking)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 199 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 200 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation		
	Basics in System Administration   07-SQF-GSA-102-m01					
Module coordinator			Module offered by			
holder of the	Chair of Bioinformatics		Faculty of Biology			
ECTS Metho	od of grading	Only after succ. con	npl. of module(s)			
2 (not) :	successfully completed					
Duration	Module level	Other prerequisites				
1 semester	undergraduate					
Contents						
	ll introduce students to tl al exercises in the compu			stems (Linux, Mac OSX, Win- lecture.		
Intended lear	ning outcomes					
Students will	demonstrate a basic fami ons in different system en			sed and will be able to perform h a broader range of operating		
Courses (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)		
V + Ü (no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)		
	sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
written exami	nation or practical examin	nation (approx. 30 m	inutes)			
Allocation of	places					
allocated as fa logy) with 180 ces will be all 5% of places of ject Biologie ( thematics and ject Biology (a ble in one quo the other quo places, there courses of a n dure, applican tive module w they become a plicants' prev of ECTS credit all module co thematik (Mat firstly, accord and, secondly position in a t cording to this qualitative ran following quo components of ces will be all among applic	ollows: Places will primar ECTS credits. Should the ocated to students of the (a minimum of one particle Biology) with 60 ECTS cred Mathematik (Mathematic is well as potentially to sto the exceed the number of ta. Should there be, within will be a uniform regulation nodule component that a nots who already have succ- till be given preferential c available. Selection process is they have achieved and mponents in the subject of thematics)) at the time of ing to their average grade to their average grade to their average grade to their anking. Among ap not and the sub lot. tas: Quota 1 (50% of plac of the Faculty of Biology; a pocated by lot. Quota 2 (29) ants with the same numb	ily be allocated to stue module be used in of Bachelor's degree su ipant in total) will be dits and to students ics), each with 180 EG udents of other 'imp applications, the ren n one module compo- on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla- ents. For this purpose I their average grade of Biologie (Biology) application. This will weighted according number of ECTS cred lated as the sum of t oplicants with the sar Selection process gr es): total number of I among applicants with the of places): number of subject semest nodule be used only i	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mor ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (O l be done as follows: to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w ECTS credits already the same number er of subject semeste ers, places will be al n the Bachelor's deg	available places, places will be or's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- First, applicants will be ranked, TS credits (qualitative ranking) rative ranking). The applicants' and places will be allocated ac- rill be allocated according to the <i>v</i> ill be allocated according to		

#### Additional information

Workload

# --Teaching cycle

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 202 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Teamw	ork in I	Natural Science			07-SQF-GTA-102-m01
Module coordinator Module offered by					<u> </u>
Coordir	nator B	ioCareers		Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
2	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
teams o	of 3 to ;				nd phases of team building. In . They will summarise and deliver
Intende	ed lear	ning outcomes			
based of familian work. In	environ r with t n addit	ment. They will know ho he advantages of teamwo ion, they will have becom	w their team projects ork as well as with dis ne familiar with the di	were different from sadvantages teamwo fferent phases of tea	
		, number of weekly conta			
		ion on SWS (weekly cont			
		<b>sessment</b> (type, scope, la on on whether module c			tion offered — if not every seme-
c) oral o didates	examin 6 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces	· · · ·		
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	urs in			
		ree (1 major) Biology (20:	11)		
Bachel	or' deg	ree (1 major) Biology (20	lo)		

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 203 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module					Abbreviation
Good P	Practice	s in Laboratory, Clinics a	and Production		07-SQF-GXP-102-m01
Module coordinator Module offered by					
	Coordinator BioCareers			Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
3	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
techno are in p aboven res, e. g rage an trophor technic	logical place at mentior g. desig nd dispo resis, co ques (en	production. The course v American, European and ed areas. In addition, th gning experiments, the se osal, maintenance of lab entrifugation and light m	vill discuss the guide d German authorities, e course will teach st ensible use of checks equipment, handling icroscopy. In additior	lines for safeguardir universities and org udents basic rules ro , keeping lab notebo of radioactivity; ba n, the course will dis	rmaceutical, chemical and bio- ng good scientific practice that ganisations that are active in the egarding everyday lab procedu- ooks, handling of reagents, sto- ckground knowledge on elec- ccuss fundamental cell culture e molecular biological analysis of
		ning outcomes			
dents a place. of findi	are able They ar ings -, t	to adhere to existing gu e able to effectively struc	idelines, both during ture research project up experiments if init	lab courses at unive s - from experiment	o the relevant regulations. Stu- ersity and in their future work- design through to the publication gest certain findings, and to pro-
Course	<b>s</b> (type	number of weekly conta	ect hours, language —	if other than Germa	in)
		ion on SWS (weekly cont			
		<b>essment</b> (type, scope, la on on whether module c			ition offered — if not every seme-
written	examiı	nation or practical exami	nation (approx. 20 mi	inutes)	
Allocat	ion of p	olaces	-		
allocate logy) w ces will 5% of p	ed as fo vith 180 l be allo places ( plogie (l	ollows: Places will prima ECTS credits. Should the	rily be allocated to stu e module be used in c Bachelor's degree su	udents of the Bachel other subjects, there ubject Biologie (Biolo	f available places, places will be lor's degree subject Biologie (Bio will be two quotas: 95% of pla- ogy) with 180 ECTS credits and

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 204 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

Workload

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Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 205 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Outstai	nding P	ublications in Biology			07-SQF-HVB-102-m01
Module coordinator				Module offered by	
Coordinator BioCareers				Faculty of Biology	
ECTS	r	d of grading	Only after succ. com		
3	numer	ical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
rical sig	gnifican		ered ground-breaking		olications that are either of histo- hods and techniques that helped
Intende	ed learn	ing outcomes			
dings/p evaluat <b>Course</b> :	publicat te new c <b>s</b> (type,	tions. A retrospective rev developments in science number of weekly conta	view of these "key pul 	blications" has giver	
S (no in	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	e)
		<b>essment</b> (type, scope, la on on whether module ca			ition offered — if not every seme-
present	tation (a	approx. 20 to 30 minutes	5)		
Allocat	ion of p	laces			
allocate logy) wi ces will 5% of p ject Bio themati ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themati firstly, a and, se position cording qualitat followir compor	ed as for ith 180 l be allo places (a plogie (E cics and plogy (a prequot s of a m pplican odule wi ecome a s' previo credits dule con ik (Matl accordits tive ran ng quot nents o	Allows: Places will primar ECTS credits. Should the protected to students of the a minimum of one partice Biology) with 60 ECTS created Mathematik (Mathematic swell as potentially to state ta exceed the number of a. Should there be, within will be a uniform regulation odule component that a ts who already have succed at swho already have succed by academic achievement of the preferential construction of their average graded according to their total and the subject of the their average graded according to their total and the faculty of Biology; a fuel faculty of Biology; a	ily be allocated to stue module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 EG tudents of other 'imper applications, the rem in one module compor- on for the courses of re concerned will be a cessfully completed a onsideration. A waiting ess group 1 (95%): Pla ents. For this purpose I their average grade of Biologie (Biology) ( application. This will e weighted according number of ECTS credit lated as the sum of the policants with the sam Selection process gra- es): total number of E among applicants with	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie ( be done as follows: to the number of EC its achieved (quantif hese two rankings, a ne ranking, places w oup 2 (5%): Places v ECTS credits already th the same number	Favailable places, places will be lor's degree subject Biologie (Bio will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma of the application-oriented sub- ould the number of places availa be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number taken during their studies or of Chemistry), Physik (Physics), Ma- : First, applicants will be ranked, TS credits (qualitative ranking) tative ranking). The applicants' and places will be allocated ac- vill be allocated according to the achieved in modules/module of ECTS credits achieved, pla- ers of the respective applicant;

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 206 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

