

Subdivided Module Catalogue for the Subject

Biology

as a minor in a Bachelor's degree programme (60 ECTS credits)

Examination regulations version: 2010 Responsible: Faculty of Biology

JMU Würzburg • generated 26-Aug-2024 • exam. reg. data record B1|026|-|-|N|2010



Course of Studies - Contents and Objectives

The study program is based on the study program of the Bachelor of Science Biology at the University of Würzburg. The graduate possesses a basic qualification in biological sciences as addendum.



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)):

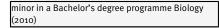
12-Jan-2011 (2011-4)

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

Julius-Maximilians-UNIVERSITÄT WÜRZBURG

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (30 EC	TS credits)			
General Biology I (10 ECTS	credits)			
07-1A1ZO-NF-102-m01	From Cells to Organisms for minor field of study	10	NUM	5
General Biology II (6 ECTS	credits)	Į		
07-2A2GNV-072-m01	Genetics, Neurobiology, Behaviour	6	NUM	7
General Biology III (10 ECT	S credits)			
07-3A30E-102-m01	Plant and Animal Ecology	6	NUM	18
07-3A3EBIOT-102-m01	Developmental Biology of Animals	4	NUM	15
Mathematics/Quantitative	e Biology (4 ECTS credits)			
07-2BM-072-m01	Mathematical Biology and Biostatistics	4	NUM	12
	CTS credits) we achieved across the corresponding sub-areas specified.			
General Biology II				
07-2A2TP-NF-082-m01	Basic Physiology of Animals for minor field of study	3	NUM	11
07-2A2PPR-NF-082-m01	Basic Physiology of Prokaryotes for minor field of study	3	NUM	10
07-2A2PPF-NF-082-m01	Basic Physiology of Plants for minor field of study	3	NUM	9
General Biology III				
07-3A3GMT-102-m01	Genes, Molecules, Technologies	6	NUM	16
07-3A3BC-102-m01	Principles of Biochemistry	4	NUM	13
07-3A3EBIOP-102-m01	Developmental Biology of Plants for minor field of study	4	NUM	14
General Biology IV		1		r
07-4A4FL-102-m01	The Flora of Germany	7	NUM	22
07-4A4FA-102-m01	The Fauna of Germany	7	NUM	20
Special Biosciences I	1			
07-4S1NVO3-092-m01	Functional Morphology of arthropods	5	NUM	34
07-4S1NV01-102-m01	Neurobiology 1	5	NUM	30
07-4S1NVO2-102-m01	Integrative Behavioral Biology	5	NUM	32
07-4S1MZ1-102-m01	Basics in Light- and Electron-Microscopy	5	NUM	24
07-4S1MZ2-102-m01	Analysis of Chromosomes	5	NUM	26
07-4S1MZ6-102-m01	Special Bioinformatics 1	5	NUM	28
07-4S1PS1-102-m01	Molecular modelling - From DNA to protein	5	NUM	36
07-4S1PS2-102-m01	Introduction to Methods in Plant Ecophysiology	5	NUM	38
07-4S1PS3-102-m01	Pharmaceutical Drugs in Plants	5	NUM	40
07-S1-LP1-102-m01	Laboratory practical course I	5	NUM	45
07-S1-Ex1-102-m01	Excursion I	5	NUM	43
07-S1-IP1-102-m01	Interdisciplinary Project I	5	NUM	44
Special Biosciences II				·
07-5EP-102-m01	External Practical Course	10	NUM	42
07-S2-EX2-102-m01	Excursion II	10	NUM	46
07-S2-IP2-102-m01	Interdisciplinary Project II	10	NUM	47
07-S2-LP2-102-m01	Laboratory Practical Course II	10	NUM	48
07-SQF-OSB-102-m01	Organisation and Safety in Biosciences	5	NUM	49