### Additional information

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Workload

# Teaching cycle

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 207 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation
	cultural Competence			07-SQF-IKK-102-m01
Module coord	linator		Module offered by	
Coordinator B	ioCareers		Faculty of Biology	
	od of grading	Only after succ. con	npl. of module(s)	
4 (not)	successfully completed			
Duration	Module level	Other prerequisites		
2 semester	undergraduate			
Contents				
the Faculty of dents from ab ternational st small-group to	Biology at the University proad (in particular from n	of Würzburg, we aim on-EU states) studyir ling scientific conten	to offer more intensing biology. For this p ts, to overcome lang	foster the international focus of ive mentoring for first-year stu- purpose, we train tutors to help in- uage problems with the help of dents in general.
				ernational competencies, the as the ability to supervise groups.
Courses (type	, number of weekly conta	ct hours, language —	- if other than Germa	ın)
Ü + T (no info	rmation on SWS (weekly o	contact hours) and co	urse language availa	able)
ster, informat	sessment (type, scope, la ion on whether module ca o to 20 pages)			ition offered — if not every seme-
Allocation of	places			
allocated as f logy) with 180 ces will be all 5% of places ject Biologie ( thematics and ject Biology (a ble in one quo places, there courses of a n dure, applican tive module w they become plicants' prev of ECTS credit all module co thematik (Ma firstly, accord and, secondly position in a t cording to this qualitative ran following quo components o ces will be all	ollows: Places will primar o ECTS credits. Should the ocated to students of the (a minimum of one partic Biology) with 60 ECTS cred d Mathematik (Mathemat as well as potentially to sto ba exceed the number of ta. Should there be, within will be a uniform regulation nodule component that a nts who already have suc- vill be given preferential c available. Selection proce- ious academic achievem is they have achieved and mponents in the subject thematics)) at the time of ing to their average grade v, according to their total hird ranking. Among ap- nking or otherwise by lot. tas: Quota 1 (50% of plac of the Faculty of Biology; a ocated by lot. Quota 2 (20)	ily be allocated to strue module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 tudents of other 'imp applications, the rem in one module compo- on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla- ents. For this purpose I their average grade of Biologie (Biology) application. This will weighted according number of ECTS cred lated as the sum of to plicants with the sar Selection process gr es): total number of l among applicants with 5% of places): number	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be of all assessments t (excluding Chemie (O l be done as follows: to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w ECTS credits already th the same number er of subject semeste	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e: First, applicants will be ranked, TS credits (qualitative ranking) tative ranking). The applicants' and places will be allocated ac- vill be allocated according to the achieved in modules/module of ECTS credits achieved, pla- ers of the respective applicant; located by lot. Quota 3 (25% of

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 208 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

# Additional information

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Workload

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# Teaching cycle

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

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#### Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 209 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation	
Career, Personality and Communication 07-SQF-KEB-102-m01				
Module coordinator Module offered by				
Coordinator BioCareers		Faculty of Biology		
ECTS Method of grading	Only after succ. co	ompl. of module(s)		
5 numerical grade				
Duration Module level	Other prerequisite	25		
1 semester undergraduate				
Contents				
This module will provide students address the topic of job application and will acquaint students with cri- will develop fundamental criteria ted approach to work and of comma also receive advice on how to des	on and staff selection. It iteria for developing per for working in groups an nunication (incl. rhetoric	will discuss methods sonal and social skills d teams. The fundame	for analysing personality types 5. Building on this, the module ental principles of a project-orien-	
Intended learning outcomes				
Students know what it takes to su market, know how to go job hunti veloped a fundamental knowledg ment methods. They are able to w ge of project management method cient in the theory and practice of sent data in both oral and written	ng, and are familiar with e of personality assessm ork in a team-based env ds and approaches. Stuc communication. They kn form. Students are awar	recruitment practices nent methods and are ironment and have de dents have enhanced t now how to design an re of what body langua	of employers. Students have de- familiar with conflict manage- eveloped a fundamental knowled- their teaching skills and are profi- d structure talks as well as to pre- age may communicate.	
Courses (type, number of weekly	contact hours, language	— if other than Germa	ın)	
V + S (no information on SWS (weekly contact hours) and course language available)				
	<b>Method of assessment</b> (type, scope, language — if other than German, examination offered — if not every seme- ster, information on whether module can be chosen to earn a bonus)			
a) written examination (30 to 60 n 10 pages)	ninutes) and b) presenta	tion (approx. 10 minu	tes) or term paper (approx. 5 to	
Allocation of places				
Number of places: 15. Should the allocated as follows: Places will p logy) with 180 ECTS credits. Should ces will be allocated to students of 5% of places (a minimum of one p ject Biologie (Biology) with 60 ECT thematics and Mathematik (Mathe- ject Biology (as well as potentially ble in one quota exceed the numb the other quota. Should there be, places, there will be a uniform reg courses of a module component t dure, applicants who already have tive module will be given preferent they become available. Selection plicants' previous academic achies of ECTS credits they have achieve all module components in the sub thematik (Mathematics)) at the tir firstly, according to their average	rimarily be allocated to s d the module be used ir of the Bachelor's degree participant in total) will b S credits and to student ematics), each with 180 to students of other 'im per of applications, the re within one module com ulation for the courses of hat are concerned will be e successfully completed tial consideration. A wai process group 1 (95%): I evements. For this purpo d and their average grad oject of Biologie (Biology ne of application. This w	students of the Bachel o other subjects, there subject Biologie (Biolo e allocated to student ts of the Bachelor's de ECTS credits, as part of porting' subjects). Sh emaining places will b ponent, several course of one module compor e allocated in a standa d at least one other mo iting list will be mainta Places will primarily be se, applicants will be e of all assessments t () (excluding Chemie (find))	lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- : First, applicants will be ranked,	

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 210 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	1

position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 211 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title		Abbreviation		
Organis	Organisation and Safety in Biosciences 07-SQF-OSB-102-m01			
Module coordinator Module offered by				
Coordir	nator BioCareers		Faculty of Biology	
ECTS	Method of grading	Only after succ. con	npl. of module(s)	
5	numerical grade			
Duratio	on Module level	Other prerequisites		
1 semes	ster undergraduate			
Conten	ts			
nisms, help en the bios	procedures in the biosciences, i hygiene procedures and hazard isure an effective and efficient v science/biotech sector. Process s of managers/supervisors, app	lous substances, wor vorkflow in the biosci based project mana	king with lab animal iences. Structure and gement. HR manage	s. Fundamental concepts that l organisation of institutions in ment in the biosciences, respon-
Intende	ed learning outcomes			
and are on. The	ts have developed a fundament familiar with fundamental orga y are also familiar with fundame <b>s</b> (type, number of weekly conta	inisational principles ental principles of pro	that are relevant for ocess-based project	work in research and producti- work in the biosciences.
	io information on SWS (weekly o			
	· · ·			tion offered — if not every seme-
	formation on whether module ca			tion oncica in not every senie
a) writte 10 page	en examination (30 to 60 minut es)	es) and b) presentati	on (approx. 10 minut	tes) or term paper (approx. 5 to
Allocati	ion of places			
allocate logy) wi ces will 5% of p ject Bio themati ject Bio ble in o the othe places, courses dure, a tive mo they be plicants of ECTS all mod themati firstly, a and, se position cording qualitat	ed as follows: Places will primar ith 180 ECTS credits. Should the be allocated to students of the places (a minimum of one partic plogie (Biology) with 60 ECTS cre ics and Mathematik (Mathemat plogy (as well as potentially to st one quota exceed the number of er quota. Should there be, within there will be a uniform regulation of a module component that a pplicants who already have suc dule will be given preferential of come available. Selection process is previous academic achievem credits they have achieved and lule components in the subject ik (Mathematics)) at the time of according to their average grade condly, according to their total n in a third ranking will be calcul to this third ranking. Among ap tive ranking or otherwise by lot. ng quotas: Quota 1 (50% of place	ily be allocated to sta module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 Ef- tudents of other 'imp applications, the ren n one module compo- on for the courses of re concerned will be cessfully completed onsideration. A waiti ess group 1 (95%): Pl ents. For this purpose their average grade of Biologie (Biology) application. This will e weighted according number of ECTS cred lated as the sum of to plicants with the sar Selection process gr es): total number of	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w ECTS credits already	is of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- nined and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- First, applicants will be ranked, TS credits (qualitative ranking) ative ranking). The applicants' and places will be allocated ac- rill be allocated according to the vill be allocated according to the

ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### **Additional information**

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#### Workload

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#### Teaching cycle

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

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### Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2010)

Bachelor' degree (1 major) Mathematics (2012)

Bachelor' degree (1 major) Mathematics (2013)

Bachelor' degree (1 major) Computational Mathematics (2012)

Bachelor' degree (1 major) Computational Mathematics (2013)

Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 213 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title	·			Abbreviation
Princip	oles of I	mage Data Processing			07-SQF-PBD-102-m01
Module	e coord	inator		Module offered by	
holder	of the (	Chair of Biotechnology ar	nd Biophysics	Faculty of Biology	
ECTS	ï	od of grading	Only after succ. con	· · · · ·	
2		successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conten	nts				
		amiliar with fundamenta and storage methods.	l principles of image	data processing as v	vell as different data formats,
Intend	ed lear	ning outcomes			
	nts will Iese me		ods discussed in cla	ss and will know wha	at problems may be addressed
Course	<b>es</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)
V + Ü (I	no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		<b>sessment</b> (type, scope, la ion on whether module ca			tion offered — if not every seme-
written	exami	nation or practical exami	nation (approx. 30 m	inutes)	
Allocat	tion of <sub>l</sub>	olaces			
ject Bic themat ject Bic ble in c the oth places, course dure, a tive mo they be plicant of ECTS all moo themat firstly, and, se positio cording qualita followi compo	blogie ( tics and blogy (a blogy (a blo	Biology) with 60 ECTS creat Mathematik (Mathematics well as potentially to state the exceed the number of ta. Should there be, within will be a uniform regulation nodule component that a nets who already have suc- ill be given preferential c available. Selection proce- tious academic achievement s they have achieved and mponents in the subject chematics)) at the time of ing to their average grade to according to their total hird ranking will be calcu s third ranking. Among ap nking or otherwise by lot. tas: Quota 1 (50% of plac of the Faculty of Biology; a	edits and to students ics), each with 180 Ed tudents of other 'imp applications, the ren in one module compo- on for the courses of re concerned will be cessfully completed a onsideration. A waiti ess group 1 (95%): Pla ents. For this purpose of Biologie (Biology) application. This will e weighted according number of ECTS cred lated as the sum of to plicants with the sar Selection process gr es): total number of la among applicants with	of the Bachelor's de CTS credits, as part of orting' subjects). She naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (C l be done as follows: to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w ECTS credits already th the same number	s of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- tined and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- First, applicants will be ranked, TS credits (qualitative ranking) ative ranking). The applicants' and places will be allocated ac- till be allocated according to the achieved in modules/module of ECTS credits achieved, pla-
ces wil among places)	ll be allo gapplica ): alloca	ocated by lot. Quota 2 (2 ants with the same numb	5% of places): numbe per of subject semest nodule be used only i	er of subject semeste ers, places will be al n the Bachelor's deg	ers of the respective applicant; located by lot. Quota 3 (25% of gree subject Biologie (Biology)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 214 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

#### Additional information

Workload

# --Teaching cycle

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

# Module appears in

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 215 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title					Abbreviation			
Patents in Biology					07-SQF-PRB-102-m01			
Module coordinator				Module offered by				
Coordinator BioCareers				Faculty of Biology				
ECTS		od of grading	Only after succ. com	, .,				
2		rical grade						
Duratio	n	Module level	Other prerequisites					
1 semester undergraduate								
Contents								
Patents	Patents in biology: types, application, specification, patent rights, patent search.							
		ning outcomes	·· ·					
Students have acquired a fundamental knowledge of the criteria that determine whether ideas, inventions and developments in the life sciences in general and in biotechnology in particular are patentable. They are familiar with patent authorities and relevant data sources. Students are able to judge whether ideas, developments and inventions are patentable and, where necessary, to consult with competent advisors at the University that will help them conduct a cost-benefit analysis prior to publishing their ideas. <b>Courses</b> (type, number of weekly contact hours, language — if other than German)								
<ul> <li>V + S (no information on SWS (weekly contact hours) and course language available)</li> <li>Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)</li> <li>written examination (approx. 20 minutes)</li> </ul>								
Allocation of places Number of places: 25. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Bio- logy) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of pla- ces will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree sub- ject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree sub- ject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places availa- ble in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this proce- dure, applicants who already have successfully completed at least one other module component of the respec- tive module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Ma- thematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked ac- cording to their average grade weighted according to the number of ECTS credits achieved (quantitative ranking) an								

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 216 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

# Teaching cycle

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2013) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 217 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation			
Resear	Research, Presentation, Information 07-SQF-RPI-102-m01					1
Module coordinator M			Module offered by			
degree	progra	mme coordinator Biolo	logie (Biology) Faculty of Biology			
ECTS		od of grading	Only after succ. con	npl. of module(s)		
4	·	rical grade				
Duratio		Module level	Other prerequisites	<b>i</b>		
1 seme		undergraduate				
Conter	-					
		s aimed at students wit paring and delivering ta				
		, objects from the zoold				
		ive information and ad				
pers.						
Intend	ed learı	ning outcomes				
		nave learned how to ga edia aids.	ther information and p	present complex conc	epts in both oral an	d written
Course	s (type	, number of weekly con	tact hours, language –	– if other than Germa	n)	
		mation on SWS (weekly				
	-	essment (type, scope,				every seme-
		on on whether module				,
presen	tation (	approx. 10 to 20 minut	es)			
Allocat	ion of p	olaces				
Number of places: 20. Should the number of applications exceed the number of available places, places will be allocated as follows: Places will primarily be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one participant in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subject Scomputational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in a standardised procedure. In this procedure, applicants who already have successfully completed at least one other module corongent of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the number of all module components in the subject of Biologie (Biology) (excluding Chemis (Quantitative ranking). The applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of all module components in the subject of Biologie (Biology) (excluding Chemis (Quantitative ranking). The applicants will be calculated as the sum or factors d						
Bachelor's	with 1 maj	or Biology (2010)		urg • generated 26-Aug-2024 ord Bachelor (180 ECTS) Biolog		page 218 / 252

places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

## Additional information

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Workload

## Teaching cycle

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 219 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module					Abbreviation
Operational Safety in Ecophysiological Laboratories			l Laboratories		07-SQF-SAL-102-m01
Module coordinator				Module offered by	
degree	progra	mme coordinator Biologi	ie (Biology)	Faculty of Biology	
ECTS	<u> </u>	od of grading	Only after succ. con	· · · · · · · · · · · · · · · · · · ·	
1	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
this mo	odule, s potenti	students will become far	niliar with the fundam	ientals for recognisin	ytical chemistry laboratories. In ng, assessing, avoiding and elimi lures in accordance with statutory
Intende	ed lear	ning outcomes			
Studen	ts knov	w how to handle hazardo	us substances typica	Illy used in ecophysi	ology and analytical chemistry
statuto	ry prov practice	isions on health and safe es when working in the la	ety and accident prev	ention. Students are	miliar with the most important able to adhere to the respective tness toward potential safety ha-
Course	<b>s</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
V + Ü (r	no info	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
ster, in	format	on on whether module c	an be chosen to earn		ation offered — if not every seme-
written	exami	nation (approx. 15 minute	es)		
Allocat	ion of <sub>l</sub>	olaces			
allocate logy) w ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themat firstly, a and, se positio cording qualita followin	ed as fr ith 180 l be all olaces ( ologie ( ics and ology (a er quo there s of a n pplicar odule w come a s' previs c credit lule co ik (Mat accord condly n in a t s to this tive ran ng quo	bllows: Places will prima ECTS credits. Should the ocated to students of the a minimum of one partic Biology) with 60 ECTS cre Mathematik (Mathemat s well as potentially to s ota exceed the number of ta. Should there be, with will be a uniform regulati nodule component that a nots who already have suc ill be given preferential of available. Selection proce ous academic achievem s they have achieved and mponents in the subject hematics)) at the time of ing to their average grade a cacording to their total hird ranking will be calcu s third ranking. Among ap hking or otherwise by lot. tas: Quota 1 (50% of place	rily be allocated to streamodule be used in or Bachelor's degree streamodule be used in or Bachelor's degree streamodule ipant in total) will be edits and to students ics), each with 180 Eff tudents of other 'imp applications, the rem in one module compo- on for the courses of re concerned will be cessfully completed consideration. A waiti ess group 1 (95%): Pl ents. For this purposed their average grade of Biologie (Biology) application. This will e weighted according number of ECTS cred tated as the sum of to pplicants with the sar Selection process gr ces): total number of	udents of the Bache other subjects, there ubject Biologie (Biol allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sh naining places will b onent, several course one module compor allocated in a standa at least one other mo- ng list will be mainta aces will primarily b- e, applicants will be of all assessments t (excluding Chemie ( l be done as follows to the number of EC its achieved (quantit hese two rankings, a ne ranking, places w oup 2 (5%): Places w	f available places, places will be lor's degree subject Biologie (Bio e will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational Ma of the application-oriented sub- ould the number of places availa be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number caken during their studies or of Chemistry), Physik (Physics), Ma- : First, applicants will be ranked, CTS credits (qualitative ranking) tative ranking). The applicants' and places will be allocated ac- vill be allocated according to the will be allocated according to the of ECTS credits achieved, pla-