Modul	le title				Abbreviation	
		Organisms for minor f	ield of study	_	07-1A1ZO-NF-102-m	101
Modul	le coord	inator		Module offered by		
Dean c	of Studi	es Biologie (Biology)		Faculty of Biology		
ECTS		od of grading	Only after succ. cor	npl. of module(s)		
10	nume	rical grade				
Durati	ion	Module level	Other prerequisites	5		
1 seme	ester	undergraduate	By way of exceptior	n, additional prerequ	isites are listed in th	e section on
assessments.						
Conter	nts					
ting wi ference plants) and hy thods. to the will acc organis tents o Intend - Know ledge o mal an liarity w hing ch se plan	ith its m ces and s s). The so ypothes . Using t phyloge cquire th isms, wi of the m ded lear vledge o of the s nd plant with the characte ant and a	acroscopic structure b similarities between p econd part will addres es will be discussed a he examples of plants enetic diversity of euka e fundamental knowle th morphology and cy odule are relevant for hing outcomes f the structures of pro pecific characteristics cells Ability to recoge concepts of phyloger ristics and major repre	vledge, the course will before moving on to its rokaryotic cells (bacteri s one of the central issu and students will be intra- and animals, the subs aryotes. At the level of g edge necessary to unde tology being discussed biological disciplines a karyotic and eukaryotic of the intracellular and gnise evolution as the d hetic relationships betw sentatives of groups in are most suitable for pages.	microscopic structure a, archaebacteria) and ues of biology: evolu- oduced to major phy equent module comp groups in the plant ar rstand the forms and in an evolutionary and t all levels of biologic cells and their (biologic extracellular structure riving force behind t even plants/animals. the plant and anima	e. The course will pond eukaryotic cells (attion. Fundamental mologenetic reconstruction of animal kingdoms, and ecological contex cal organisation. ogical) macromolecutions of prokaryotes as the phylogeny of spectruction of spectructions of animal cological contex cal organisation.	int out dif- animals, eechanisms tion me- ce students students and plant t. The con- les Know- s well as ani- cies Fami- e distinguis- to select tho
Course	es (type	, number of weekly co	ntact hours, language –	– if other than Germa	ın)	
• (07-1A1Z of week	O-3P-072, 07-1A1ZO-4 ⁻ ly contact hours availa	ormation on courses lis F-072, and 07-1A1ZO-2E Ible) ormation on language a	-102: V + Ü (no inform	ation on language ar	
			, language — if other th		tion offered — if not	every seme-
This m	nodule h	as the following 4 ass	e can be chosen to earn essment components. ass the module as a wh	Unless stated otherw	vise, students must p	bass all of
• 2 • V • <i>f</i>	4 ECTS of written of Addition as succe	credits, numerical grace examination (approx.) nal prerequisites: adm essful completion of the n module component of		ssessment: regular a	ttendance of exercis	ses as well
Assess • 2 • v • 4 i C Assess	4 ECTS of written of Addition in exerce of the co sement in	ises as well as succes ourse.	-	ssessment: regular a respective exercises	ttendance of and pa as specified at the	beginning
Assess • 2 • v • 4 i c Assess gy Min	4 ECTS of written of Addition in exerc of the co sment in nors)	examination (approx.) nal prerequisites: adm ises as well as succes purse.	50 minutes) ission prerequisite to a sful completion of the 07-1A1ZO-NF-1Z-082: Di	ssessment: regular a respective exercises	ttendance of and pa as specified at the nfach Biologie (The G	beginning

• 1 ECTS credit, numerical grading

• written examination (approx. 60 minutes) including multiple choice questions

Assessment in module component o7-1A1ZO-2E-102: Evolution

- 1 ECTS credit, pass / fail
- written examination (approx. 30 minutes, including multiple choice questions)
- Additional 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

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) 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)

Modul	e title				Abbreviation		
Geneti	Genetics, Neurobiology, Behaviour 07-2A2GNV-072-m01 Module coordinator Module offered by						
Modul	e coord	inator		Module offered by			
Dean o	of Studi	es Biologie (Biology)		Faculty of Biology			
ECTS		od of grading	Only after succ. con	pl. of module(s)			
6	nume	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						
Funda	mental	principles of genetics, ne	urobiology and beha	vioural biology.			
Intend	ed lear	ning outcomes					
proces bases cal me molec	of inhei of inhei chanisr ular anc	olved in animal behaviou itance.] [Version 2: Studo ns and processes involve I formal bases of inherita	r and will be able to ents will understand ed in animal behaviou nce.]	relate animal behavi that there are molec ur and will be able to	m biological mechanisms and iour to the molecular and formal ular, cellular and system biologi- o relate animal behaviour to the		
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
Compo Methor ster, ir Assess low. U	onent. 07-2A20 07-2A20 07-2A20 d of ass of ormati sment ir	GNV-1G-072: V + Ü (no info GNV-2N-072: V + Ü (no info GNV-3V-072: V + Ü (no info GNV-3V-072: V + Ü (no info cessment (type, scope, la on on whether module ca n this module comprises ated otherwise, successf	ormation on SWS (we ormation on SWS (we ormation on SWS (we nguage — if other tha an be chosen to earn the assessments in t	ekly contact hours) a ekly contact hours) a ekly contact hours) a an German, examina a bonus) he individual modul	sted separately for each module and course language available) and course language available) and course language available) tion offered — if not every seme- e components as specified be- successful completion of all indi-		
Asses	2 ECTS, written of Other p cessful of sment in 2 ECTS, written of Other p cessful of sment in 2 ECTS, written of Other p	completion of the respect module component o7- Method of grading: nume examination (approx. 30 rerequisites: Admission completion of the respect module component o7- Method of grading: nume examination (approx. 30	erical grade minutes) prerequisite to assestive exercises as spece 2A2GNV-2N-072: Base erical grade minutes) prerequisite to assestive exercises as spece 2A2GNV-3V-072: Beh erical grade minutes, word proble prerequisite to assest	ssment: regular atte cified at the beginnin sic Neurobiology Bas ssment: regular atte cified at the beginnin avioural Biology Bel ems and/or multiple ssment: regular atte	Indance of exercises and suc- ng of the course. Sic Neurobiology Indance of exercises and suc- ng of the course. havioural Biology choice questions) ndance of exercises and suc-		
	tion of p		live exercises as spe	cineu at the beginni			
		f "spezielles Studienange	abot": 10 places				
		ormation	EDOL . IO PLACES.				
Auditi	undt IIII						
Workl	bad						

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 (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)

Module	e title				Abbreviation
Basic P	hysiol	ogy of Plants for minor fi	eld of study		07-2A2PPF-NF-082-m01
Module	e coord	inator		Module offered by	
Dean o	f Studi	es Biologie (Biology)		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	Admission prerequis	site to assessment:	regular attendance of exercises
			and successful com	pletion of the respec	ctive exercises as specified at the
			beginning of the cou	irse.	
Conten	ts				
vide th	em witl		op the fundamental s	skills for working in a	ive plant physiology and will pro- a physiological laboratory. The onment of plants.
Intend	ed lear	ning outcomes			
					egulation of organisms. They ha- sentation of scientific results.
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	in)
		mation on SWS (weekly o			
Metho	d of ass		inguage — if other tha	an German, examina	tion offered — if not every seme-
		nation (approx. 45 minute			
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Additio	nal inf	ormation			
Worklo	be				
WOINT					
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Teacini	ing cyci	e			
Referre	d to in	LPO I (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	ars in			
		ree (1 major) Mathematic	s (2012)		
	-	ree (1 major) Mathematic			
		ree (1 major) Computatio		12)	
	-	ree (1 major) Computatio		13)	
		gree (1 major, 1 minor) Bi			
Bachel	or's de	gree (1 major, 1 minor) Bi	ology (Minor, 2010)		

Modul	le title				Abbreviation
Basic	Physiol	ogy of Prokaryotes for m	inor field of study		07-2A2PPR-NF-082-m01
Modul	le coord	linator		Module offered by	<u> </u>
Dean o	of Studi	es Biologie (Biology)		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
3	nume	rical grade			
Durati	on	Module level	Other prerequisites	i	
1 seme	ester	undergraduate			
Conte	nts				
	odule v diversity	•	h the principles of pr	okaryotic physiology	y. It will discuss prokaryotic meta
Intend	led lear	ning outcomes			
					regulation of organisms. They ha- sentation of scientific results.
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)
V + Ü ((no info	rmation on SWS (weekly o	contact hours) and co	ourse language avail	lable)
ster, ir	nformat	ion on whether module ca	an be chosen to earn	a bonus)	ation offered — if not every seme-
		nation (approx. 60 minut	es) including multipl	e choice questions	
Alloca	tion of	places			
Additi	onal inf	ormation			
Workl	oad				
Teach	ing cyc	e			
Referr	ed to in	LPOI (examination regu	lations for teaching-	degree programmes)	
Modul	le appe	ars in			
		ree (1 major) Mathematic			
		ree (1 major) Mathematic		、 、	
	-	ree (1 major) Computatio			
	-	ree (1 major) Computatio	-	13)	
		gree (1 major, 1 minor) Bi gree (1 major, 1 minor) Bi	•, ·		
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Module	e title				Abbreviation
Basic P	hysiol	ogy of Animals for minor	field of study		07-2A2TP-NF-082-m01
Module	e coord	inator		Module offered by	<u> </u>
Dean o	f Studi	es Biologie (Biology)		Faculty of Biology	
ECTS		od of grading	Only after succ. com	, ,,	
3		rical grade		•	
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	Admission prerequis	site to assessment:	regular attendance of exercises
			and successful com	pletion of the respec	ctive exercises as specified at the
			beginning of the cou	ırse.	
Conten	ts				
vide the	em witl		op the fundamental s	kills for working in a	ive plant physiology and will pro- a physiological laboratory. The onment of animals.
Intende	ed lear	ning outcomes			
					regulation of organisms. They ha- sentation of scientific results.
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-			-		tion offered — if not every seme-
		on on whether module ca			alon oncice an not every serie
		nation (approx. 60 minut			e questions)
Allocat			· ·		
Additio	nal inf	ormation			
Worklo	ad				
WORKIO	au				
Teachi	ng cycl	e			
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Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	urs in			
Bachel	or' deg	ree (1 major) Mathematic	s (2012)		
	-	ree (1 major) Mathematic			
	-	ree (1 major) Computatio			
	-	ree (1 major) Computatio		13)	
		gree (1 major, 1 minor) Bi			
Bachel	or's de	gree (1 major, 1 minor) Bi	010gy (Minor, 2010)		

Mather matical Biology and Biostatistics 07:2BM-072:m01 Module correlinator Kadule offered by FaceUly of Biology FaceUly of Biology ECTS Methador of grading Only after succ. compil. of module(3) Touration Module level Only after succ. compil. of module(3) Numerical grade Duration Module level Other prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course. Contents	Module	e title				Abbreviation
holder of the Chair of Bioinformatics Faculty of Biology ECTS Method of grading Only after succ. compl. of module(s) 4 inumerical grade 1 semester 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. Contents Fundamental principles of the most important mathematical and statistical methods in biology. Intended learning outcomes Students will have acquired fundamental skills in the evaluation of experiments, the interpretation of readings and numbers as well as the mathematical description of biological processes. Courses (type, number of weekly contact hours, language — if other than German) V + Û (no information on SWS (weekly contact hours) and course language available) Method of paces Motion on whether module can be chosen to ean a bonus) written examination (approx. 45 minutes) including multiple choice questions Additional information Workload Module appears in Bachelor' degree (1 major) Biology (2001) Bachelor' degree (1 m	Mather	natical	Biology and Biostatistic	S		07-2BM-072-m01
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Duration 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. Contents Fundamental principles of the most important mathematical and statistical methods in biology. Intended learning outcomes Students will have acquired fundamental skills in the evaluation of experiments, the interpretation of readings and numbers as well as the mathematical description of biological processes. Courses (type, number of weekly contact hours, language — if other than German) V + 0 (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 eam a bonus) written examination (approx. 45 minutes) including multiple choice questions Aldication of places Only as part of "spezielles Studienangebot": 30 places. Additional information Teaching cycle Bachelor' degree (1 major) Biology (201) Bachelor' degree (1 major) Biology (201) Bachelor' degree (1 major) Biology (201) Bachelor' degree (1 major) Biology (
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Intended learning outcomes Students will have acquired fundamental skills in the evaluation of experiments, the interpretation of readings and numbers as well as the mathematical description of biological processes. Courses (type, number of weekly contact hours, language — if other than German) V + Û (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) written examination (approx. 45 minutes) including multiple choice questions Allocation of places Only as part of "spezielles Studienangebot": 30 places. Additional information	Conten	ts				
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Bachelor's degree (1 major, 1 minor) Biology (Minor, 2008) Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)						
Bachelor's degree (1 major, 1 minor) Biology (Minor, 2010)		-			<i></i>	
No final examination Special study offering (2010)						
	No fina	l exam	nation Special study offe	ering (2010)		