Bachelor's with 1 major Biology (2010)	JMU Würzburg ● generated 26-Aug-2024 ● exam.	page 220 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

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ces will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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Workload

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#### Teaching cycle

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

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#### Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2013) Bachelor' degree (1 major) Biology (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 221 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title				Abbreviation	
Supervising	Supervising Tutorial for Basic Courses 3			07-SQF-TFB3-102-m01	
Module coord	Module coordinator				
degree progra	amme coordinator Biologi	e (Biology)	Faculty of Biology		
ECTS Meth	od of grading	Only after succ. con	npl. of module(s)		
3 (not)	successfully completed				
Duration	Module level	Other prerequisites			
1 semester	undergraduate				
Contents					
te their know will help ther cess.	ledge and prepare for ass n fill gaps in their knowled	essments. They will o	orrect exercises, wil	standing of material, consolida- l discuss these with students and their way towards academic suc-	
Intended lear	ning outcomes				
ence supervis	sing a group. Having prep ve also enhanced their ow	ared for answering sp n subject-specific sk	pecific questions and ills. They have enha	way. They have gained experi- d explaining material in detail, nced their teaching skills.	
Courses (type	e, number of weekly conta	ict hours, language –	- if other than Germa	n)	
	tion on SWS (weekly cont				
	<b>sessment</b> (type, scope, la ion on whether module c			tion offered — if not every seme-	
proof of tutor	ing activities and report (a	approx. 2 to 3 pages)			
Allocation of	places				
Additional in	formation				
Workload					
Teaching cyc	le				
-					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appe	Module appears in				
Bachelor' deg	gree (1 major) Biology (20	11)			
	gree (1 major) Biology (20	-			
Bachelor' deg	gree (1 major) Biology (20:	10)			

Module	e title				Abbreviation	
Superv	ising T	utorial for Basic Courses	4		07-SQF-TFB4-102-m01	
Module	e coord	inator		Module offered by		
degree	progra	mme coordinator Biologi	e (Biology)	Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)		
4	(not) s	successfully completed				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
te their will hel cess.	knowl p them	edge and prepare for ass fill gaps in their knowled	essments. They will d	correct exercises, will	standing of material, consolida- l discuss these with students and their way towards academic suc-	
Intende	ed lear	ning outcomes				
ence su the tuto	upervis ors hav	ing a group. Having prepa e also enhanced their ow	ared for answering sp n subject-specific sk	pecific questions and ills. They have enhar	way. They have gained experi- l explaining material in detail, nced their teaching skills.	
		, number of weekly conta				
		ion on SWS (weekly cont				
		s <b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-	
proof o	f tutori	ng activities and report (a	approx. 2 to 3 pages)			
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	Module appears in					
Bachel	Bachelor' degree (1 major) Biology (2011)					
	Bachelor' degree (1 major) Biology (2013)					
Bachel	or' deg	ree (1 major) Biology (201	10)			

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 223 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Supervising Tutorial for Basic Courses 5				07-SQF-TFB5-102-m01	
Module	coord	inator		Module offered by	
Coordir	nator B	ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
5	(not) s	successfully completed			
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
<i>gy</i> ) I thr te their	ough I knowle	II in particular. Tutors will edge and prepare for ass	l help students impro essments. They will c	ve upon their under orrect exercises, wil	emeine Biologie (General Biolo- standing of material, consolida- l discuss these with students and their way towards academic suc-
Intende	ed leari	ning outcomes			
ence su	pervis	ing a group. Having prepa	ared for answering sp	ecific questions and	way. They have gained experi- l explaining material in detail, nced their teaching skills.
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
T (no in	format	ion on SWS (weekly cont	act hours) and course	e language available	)
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
proof of	ftutori	ng activities and report (a	approx. 2 to 3 pages)		
Allocati	ion of p	olaces			
Additio	nal inf	ormation			
Workload					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Bachelo	or' deg	ree (1 major) Biology (201	.1)		
		ree (1 major) Biology (201			
Bachelo	Bachelor' degree (1 major) Biology (2010)				

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reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Supervising Tutorial for Biology 2					07-SQF-TSB2-102-m01
Module	coord	inator		Module offered by	
Coordir		ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
2		successfully completed			
Duratio		Module level	Other prerequisites		
1 semes		undergraduate			
Conten	ts				
<i>gy</i> ) I thr prove u with stu	rough l pon th udents,	II in particular. Tutors will eir understanding of mat	l help with organisati erial, consolidate the gies to detect and fill	onal and personal m ir knowledge and pr	emeine Biologie (General Biolo- natters and will help students im- epare for assessments. Together dge. Tutors will support other
Intende	ed learr	ning outcomes			
ence su interpe ve learr	ipervisi rsonal ned to p	ing a group and helping s skills and know how to sl	students with persona hare their expertise ir	al matters. The tutors n exploring complex	way. They have gained experi- s have thus enhanced their own topics. In addition, the tutors ha- and the university education of
Courses	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
T (no in	format	ion on SWS (weekly cont	act hours) and course	e language available	)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
proof of	f tutori	ng activities and report (a	approx. 2 to 3 pages)		
Allocati	ion of p	olaces			
 Additio	nal info	ormation			
Worklo	ad				
Teaching cycle					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)					
Module appears in					
		ree (1 major) Biology (201			
	-	ree (1 major) Biology (201	-		
Bachelor' degree (1 major) Biology (2010)					

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 225 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title			Abbreviation		
Supervising Tutorial for Biology 3					07-SQF-TSB3-102-m01
Module	coord	inator		Module offered by	
Coordin	ator B	ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
3	(not) s	successfully completed			
Duratio		Module level	Other prerequisites		
1 semes	ster	undergraduate			
Content	ts				
<i>gy</i> ) I thr prove u with stu	ough l pon th dents,	II in particular. Tutors will eir understanding of mat	help with organisati erial, consolidate the gies to detect and fill	onal and personal m ir knowledge and pr	emeine Biologie (General Biolo- natters and will help students im- epare for assessments. Together dge. Tutors will support other
Intende	d learr	ning outcomes			
ence su interpei ve learr	The tutors are able to communicate complex concepts in a clear and structured way. They have gained experi- ence supervising a group and helping students with personal matters. The tutors have thus enhanced their own interpersonal skills and know how to share their expertise in exploring complex topics. In addition, the tutors have ve learned to plan and organise key elements of their own university education and the university education of the students they mentor.				
Courses	<b>s</b> (type	, number of weekly conta	ct hours, language —	if other than Germa	n)
T (no information on SWS (weekly contact hours) and course language available)					
		e <b>ssment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-
proof of	ftutori	ng activities and report (a	pprox. 2 to 3 pages)		
Allocati	ion of p	olaces			
Additional information					
Worklo	Workload				
Teaching cycle					
Referre	d to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
Module	appea	irs in			
	-	ree (1 major) Biology (201			
	-	ree (1 major) Biology (201			
Bachelo	Bachelor' degree (1 major) Biology (2010)				