Module	e title				Abbreviation
Principles of Biochemistry					07-3A3BC-102-m01
Module coordinator				Module offered by	
holder	of the (Chair of Plant Physiology	and Biophysics	Faculty of Biology	
ECTS		od of grading	Only after succ. com		
4		rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	Admission prerequis	pletion of the respec	regular attendance of exercises trive exercises as specified at the
Conten	ts				
dents v will bed transla formed	vith dee come fa tion) ar on sele	eper insights into the mo miliar with fundamental nd the biochemistry of ca	lecular biology and b principles of molecul rbohydrates, lipids, p scussed 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).
Intende	ed learr	ning outcomes			
Studen	ts are f	amiliar with the fundame	ental principles of bio	chemistry.	
Course	s (type,	, number of weekly conta	ct hours, language —	· if other than Germa	n)
V + Ü (r	no infor	mation on SWS (weekly o	contact hours) and co	ourse language avail	able)
ster, in	formati	essment (type, scope, la on on whether module ca nation (approx. 30 to 60 i	an be chosen to earn	a bonus)	tion offered — if not every seme-
Allocat	ion of p	olaces			
Additio	nal info	ormation			
Worklo	ad				
Teachi	ng cycl	9			
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	rs in			
Bachel Bachel Bachel Bachel Bachel	or' degi or' degi or' degi or' degi or' degi	ree (1 major) Biology (202 ree (1 major) Biology (202 ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Computatio ree (1 major) Computatio gree (1 major, 1 minor) Bi	io) s (2012) s (2013) nal Mathematics (202 nal Mathematics (202		

Module	title				Abbreviation
Developmental Biology of Plants for minor field of study 07-3A3EBIOP-102-m01					07-3A3EBIOP-102-m01
Module	e coord	inator		Module offered by	·
Dean o	f Studie	es Biologie (Biology)		Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. con	npl. of module(s)	
4	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises
			and successful com	pletion of the respec	ctive exercises as specified at the
			beginning of the cou	urse.	
Conten	ts				
over a p	olant's	entire life cycle from gerr	nination to reproduct	tion. The module wil	of plant developmental biology l discuss the molecular determi- as well as their plasticity.
Intende	ed learı	ning outcomes			
Selecte embryc ontoge	d mole onic axe ny and	cular mechanisms that r es. 5. Examples of mecha evolution. 7. Physiologic	egulate determinatio nisms of morphogen al aspects of the dev	n and differentiation esis and organogene elopmental processe	
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)
V + Ü (r	no infor	mation on SWS (weekly	contact hours) and co	ourse language avail	able)
		s essment (type, scope, la on on whether module ca			tion offered — if not every seme-
written	examiı	nation (approx. 30 to 60	minutes) including m	ultiple choice quest	ions
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
	-				
Teachi	ng cvcl	6			
	0 . 7	-			
Referre	d to in	LPOI (examination regu	lations for teaching-o	degree programmes)	
				<u> </u>	
Module	appea	urs in			
		ree (1 major) Mathematic	s (2012)		
	0	ree (1 major) Mathematic	. ,		
	-	ree (1 major) Computatio		12)	
Bachel	or' deg	ree (1 major) Computatio	nal Mathematics (20	13)	
Bachel	or's deg	gree (1 major, 1 minor) Bi	ology (Minor, 2010)		

Modul					Abbreviation
Develo	pmenta	al Biology of Animals			07-3A3EBIOT-102-m01
Modul	e coord	inator		Module offered by	
Dean o	of Studi	es Biologie (Biology)		Faculty of Biology	
ECTS	1	od of grading	Only after succ. con		
4		rical grade			
Duratio		Module level	Other prerequisites		
1 seme	_	undergraduate			regular attendance of exercises
1 501110					ctive exercises as specified at th
			beginning of the cou	urse.	
Conter	nts				
biology bians, of sper organo	y. The fo nemato matozo genesi	ollowing topics will be odes, Drosophila, mou ba and ova), differentia	covered: early embryon se) and relevance for th Il gene expression, cell	ic development of v e systematics of an growth and molecu	vledge on animal developmental various model organisms (amphi imals, gametogenesis (productio lar regulation of cell developmen ing, metamorphosis (amphibians
	-	ning outcomes			
don, ca 7. Phys Course V + Ü (1	ancer a siologic es (type no info	nd stem cells as well a al aspects of the deve , number of weekly con rmation on SWS (week	s gametes. 6. Interrelat lopmental processes di ntact hours, language – ly contact hours) and co	ions between ontog scussed. - if other than Germ purse language avai	lable)
			, language — if other the e can be chosen to earn		ation offered — if not every seme
written	exami	nation (approx. 30 to 6	o minutes) including m	ultiple choice ques	tions
Allocat	tion of _l	places			
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPOI (examination re	gulations for teaching-	degree programmes)
Modul	e appea	ars in			
Bachel	lor' deg	ree (1 major) Mathema	tics (2012)		
	-	ree (1 major) Mathema			
Dechal	lor' deg	raa (1 maiar) Diamadia			
	-	ree (1 major) Biomedic	-		
	-	-	ine (2009) tional Mathematics (20	12)	
Bachel Bachel	lor' deg lor' deg	ree (1 major) Computa	tional Mathematics (20 tional Mathematics (20		

Module	e title				Abbreviation
Genes,	Molec	ules, Technologies			07-3A3GMT-102-m01
Module	e coord	inator		Module offered by	
Dean o	f Studi	es Biologie (Biology)		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	
6	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			
Conten	ts				
<i>to Gene</i> of the e sectior functio <i>Bioinfo</i>	etics) a eukaryo n will al n and g ormatic:	nd will deepen the stude otic genome, regulatory R so focus on methods of g gene sequence analysis. s), students will acquire a	nts' knowledge of top NA, epigenetically ar gene expression profi In the module compo an overview of major	bics from the followin d evolutionarily sign ling, reverse genetic onent <i>Einführung in c</i> areas in the field of l	rung in die Genetik (Introduction ng areas: structure and evolution nificant genetic mechanisms. The s and modern methods of gene die Bioinformatik (Introduction to bioinformatics: protein sequence ructure RNA/DNA sequences and

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 *Einführung in die Biotechnologie (Introduction to Biotechnology*), 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 *Einführung in die Pharmakokinetik (Introduction to Pharmacokinetics*) 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.

Intended learning outcomes

Module component *Spezielle Genetik* (*Special Genetics*): Advanced knowledge on genome evolution and the regulation of gene expression. Essential knowledge on current methods in genetics. 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 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

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(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	

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

Allocation of places

Additional information

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) Computational Mathematics (2012)

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

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

Module	e title				Abbreviation	
Plant a	Plant and Animal Ecology 07-3A30E-102-m01					
Module coordinator				Module offered by		
Dean of Studies Biologie (Biology) F		Faculty of Biology				
ECTS	Metho	od of grading	Only after succ. compl. of module(s)			
6	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	e section on
Conten	Its		·			
and bio as on t model	otic env he stru concep	vill provide students wit ironments. The module cture and dynamics of p ts of ecology, will becor edge necessary to devel	will focus on the func opulations and ecosy ne familiar with exam	tional adaptation to stems. Students will ples of research find	environmental condi be introduced to fun ings and will acquire	tions as well Idamental
Intend	ed lear	ning outcomes				
portant	t abioti nvironm	amiliar with the fundam c and biotic factors that nent. In addition, they u ues.	influence the distribu	tion and frequency o	of occurrence of organ	nisms in
Course	s (type	, number of weekly cont	act hours, language –	- if other than Germa	n)	
compo • c	nent. 07-3A30	omprises 2 module com DE-1-102: V + Ü (no infor DE-2-102: V + Ü (no infor	mation on SWS (week	ly contact hours) and	l course language av	ailable)
Metho	d of ass	essment (type, scope, l on on whether module	anguage — if other th	an German, examina		
	าless st	n this module comprises ated otherwise, success ments.				
 Assessment in module component o7-3A3OE-1-102: Animal Ecology Animal Ecology 3 ECTS, Method of grading: numerical grade written examination (approx. 45 minutes) 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. Assessment in module component o7-3A3OE-2-102: Plant Ecology Plant Ecology 3 ECTS, Method of grading: numerical grade written examination (approx. 45 minutes) 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						
Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.						
Additional information						
Workload						
Teachi	ng cvcl	9				
	0.934					
minor in a (2010)	Bachelor's	degree programme Biology		rrg ● generated 26-Aug-2024 ord Bachelor (60 ECTS) Biolog		page 18 / 50

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) No final examination Special study offering (2010)