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 226 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	title			Abbreviation
Environ	mental Education in the Botani	cal Garden of the Uni	iversity	07-SQF-UBG-102-m01
Module coordinator			Module offered by	<u> </u>
	f Botanical Garden		Faculty of Biology	
ECTS	Method of grading	Only after succ. com		
2	(not) successfully completed			
Duratio		Other prerequisites		
1 seme	ster undergraduate			
Conten	ts			
rent see botany, parting and usi lines) fo plete th	, ecology and gardening. In this , in a comprehensible way, spec ing appropriate aids (informatio or the comprehensible presenta ne following tasks: develop cont	ed to inform intereste module, students wil cialist knowledge to i n boards, leaflets etc tion of complex conc cents tailored to the n	d members of the pu Il develop appropria nterested layperson: ) and applying methers. Students will be eeds of selected tar	ublic about topics in the areas of te educational concepts for im-
Intende	ed learning outcomes			
vidual s guide to Courses Ü + E (n Methoo	ours through the Botanical Gard <b>s</b> (type, number of weekly conta to information on SWS (weekly c	eed both botanical kn len, imparting knowle let hours, language — contact hours) and co inguage — if other tha	owledge and teaching edge in a way that is if other than Germa ourse language avail an German, examina	ng skills that will enable them to tailored to their target audience. m)
term pa	aper or preparing educational m	aterials and material	s for demonstrations	s (approx. 10 to 20 pages)
Allocat	ion of places			
allocate logy) wi ces will 5% of p ject Bio themat ject Bio ble in o the oth places, courses dure, a tive mo they be plicants of ECTS all mod themat firstly, a	ith 180 ECTS credits. Should the be allocated to students of the blaces (a minimum of one partic blogie (Biology) with 60 ECTS cre ics and Mathematik (Mathemat blogy (as well as potentially to st one quota exceed the number of er quota. Should there be, withi there will be a uniform regulations of a module component that a pplicants who already have suc dule will be given preferential c come available. Selection process is previous academic achievement credits they have achieved and bulle components in the subject	ily be allocated to stue module be used in of Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 EG udents of other 'imper applications, the rem n one module composed on for the courses of re concerned will be a cessfully completed a onsideration. A waiting ess group 1 (95%): Pla ents. For this purposed I their average grade of Biologie (Biology) ( application. This will everighted according	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). Sho naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta acces will primarily be of all assessments t (excluding Chemie (G be done as follows: to the number of EC	lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- be allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked, TS credits (qualitative ranking)

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

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position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% 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. Quota 3 (25% of places): allocation by lot. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

Additional information

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Workload

Teaching cycle

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

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## Module appears in

Bachelor' degree (1 major) Biology (2011)

Bachelor' degree (1 major) Biology (2013)

Bachelor' degree (1 major) Biology (2010)

Bachelor's degree (1 major, 1 minor) Museology and material culture (2010)

Bachelor's degree (1 major, 1 minor) Museology and material culture (2013)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 228 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module	e title				Abbreviation
Entrepreneurial Thinking in Biosciences 07-S			07-SQF-UDB-102-m01		
Module	e coord	inator		Module offered by	
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. com	pl. of module(s)	
3	(not) s	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
- the lo pharma makes	ng jour a indus a succe	ney from the research pro try and the academic wo essful biotech entreprene	oject via biotechnolog 'ld: why join forces? - eur? - advances in ant	gy and the pharma in development of the ibody-based immun	armaceutical drug development ndustry to the patient - biotech, rapeutics at Novo Nordisk - what notherapy - the development of trends in antibody development.
Intende	ed lear	ning outcomes			
		see behind the curtain of the bioscience sector.	businesses and will	understand the proc	edures and processes used by
Course	<b>s</b> (type	, number of weekly conta	ct hours, language —	· if other than Germa	ın)
V + S (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
c) oral didates	examin 5 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teachi	Teaching cycle				
	<u> </u>				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
				<u> </u>	
Module	e appea	ars in			
		ree (1 major) Biology (201	11)		
	-	ree (1 major) Biology (201			

Module title			Abbreviation			
Publishing S	Publishing Scientific Data 07-SQF-WIP-102-m01					
Module coor	dinator		Module offered by			
Coordinator I	BioCareers		Faculty of Biology			
ECTS Meth	nod of grading	Only after succ. con	npl. of module(s)			
3 num	erical grade					
Duration	Module level	Other prerequisites				
1 semester	undergraduate					
Contents						
of life science "core publica lated to these where applic the standard ticle will cont be divided up gated, summ	Either alone or in small groups of two or three persons, students will select several journal articles from the field of life sciences. These will serve as the basis for a review article to be prepared by students. With two or three "core publications" as a basis, students will search data bases (e. g. PubMed) for literature that is directly related to these articles. The most important current original publications will be summed up in a review article; where applicable, students may also use their own raw data. The structure of this review article will comply with the standards of the scientific community as defined in the instructions to authors of a scientific journal. The article will contain at least one figure, one table as well as one schematic representation of the contents and will be divided up into the following sections: title, abstract, introduction and/or hypothesis/problem to be investigated, summary of results as well as current developments and discussion thereof. The article will also contain citations in the specified format. Students will also deliver a presentation on the contents of the article.					
view of recen blications in ar with the st know what to	t publications on a specif a review article complying andards regarding the stru	ic topic and will be fa with the standards o ucture of reviews and ng scientific articles.	miliar with basic rul of the scientific comr I will be able to prop	ey will know how to get an over- es for summing up original pu- nunity. Students will be famili- erly cite sources. They will thus s will be able to prepare and deli-		
Courses (type	e, number of weekly conta	ct hours, language –	- if other than Germa	n)		
S (no informa	ation on SWS (weekly cont	act hours) and cours	e language available	2)		
	<b>ssessment</b> (type, scope, la tion on whether module ca			tion offered — if not every seme-		
term paper (a	approx. 5 to 10 pages) and	presentation (appro	x. 15 minutes), weigł	nted 2:1		
Allocation of	places					
Number of pl allocated as logy) with 18 ces will be al 5% of places ject Biologie thematics an ject Biology ( ble in one qu the other quo places, there courses of a dure, applicat tive module of they become plicants' prev of ECTS credi all module co	aces: 30. Should the num follows: Places will primar o ECTS credits. Should the located to students of the (a minimum of one partic (Biology) with 60 ECTS cre d Mathematik (Mathemat fas well as potentially to st tota exceed the number of ota. Should there be, within will be a uniform regulation module component that a first who already have suc will be given preferential c available. Selection process vious academic achievement to they have achieved and components in the subject	ily be allocated to stra module be used in or Bachelor's degree su ipant in total) will be edits and to students ics), each with 180 E0 udents of other 'imp applications, the ren n one module compo on for the courses of re concerned will be cessfully completed onsideration. A waiti ess group 1 (95%): Pla ents. For this purpose I their average grade of Biologie (Biology)	udents of the Bachel other subjects, there ubject Biologie (Biolo allocated to student of the Bachelor's de CTS credits, as part of orting' subjects). She naining places will b onent, several course one module compor allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be of all assessments t (excluding Chemie (G	available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and as of the Bachelor's degree sub- gree subjects Computational Ma- of the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of nent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ained and places re-allocated as e allocated according to the ap- ranked according to the number aken during their studies or of Chemistry), Physik (Physics), Ma- e First, applicants will be ranked,		

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

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firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50% of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25% of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters of the respective applicant; among applicants with the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.

#### Additional information

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#### Workload

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Teaching cycle

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

## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2013) Bachelor' degree (1 major) Biology (2010)

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Modul					Abbreviation
Additio	Additional Qualification outside Natural Sciences 2				07-SQF-ZQA2-102-m01
Module	e coord	inator		Module offered by	
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. com		
2	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conten	nts				
skills ( science	ASQ) a es. The	nd that provide students	with an opportunity t d by the University of	o strengthen their ge Würzburg or by exte	he pool of general transferable eneral background in the natural ernal institutions. Decision on cre urses.
Intend	ed lear	ning outcomes			
					nced their general scientific skills nareas other than biology.
Course	<b>es</b> (type	, number of weekly conta	ict hours, language –	· if other than Germa	n)
V + S (I	no info	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
c) oral didates	examir s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
	tion of		· ·		
Additio	onal inf	ormation			
Worklo	bad				
WORKIG					
	ng cycl	e			
		e			
 Teachi 	ng cycl	e LPOI (examination regu	lations for teaching-o	legree programmes)	
 Teachi 	ng cycl		lations for teaching-c	legree programmes)	
 Teachi  Referre	ng cycl	LPOI (examination regu	lations for teaching-c	legree programmes)	
 Teachi  Referre  Module	ng cycl ed to in e appea	LPOI (examination regu		legree programmes)	

Modul					Abbreviation
Additional Qualification outside Natural Sciences 3			al Sciences 3		07-SQF-ZQA3-102-m01
Modul	e coord	inator		Module offered by	
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)	
3	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conter	nts				
skills (, science	ASQ) ai es. The	nd that provide students	with an opportunity t d by the University of	o strengthen their ge Würzburg or by exte	he pool of general transferable eneral background in the natural ernal institutions. Decision on cre reekly contact hour.
Intend	ed lear	ning outcomes			
		•			nced their general scientific skills nareas other than biology.
Course	e <b>s</b> (type	, number of weekly conta	ict hours, language –	· if other than Germa	n)
V + S (I	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
c) oral didate:	examin s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat			•		
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Deferre	ed to in	LPOI (examination regu	lations for teaching-	legree programmes)	
Reierre	-				
 Module	e appea	ars in			
 Modul		<b>ars in</b> ree (1 major) Biology (201	11)		

Module title				Abbreviation	
Additional Qualification outside Natural Sciences 4					07-SQF-ZQA4-102-m01
Module coordinator				Module offered by	1
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
4	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
skills (/ science	ASQ) ai es. The	nd that provide students	with an opportunity t d by the University of	o strengthen their g Würzburg or by exte	he pool of general transferable eneral background in the natural ernal institutions. Decision on cre day courses.
Intend	ed lear	ning outcomes			
					nced their general scientific skills n areas other than biology.
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)
V + S (r	no infoi	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
		<b>sessment</b> (type, scope, la ion on whether module c			ation offered — if not every seme-
c) oral didates	examin s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be infor-
Allocat	ion of <sub>l</sub>	olaces			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e	· · · · · · · · · · · · · · · · · · ·		
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Biology (20:			
D I I	or' dog	ree (1 major) Biology (20:			

	e title				Abbreviation
Additional Qualification outside Natural Sciences 5					07-SQF-ZQA5-102-m01
Module coordinator				Module offered by	<u> </u>
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
5	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conten	nts				
skills (/ science	ASQ) a es. The	nd that provide students	with an opportunity t d by the University of	o strengthen their go Würzburg or by exte	he pool of general transferable eneral background in the natural ernal institutions. Decision on cre veekly contact hours.
Intend	ed lear	ning outcomes			
		•	, , ,		nced their general scientific skills n areas other than biology.
Course	<b>es</b> (type	, number of weekly conta	act hours, language –	- if other than Germa	ın)
V + S (I	no info	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
c) oral didates	examir s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exam on (approx. 20 to 30	) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- minutes); students will be infor-
Allocat	tion of	places			
Additic	onal inf	ormation			
	bad				
Worklo					
Worklo					
	ng cycl	e			
	ng cycl	e			
 Teachi 		e LPOI (examination regu	lations for teaching-o	degree programmes)	
 Teachi 			llations for teaching-o	degree programmes)	
 Teachi  Referre		LPOI (examination regu	lations for teaching-o	degree programmes)	
 Teachi  Referre  Module	ed to in e appea	LPOI (examination regu		degree programmes)	

Module title					Abbreviation	
Additio	onal Qu	alification in Natural Sci		07-SQF-ZQN2-102-m01		
Module	e coord	inator		Module offered by	<u> </u>	
Coordi	nator B	ioCareers		Faculty of Biology		
ECTS	Methe	od of grading	Only after succ. com	npl. of module(s)		
2	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
dents v	vith ad by the	vanced knowledge in the University of Würzburg o	natural sciences that	t is related to their d	rable skills (ASQ) that equip stu- iscipline. These courses may be dit transfer to be made by exami-	
Intende	ed lear	ning outcomes				
		e developed an improved e acquired additional exp			anced their specific qualificati- eir field.	
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
		nformation on SWS (wee				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
c) oral didates	examin 5 (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-	
Allocat			· · · · ·			
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
	.5 .9 .1	-				
Referre	d to in	LPOI (examination regu	lations for teaching.	legree programmes)		
				2-3-00 programmes)		
Module		ars in				
		ree (1 major) Biology (20:	11)			
	-	ree (1 major) Biology (20)				
		( ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	*			

Module title					Abbreviation	
Additional Qualification in Natural Sciences 3					07-SQF-ZQN3-102-m01	
Module coordinator				Module offered by		
Coordi	nator B	ioCareers		Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
3	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
dents v	vith ad by the	vanced knowledge in the University of Würzburg o	natural sciences that	t is related to their d	rable skills (ASQ) that equip stu- iscipline. These courses may be dit transfer to be made by exami-	
Intendo	ed lear	ning outcomes				
		e developed an improved e acquired additional exp			nced their specific qualificati- eir field.	
Course	<b>s</b> (type	, number of weekly conta	ict hours, language –	- if other than Germa	n)	
V + S +	Ü (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
c) oral ( didates	examin 5 (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-	
Allocat	ion of <b>j</b>	olaces				
Additio	onal inf	ormation				
Worklo	ad					
Teachi	ng cvcl	e				
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Referred to in LPO I (examination regulations for teaching-degree programmes)						
 Module	e appea	ars in				
 <b>Module</b> Bachel		a <b>rs in</b> ree (1 major) Biology (20:	11)			

Additio			Abbreviation		
Additional Qualification in Natural Sciences 4					07-SQF-ZQN4-102-m01
Module coordinator				Module offered by	
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
4	(not)	successfully completed			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	Its				
dents v offered	with ad	vanced knowledge in the University of Würzburg c	natural sciences that	t is related to their d	rable skills (ASQ) that equip stu- iscipline. These courses may be edit transfer to be made by exami
Intende	ed lear	ning outcomes			
		e developed an improved e acquired additional exp			anced their specific qualificati- ieir field.
Course	e <b>s</b> (type	, number of weekly conta	ict hours, language —	· if other than Germa	ın)
		nformation on SWS (wee			
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-
c) oral didates	examin s (appr	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	tes) or d) oral exami on (approx. 20 to 30	) log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of <sub>l</sub>	places			
Additic	onal inf	ormation			
Worklo	ad				
-					
Teachi	ng cycl	e			
-	0.94				
Referre	ed to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
				- 0·	
	e appez	ars in			
Module					
<b>Module</b> Bachel		ree (1 major) Biology (20:	11)		

Module title					Abbreviation	
Additional Qualification in Natural Sciences 5					07-SQF-ZQN5-102-m01	
Module coordinator				Module offered by		
Coordi	nator B	ioCareers		Faculty of Biology		
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	(not) s	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
dents v	vith ad <sup>.</sup> I by the	vanced knowledge in the University of Würzburg o	natural sciences that	t is related to their d	rable skills (ASQ) that equip stu- iscipline. These courses may be dit transfer to be made by exami-	
Intend	ed lear	ning outcomes				
		e developed an improved e acquired additional exp			anced their specific qualificati- eir field.	
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
V + S +	Ü (no i	nformation on SWS (wee	kly contact hours) an	d course language a	vailable)	
Metho	d of ass		nguage — if other tha	an German, examina	tion offered — if not every seme-	
c) oral didates	examin s (appro	ation of one candidate e	ach (approx. 30 minu date) or e) presentati	ites) or d) oral exami on (approx. 20 to 30	log (approx. 10 to 20 pages) or nation in groups of up to 3 can- minutes); students will be infor-	
Allocat		_	•			
Additio	onal inf	ormation	·			
Worklo						
Teachi		۵				
	ig tytt	C				
		LPOI (examination regu	lations for taashing	lagraa programme)		
Referre		LEVI (examination regu		regree programmes)		
		•				
Module						
	-	ree (1 major) Biology (20: ree (1 major) Biology (20:				
Dachel	or deg	ree (1 major) Blotogy (20)	10)			