Module title				Abbreviation		
The Fauna of Germany 07-4A4FA-102-m01					07-4A4FA-102-m01	
Module coordinator				Module offered by	<u> </u>	
holder of the Chair of Animal Ecology and Tropical Biology Faculty of Biology						
ECTS	Metho	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 assessments.	, additional prerequ	isites are listed in the section on	
Conte	nts					
They w cordin will be provid	vill acqu g of bio taxon-s e stude	ire a fundamental knowl diversity and will practise specific and will represen	edge of the systemat e identifying species, it 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 rcises in a variety of habitats will ney acquired in the lab by iden-	
Intend	ed lear	ning outcomes				
verteb their fa the bio tors ar	rates) a aunas a ology an nd are o	nd use identification key nd phenology. On the ba d ecology of these speci f conservation concern.	s. They are familiar w sis of the morpholog es as well as, where a	vith selected Central y and habitats of spe applicable, to predic	digenous fauna (vertebrates, in- European habitats as well as ecies, students are able to predict t whether they function as indica-	
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
Metho ster, ir Assess low. U vidual Assess Fauna	o7-4A4F o7-4A4F of of ass of of ass ment in nless st assess sment in of Germ 4 ECTS, written of weighte Assessen Other p cessful of barium) sment in 3 ECTS,	A-2-102: E (no informatic sessment (type, scope, la on on whether module can on this module comprises ated otherwise, successf ments. n module component 07- nany Method of grading: nume examination (approx. 45 d 1:1 nent offered: once a year rerequisites: Admission	on on SWS (weekly co inguage — if other the an be chosen to earn the assessments in t ful completion of the 4A4FA-1-102: Introdu erical grade minutes) and practic prerequisite to asses tive exercises (particu- ning of the course. 4A4FA-2-102: Field E2 successfully comple	an German, examina a German, examina a bonus) he individual modul module will require action to the Fauna or al identification ass ssment: regular atte ular emphasis to be xcursions on the Fau	ition offered — if not every seme- e components as specified be- successful completion of all indi- f Germany Introduction to the ignment (approx. 45 minutes), endance of exercises and suc- placed on the setting up a her-	
		nent offered: once a year				
	tion of p					
allocat logy) v	ted as fo vith 180	ollows: Places will primar ECTS credits. Should the	ily be allocated to sto module be used in c	udents of the Bachel other subjects, there	of available places, places will be lor's degree subject Biologie (Bio- will be two quotas: 95% of pla- ogy) with 180 ECTS credits and	

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(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	

UNIVERSITÄT WÜRZBURG

Subdivided Module Catalogue for the Subject Biology minor in a Bachelor's degree programme, 60 ECTS credits

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)

Module	e title				Abbreviation	
The Flora of Germany 07-4A4FL-102-m01					07-4A4FL-102-m01	
Module coordinator				Module offered by		
holder gy	of the (Chair of Ecophysiology ar	nd Vegetation Ecolo-	Faculty of Biology		
ECTS	Metho	od of grading	Only after succ. com	pl. of module(s)		
7		rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme		undergraduate		By way of exception, additional prerequisites are listed in the section on		
Conten	ts					
will acc gical ar will der using d racteris to typic commo cies-sp site. Ha cussed door fa Intende Studen flowerin	uire ar nd ecor nonstra lichotor stics an cal habi on as we ecific c abitat e . The m cilities ed learr ts have ng plan	n overview of the major flo nomic importance. Using ate how dichotomous key mous keys. Identifying pl d will become familiar wi itats in the Botanical Gard ell as scientific names of haracteristics of these pl cological, geobotanical, odule will also include s and greenhouses to help hing outcomes e acquired knowledge and ts. They are familiar with	owering plants to be the field guide <i>Flora</i> ys are used, and stud ants, students will le ith the respective terr den and the vicinity of the plants found and ants. Students will p climatic as well as co essions at the Botani o students acquire sp d skills related to the	found in the tempera von Deutschland by ents will practise ide arn how to identify r ninology. The modul of Würzburg. Student will be introduced to ractise using field gu nservation-relevant cal Garden of the Ur ecies identification servation	ogy of flowering plants. Students ate zone as well as their ecolo- Schmeil-Fitschen, the course entifying freshly-gathered plants najor morphological plant cha- le will also include field trips ts will become familiar with the to the family- as well as spe- uides and identification keys on characteristics will also be dis- niversity of Würzburg with its out- skills.	
		erbaria. , number of weekly conta	ct hours languago	if other than Corma	n	
compo • 0 • 0	nent. 7-4A4F 7-4A4F	L-1-102: V + Ü (no inform L-2-102: E (no informatio	ation on SWS (weekly n on SWS (weekly co	r contact hours) and ntact hours) and cou		
Methoo ster, in	d of ass formati	essment (type, scope, la on on whether module ca	nguage — if other tha an be chosen to earn	an German, examina a bonus)	tion offered — if not every seme-	
	less st	ated otherwise, successf			e components as specified be- successful completion of all indi-	
of Germ	nany ECTS, vritten e veighte ssessn Other pl essful e arium) ment ir ECTS, og (app	Method of grading: nume examination (approx. 45 d 1:1 nent offered: once a year rerequisites: Admission	erical grade minutes) and practic , summer semester prerequisite to asses tive exercises (particu- ning of the course. 4A4FL-2-102: Field Ex successfully complet d trip)	al identification ass ssment: regular atte ular emphasis to be ccursions on the Flor	Germany Introduction to the Flora ignment (approx. 45 minutes), indance of exercises and suc- placed on the setting up a her- a of Germany	

minor in a Bachelor's degree programme Biology	JMU Würzburg • generated 26-Aug-2024 • exam.	page 22 / 50
(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	



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

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) 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, 1 minor) Biology (Minor, 2010)

Module title					Abbreviation
Basics in Light- and Electron-Microscopy					07-4S1MZ1-102-m01
Module	e coord	inator		Module offered by	
head o	f the De	epartment of Electronmic	croscopy	Faculty of Biology	
ECTS	Metho	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 successful completion of the respective exercises as specified at the beginning of the course.			
Contents					
Fundar	Fundamental principles of confocal laser scanning microscopy and electron microscopy.				