Module title					Abbreviation
		mistry for Biology Major		08-AC-Bio-102-m01	
Module coordinator				Module offered by	
mie für gie" (Ge	Studie eneral a	ure "Allgemeine and Anc rende der Medizin, Zahn and Inorganic Chemistry f ry and Biology)	medizin and Biolo-	Institute of Inorgani	c Chemistry
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)	
5		rical grade		-	
Duratio	n	Module level	Other prerequisites		
1 semes	ster	undergraduate			
Conten	ts				
		rovides students with an he fundamental techniqu			norganic chemistry. In addition,
Intende	ed learn	ning outcomes			
Studen	ts have				emistry. They are able to identify
Courses	<b>s</b> (type,	, number of weekly conta	ct hours, language —	if other than Germa	n)
compor • 0 • 0 Method	nent. 8-AC-B 8-AC-N <b>I of ass</b>	io-2-072: P (no informati F-1-102: V (no informatio	on on SWS (weekly co n on SWS (weekly co nguage — if other tha	ontact hours) and co ntact hours) and cou an German, examina	sted separately for each module urse language available) rse language available) tion offered — if not every seme-
<ul> <li>Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.</li> <li>Assessment in module component o8-AC-Bio-2-072: Chemistry Lab for Biology Majors <ul> <li>2 ECTS, Method of grading: (not) successfully completed</li> <li>Vortestate (pre-experiment exams, approx. 15 minutes each), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes each)</li> <li>Only after successful completion of module components: Successful completion of module component o8-AC-NF-1 is a prerequisite for participation in module component o8-AC-Bio-2.</li> </ul> </li> <li>Assessment in module component o8-AC-NF-1-102: Introduction to Inorganic Chemistry for Students of Biology, Medicine and Dentistry <ul> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 60 minutes)</li> </ul> </li> <li>Allocation of places <ul> <li>Information on the allocation of places will be listed separately for each module component.</li> <li>o8-AC-NF-1-102: Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.</li> <li>o8-AC-Bio-2-072:</li> </ul> </li> </ul>					
		ormation			
Worklo	ad				
WUIKU	uu				
 T					
Teachin	ig cycl	9			

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

## Module appears in

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Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

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	reg. data record Bachelor (180 ECTS) Biologie - 2010	

Module title Abbreviation						
Bioche	Biochemistry for students of biological sciences 08-BCB-072-m01					
Module coordinator Module offered by						
holder	of the (	Chair of Biochemistry		Chair of Biochemist	ry	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
6	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
2 seme	ster	undergraduate				
Conten	ts					
Compri mistry.	sing le	ctures and exercises, this	s module acquaints s	tudents with the fun	damental principles of bioche-	
Intende	ed lear	ning outcomes				
		e become familiar with th cal processes in cellular s		ples of biochemistry	. They are able to describe the	
Course	<b>s</b> (type	, number of weekly conta	ct hours, language –	if other than Germa	n)	
V + Ü +	V + Ü (	no information on SWS (\	weekly contact hours	) and course langua	ge available)	
		<b>essment</b> (type, scope, la on on whether module ca			tion offered — if not every seme-	
written	exami	nation (approx. 90 minut	es)			
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachi	ng cycl	e				
			-			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)		
Module	e appea	urs in				
		ree (1 major) Biology (201	11)			
	-	ree (1 major) Biology (200				
Bachel	or' deg	ree (1 major) Biology (201	10)			

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 242 / 252
	reg. data record Bachelor (180 ECTS) Biologie - 2010	

	le title	Abbreviation			
Bioche	emistry	for students of biologica	ll sciences (practical	course)	08-BCPB-072-m01
Modul	le coorc	linator		Module offered by	
holder	r of the	Chair of Biochemistry		Chair of Biochemi	stry
ECTS	Meth	od of grading	Only after succ. con	pl. of module(s)	
5	(not)	successfully completed			
Durati	ion	Module level	Other prerequisites		
1 seme	ester	undergraduate			
Conte	nts				
	cal exer iments.	cises give students the o	pportunity to learn th	e fundamental prin	ciples of conducting biochemical
Intend	led lear	ning outcomes			
Stude	nts hav	e become proficient in es	sential methods in bi	ochemistry.	
Course	<b>es</b> (type	, number of weekly conta	act hours, language —	- if other than Germ	an)
P (no i	informa	tion on SWS (weekly con	tact hours) and cours	e language availab	le)
		<b>sessment</b> (type, scope, la ion on whether module c			ation offered — if not every seme-
to 10 p	pages),	e-experiment exams, app Nachtestate (post-experi offered: once a year, sum	ment exams, approx.		ractical performance (log approx. g
		mereu. onee a year, sann	inel semester		
Alloca	tion of	· · · ·			
		· · · ·			
Numb	er of pla	places			
Numb	er of pla	places aces: 25 per group.			
Numb	er of pla onal inf	places aces: 25 per group.			
Numb Additi	er of pla onal inf	places aces: 25 per group.			
Numbo Additio  Workle	er of pla onal inf	places aces: 25 per group. formation			
Numbo Additio  Workle	er of pla ional inf oad	places aces: 25 per group. formation			
Numb Additi  Workle  Teachi 	er of pla ional inf oad ing cyc	places aces: 25 per group. formation		degree programmes	5)
Numb Additi  Workle  Teachi 	er of pla ional inf oad ing cyc	places aces: 25 per group. formation		degree programmes	
Numb Additi  Workle  Teachi  Referr	er of pla ional inf oad ing cyc	places aces: 25 per group. formation le LPO I (examination regu		degree programmes	5)
Numb Additi  Workle  Teachi  Referr  Modul	er of pla onal inf oad ing cycl red to in	places aces: 25 per group. formation le LPO I (examination regu	llations for teaching-o	degree programmes	5)
Numb Additi  Workle  Teachi  Referr  Bache	er of pla onal inf oad ing cycl red to in le appe	places aces: 25 per group. formation le LPO I (examination regu	llations for teaching-o	degree programmes	
Numb Additi  Workle  Teachi  Referr  Bache Bache Bache Bache	er of pla onal inf oad ing cycl red to in le appe elor' deg elor' deg elor' deg	places aces: 25 per group. formation le LPO I (examination regu ars in gree (1 major) Biology (20	Ilations for teaching-o 11) 07) 13)	degree programmes	5)

Modul					Abbreviation	
Organic Chemistry for students of Biology					08-0C-Bio-102-m01	
Module coordinator				Module offered by	<u> </u>	
lecture	er of lec	ture "Organische Chemie	für Studierende der	Institute of Organic	Chemistry	
Mediz		nedizin, Zahnmedizin, Ing		-	·	
ECTS	1	od of grading	Only after succ. con	pl. of module(s)		
10	nume	rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester	undergraduate				
Conte	nts					
		rovides students with an e fundamental techniques			organic chemistry. In addition, it	
Intend	ed lear	ning outcomes				
		e become familiar with th problems in chemistry an			nistry. They are able to identify	
Course	es (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)	
• Metho	o8-OC-E	-	on on SWS (weekly c nguage — if other tha	ontact hours) and co an German, examina	e language available) ourse language available) ition offered — if not every seme	
low. U vidual	nless st assess	ated otherwise, successf ments.	ul completion of the	module will require	e components as specified be- successful completion of all ind atory course for students of biolo	
Asses: tal me	Vortesta approx. Assessr Only aft o8-IOC- <b>sment i</b> n dicine, o 3 ECTS, written o <b>sment i</b> n	5 to 10 pages), Nachtesta nent offered: once a year er successful completion 1 is a prerequisite for part	s, approx. 15 minute ate (post-experiment , winter semester of module compone ticipation in module <b>IOC-1-102:</b> Organic C science erical grade minutes) <b>OC-Bio-2-102:</b> Organ	s each), assessmen exams, approx. 15 n nts: Successful com component o8-OC-B hemistry for student	apletion of module component io-3. is of medicine, biomedicine, der	
	• a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (approx. 30 minutes)					
Alloca	tion of <sub>l</sub>	olaces				
• •	08-0C-E 08-I0C-	n the allocation of places Bio-3-072: I-102: Only as part of poo Bio-2-102:			e component. laces will be allocated by lot.	