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.

minor in a Bachelor's degree programme Biology	
(2010)	

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)
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)

Module title					Abbreviation	
Analysis of Chromosomes					07-4S1MZ2-102-m01	
Module	e coord	inator		Module offered by	·	
head of the Department of Electronmicro			croscopy	Faculty of Biology		
ECTS	Metho	thod of grading Only after succ. compl. of module(s)				
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
an			Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.			
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.

minor in a Bachelor's degree programme Biology	
(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' 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)

Modul	e title			Abbreviation	
Specia	l Bioin	formatics 1			07-4S1MZ6-102-m01
Modul	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			
Duration Module level		Module level	Other prerequisites		
1 semester undergraduate		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	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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(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	

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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

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)

Neurob	e title				Abbreviation
Neurobiology 1					07-4S1NVO1-102-m01
Module coordinator				Module offered by	1
holder	ofthe	Chair of Genetics		Faculty of Biology	
ECTS	Meth	od of grading	Only after succ. con		
5	1	rical grade			
Duratio	on	Module level	Other prerequisites	;	
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of lab course
			as specified at the l	peginning of the cou	rse.
Conten	nts				
Neurot	biology	and methods in neurobi	ology, using Drosoph	ila as a neurogeneti	c model system.
		ning outcomes			
				robiology of a mode	l organism and are able to apply
		nethods in neurobiology.			
		, number of weekly conta		- if other than Germa	an)
		tion on SWS (weekly con			
		· · · · · ·			ation offered — if not every seme
		ion on whether module o			
methor	ds of as	ssessment: a) written exa	amination (approx. 44	to 60 minutes) or b) log (approx. 10 to 20 pages) or
c) oral	examin	ation of one candidate e	each (approx. 30 mini	utes) or d) oral exam	ination in groups of up to 3 can-
		-	-		minutes); students will be info
med at	bout the	e method and length of t	he assessment prior	to the course	
Allocat	tion of I	alacac			
Numbe allocat logy) w	er of pla ted as fo vith 180	aces: 20. Should the num ollows: Places will prima ECTS credits. Should the	rily be allocated to st e module be used in e	udents of the Bache other subjects, there	f available places, places will be lor's degree subject Biologie (Bi will be two quotas: 95% of pla-
Numbe allocat logy) w ces wil 5% of p 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	er of pla ted as for vith 180 Il be allo places of ologie (tics and ology (a one quo ner quo ner quo ner quo ner quo tis of a n applican odule w ecome a ts' prev S credit dule co tik (Mat accord econdly on in a t g to this ative ran ing quo	aces: 20. Should the num ollows: Places will prima ECTS credits. Should the ocated to students of the daminimum of one partic Biology) with 60 ECTS cr d Mathematik (Mathemat is well as potentially to so the acceed the number of ta. Should there be, with will be a uniform regulation odule component that a not who already have suc- ill be given preferential of available. Selection proce- ious academic achievem is they have achieved an imponents in the subject thematics)) at the time of ing to their average grad of, according to their total hird ranking will be calcu- s third ranking. Among a nking or otherwise by lot tas: Quota 1 (50% of place	rily be allocated to st e module be used in o e Bachelor's degree s cipant in total) will be edits and to students tics), each with 180 E students of other 'imp f applications, the ren in one module compo- ion for the courses of are concerned will be ccessfully completed consideration. A waiting tess group 1 (95%): Pl tents. For this purposed their average grade of Biologie (Biology) f application. This will e weighted according number of ECTS cred ulated as the sum of the pplicants with the sam . Selection process gr	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 course one module compor 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 t (excluding Chemie (l be done as follows to the number of EC its achieved (quanti- hese two rankings, a me ranking, places w oup 2 (5%): Places w	lor's degree subject Biologie (Bi will be two quotas: 95% of pla- ogy) with 180 ECTS credits and ts of the Bachelor's degree sub- egree subjects Computational M of the application-oriented sub- ould the number of places avail 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
Number allocat logy) w ces will 5% of p ject Bio themat ject Bio 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 ces wil	er of pla ted as for vith 180 Il be allo places of ologie (tics and ology (a one quo tics and ology (a one quo tics and one quo tics and one quo tics of a n applican odule w ecome a ts' prev S credit dule co tik (Mat accord dule co tik (Mat accord g to this ative ran ing quo onents of Il be allo	aces: 20. Should the num ollows: Places will prima ECTS credits. Should the ocated to students of the (a minimum of one partic Biology) with 60 ECTS cred Mathematik (Mathematis well as potentially to so the exceed the number of the should there be, with will be a uniform regulation odule component that a nodule component that a this who already have suc- vill be given preferential of available. Selection pro- cious academic achievem is they have achieved an- mponents in the subject thematics)) at the time of ing to their average grad- ty, according to their total hird ranking will be calcu- st third ranking. Among a nking or otherwise by lot tas: Quota 1 (50% of plac- of the Faculty of Biology; ocated by lot. Quota 2 (2)	rily be allocated to st e module be used in o e Bachelor's degree s cipant in total) will be edits and to students tics), each with 180 E students of other 'imp f applications, the re- in one module compo- ion for the courses of are concerned will be ccessfully completed consideration. A waiti tess group 1 (95%): Pl ents. 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 t pplicants with the san . Selection process gr ces): total number of among applicants wi 5% of places): number	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 chese two rankings, a me ranking, places w COUP 2 (5%): Places w ECTS credits already th the same number er of subject semest	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 avail 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 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;
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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