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#### Additional information

## Workload

#### --

## Teaching cycle

## --

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

## Module appears in

Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010)

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Module title			Abbreviation			
Physical Chemistry for Biology Majors     08-PC-Bio-102-mo1					08-PC-Bio-102-m01	
Module coordinator				Module offered by		
lecturer of lecture "Thermodynamik, Kinetik, Elektrochemie für Studierende der Biologie and Lebensmittelchemie"				Institute of Physical	and Theoretical Chemistry	
ECTS		od of grading	Only after succ. com	pl. of module(s)		
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	undergraduate				
Conten	ts					
This mo	odule d	iscusses the fundamenta	al principles of therm	odynamics, kinetics	and electrochemistry.	
Intende	ed learı	ning outcomes				
		e become familiar with the reader of the second and the second and the second and the second and the second seco			nics, kinetics and electroche- re and engineering.	
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
					sted separately for each module	
compoi	nent.					
		io-2-072: P (no informatio				
				•	l course language available)	
		on on whether module ca			tion offered — if not every seme-	
					e components as specified be-	
					successful completion of all indi-	
vidual a	assessi	ments.				
٨٩٩٩٩	mont ii	n module component o8-	PC-Bio-2-072, Physic	al Chomistry (locture	and lab)	
		Method of grading: (not)				
• V	ortesta	ite (pre-experiment exam	s, approx. 15 minute	s each), assessment	of practical performance (log	
		5 to 10 pages), Nachtesta		exams, approx. 15 m	iinutes each)	
		nent offered: once a year, n module component o8-		odvnamics. Kinetics.	Electrochemistry Thermodyna-	
		, Electrochemistry		, a substanties, tanteties,		
		Method of grading: nume				
		examination (approx. 60	minutes)			
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	Workload					
Teachir	Teaching cycle					
<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)						
-		mie "Allgemeine und And	organische Chemie" u	ınd "Physikalische u	nd Analytische Chemie"	
Module						
	-	ree (1 major) Biology (201				
Bachelo	Bachelor' degree (1 major) Biology (2010)					

Module	e title				Abbreviation	
Mathematics for students in Chemistry and Biology					10-M-MCB-101-m01	
Module coordinator			Module offered by			
Dean of Studies Mathematik (Mathematics)			Institute of Mathem	natics		
ECTS		od of grading	Only after succ. con			
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme:	ster	undergraduate	Registration for the exercise must be made via SB@home at the beg ning of the course or as announced by the lecturer in accordance wi the specified registration deadlines. Certain prerequisites must be n to qualify for admission to assessment (e. g. successful completion certain percentage of exercises). The lecturer will inform students al the respective details at the beginning of the course. Registration for exercise will be considered a declaration of will to seek admission t sessment. If students have obtained the qualification for admission assessment over the course of the semester, the lecturer will put th gistration for assessment into effect. Students who meet all prerequire will be admitted to assessment in the current or in the subsequent ster. For assessment at a later date, students will have to obtain the lification for admission to assessment anew and have to register an		lance with nust be met npletion of a dents about ration for the nission to as- mission to ll put their re- prerequisites equent seme- otain the qua-	
	nal rela	ations, differentiation a several variables, pow				
notions	s in sta	tistics.				
		ning outcomes able to recognise and		no from natural ocio	acas as mathematic	al problems
		athematical methods to			ices as mathematica	ai piobleilis,
Course	<b>s</b> (type	, number of weekly con	tact hours, language –	- if other than Germa	ın)	
V + Ü (r	no infoi	mation on SWS (weekl	y contact hours) and co	ourse language avail	able)	
		<b>essment</b> (type, scope, on on whether module			ition offered — if not	every seme-
written	exami	nation (approx. 90 to 12	20 minutes)			
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
Teachir	ng cycl	e				
Referre	d to in	LPOI (examination reg	gulations for teaching-	degree programmes)		
Module	e appea	ars in				
	-	ree (1 major) Biochemis ree (1 major) Biochemis	•			
Bachelor's	with 1 ma	or Biology (2010)		rg • generated 26-Aug-2024 rd Bachelor (180 ECTS) Biolo		page 247 / 252

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Bachelor' degree (1 major) Biology (2011) Bachelor' degree (1 major) Biology (2010) Bachelor' degree (1 major) Chemistry (2010) Bachelor' degree (1 major) Food Chemistry (2009) Bachelor' degree (1 major) FOKUS Chemistry (2011) No final examination Special study offering (2010)

Bachelor's with 1 major Biology (2010)	JMU Würzburg • generated 26-Aug-2024 • exam.	page 248 / 252
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Module	title				Abbreviation	
		r Students of	f Non-physics-relate	d Minor Subjects	11-EFNF-072-m01	
Module coordinator				Module offered by		
Managing Director of the Institute of Applied Physics				Faculty of Physics a	and Astronomy	
			Only after succ. cor	npl. of module(s)		
7	numerical grade					
Duratio			Other prerequisites	5		
2 seme	ster undergradu	ate				
Conten	ts					
Mechar	nics, vibration theo	ry, thermody	namics, optics, scier	nce of electricity, Ato	mic and Nuclear Phy	/sics.
Intende	ed learning outcom	es				
			inciples of Physics.			
				– if other than Germa	un)	
				ourse language avail		
			inguage — if other th an be chosen to earr	an German, examina	ition offered — if not	every seme-
				l a Dollus)		
	examination (appro	ox. 120 minu	tes)			
Allocat	ion of places					
Only as	part of pool of gen	eral key skill	s (ASQ): 10 places. F	Places will be allocate	ed by lot.	
Additio	nal information					
Worklo	ad					
Teachir	ng cycle					
Teacim						
		• .•				
Referre	d to in LPO I (exam	ination regu	lations for teaching-	degree programmes)		
Module	e appears in					
Bachel	or' degree (1 major)	Biochemist	y (2011)			
	or' degree (1 major)		-			
	or' degree (1 major)					
	or' degree (1 major)					
	Bachelor' degree (1 major) Biology (2007)					
	or' degree (1 major)					
	or' degree (1 major)	-				
	Bachelor' degree (1 major) Chemistry (2008)					
	or' degree (1 major)					
	Bachelor' degree (1 major) Chemistry (2009)					
Bachelor' degree (1 major) Geography (2007)						
Bachelor' degree (1 major) Geography (2008)						
Bachelor' degree (1 major) Geography (2010)						
Bachelor' degree (1 major) Computer Science (2007)						
	Bachelor' degree (1 major) Computer Science (2014)					
Bachelor' degree (1 major) Computer Science (2010)						
	or' degree (1 major)					
	Bachelor' degree (1 major) Mathematics (2008)					
	or' degree (1 major)		•			
Bachelor's	with 1 major Biology (2010)			urg • generated 26-Aug-2024 ord Bachelor (180 ECTS) Biolo		page 249 / 252
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#### Julius-Maximilians-UNIVERSITÄT WÜRZBURG

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

Module title				Abbreviation	
Practical Cou	rse Physics for Student	s of Non-physics-rela	ated Minor Subjects	11-PFNF-072-m01	
				,	
Module coordinator			Module offered by		
Managing Director of the Institute of Applied Physics			Faculty of Physics a	and Astronomy	
	od of grading		ompl. of module(s)		
	successfully completed				
Duration	Module level	Other prerequisit	es		
1 semester	undergraduate				
Contents					
Mechanics, v	ibration theory, thermo	lynamics, optics, X-r	ays, nuclear magnetic	resonance, Atomic a	and Nuclear
Physics.					
Intended lea	rning outcomes				
The students	have knowledge of the	principles of Physics			
	e, number of weekly con			an)	
	tion on SWS (weekly co				
	· · · · · · · · · · · · · · · · · · ·				010510055
	<b>sessment</b> (type, scope, tion on whether module			alion onerea — if not	every seme-
				mination (annex)	o minutos)
	pprox. 15 minutes) duri	is experiment and b)	i ungraueu written exa	mination (approx. 9	o minutes)
Allocation of	•				
Only as part of	of pool of general key sk	ills (ASQ): 10 places.	. Places will be allocat	ed by lot.	
Additional in	formation				
Workload					
Teaching cyc	le				
reaching cyc					
Referred to Ir	LPOI (examination reg	gulations for teaching	g-degree programmes,		
Module appe					
	gree (1 major) Biochemis				
	gree (1 major) Biochemi				
	gree (1 major) Biochemis				
	gree (1 major) Biology (2				
	gree (1 major) Biology (2				
	gree (1 major) Biology (2				
	gree (1 major) Chemistry gree (1 major) Chemistry				
Bachelor' degree (1 major) Chemistry (2010) Bachelor' degree (1 major) Chemistry (2009)					
Bachelor' degree (1 major) Chemistry (2009) Bachelor' degree (1 major) Geography (2007)					
Bachelor' degree (1 major) Geography (2007) Bachelor' degree (1 major) Geography (2008)					
Bachelor' degree (1 major) Geography (2008) Bachelor' degree (1 major) Geography (2010)					
Bachelor' degree (1 major) Computer Science (2007)					
	gree (1 major) Computer				
	gree (1 major) Computer	-			
	gree (1 major) Food Cher				
Bachelor' deg	gree (1 major) Biomedici	ne (2009)			
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Bachelor' degree (1 major) Biomedicine (2013) Bachelor' degree (1 major) FOKUS Chemistry (2011)

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