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' 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)

Module title					Abbreviation	
Integrative Behavioral 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	nume	erical grade				
Durati	Duration Module level		Other prerequisites			
1 seme	ester	undergraduate	Admission prerequi	site to assessment:	regular attendance of exercises	
			and successful com	and successful completion of the respective exercises as specified a		
			beginning of the co	urse.		
Conte	nts					
sing of	folfact		organisation of behaviou	•	oment, perception and proces- oehaviour, reproductive beha-	

Intended learning outcomes

Students have acquired an advanced knowledge in the area of behavioural biology and are able to deliver presentations on current studies on relevant topics.

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)

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 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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(2010)	reg. data record Bachelor (60 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' 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)

minor in a	Bachelor's degree programme Biology
(2010)	

Module title Abbreviation					Abbreviation
Functio	onal Mo	orphology of arthropods			07-4S1NVO3-092-m01
Module	e coord	inator		Module offered by	
holder	of the (Chair of Zoology III		Faculty of Biology	
ECTS	Metho	od of grading	Only after succ. compl. of module(s)		
5	nume	rical grade			
Duratio	Duration Module level		Other prerequisites		
1 semester		undergraduate		pletion of the respec	regular attendance of exercises ctive exercises as specified at the
Conten	its	• ·			

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.

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(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	

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 (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)

Module title					Abbreviation	
Molec	ular mo	delling - From DNA to	protein		07-4S1PS1-102-m01	
Modul	Module coordinator			Module offered by		
holder	holder of the Chair of Plant Physiology and Biophysics			Faculty of Biology		
ECTS	Meth	od of grading	Only after succ. co	ompl. of module(s)		
5	nume	rical grade				
Durati	Duration Module level		Other prerequisite	Other prerequisites		
1 semester		undergraduate		mpletion of the respe	regular attendance of exercises ctive exercises as specified at the	
Conter	nts					
			•		function of nucleic acids and	

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.

Intended learning outcomes

Students have acquired a specialist knowledge of the structure-function relationships of macromolecules and are able to work with relevant databases and software.

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)

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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(2010)	reg. data record Bachelor (60 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

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' 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)

Module	e title				Abbreviation
Introdu	uction t	o Methods in Plant Ecop	hysiology		07-4S1PS2-102-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. con	npl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster	undergraduate			letion of the respective exercises
Conten	Its				
	•	eriments to introduce stu perimental findings in a c			ant ecophysiology as well as dis-

Intended learning outcomes

Students are able to use current methods in plant ecophysiology as well as to document experimental findings and put these in a scientific context.

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)

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 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

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' 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)

Modul	e title				Abbreviation
Pharm	Pharmaceutical Drugs in Plants				07-4S1PS3-102-m01
Modul	e coord	inator		Module offered by	
holder	ofthe	Chair of Pharmaceutical E	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 seme	ester	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	nts				
cals as	well as		harmacy. Microscopi	c and phytochemica	al plants and phytopharmaceuti- l analyses will be performed and ed.
Intend	ed lear	ning outcomes			
Students have acquired a specialist knowledge on active agents from medicinal plants and phytopharmaceuti- cals as well as on the requirements and analytical methods of the pharmacopoeia.					
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	n)
Ü + S (I	no info	rmation on SWS (weekly	contact hours) and co	ourse language avail	able)

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: 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

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(2010)	reg. data record Bachelor (60 ECTS) Biologie - 2010	

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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' 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)

Module	e title				Abbreviation
External Practical Course					07-5EP-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)	
10	nume	rical grade			
Duratio		Module level	Other prerequisites		
1 seme	ster	undergraduate		eginning of the cour	regular attendance of lab course rse; please consult with acade-
Conten	Its				
		complete a placement at ned by the respective ins		niversity research in	nstitution or a business. Contents
Intend	ed learı	ning outcomes			
		amiliar with the structure o work in their professior		ons and businesses	and have developed skills which
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)
P (no ir	nformat	ion on SWS (weekly cont	act hours) and course	e language available	e)
		s essment (type, scope, la on on whether module ca			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	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-
	ion of p		· · ·		
	· · · ·				
Additio	onal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	ed to in	LPO I (examination regu	lations for teaching-c	legree programmes)	
Module	e appea	ars in			
Bachel Bachel Bachel Bachel Bachel	or' deg or' deg or' deg or' deg or' deg	ree (1 major) Biology (202 ree (1 major) Biology (202 ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Computatio ree (1 major) Computatio	10) s (2012) s (2013) nal Mathematics (202 nal Mathematics (202		
васпеі	or s deg	gree (1 major, 1 minor) Bi	ology (Minor, 2010)		

Module	e title				Abbreviation
Excursi	on I				07-S1-Ex1-102-m01
Module coordinator				Module offered by	•
Coordin	nator B	ioCareers	,	Faculty of Biology	
ECTS	Methe	od of grading	Only after succ. con	pl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 seme	ster	undergraduate		inning of the course	regular attendance of field trip as ; please consult with academic
Conten	ts				
Conten	ts of th	e field trip to be determin	ned by the respective	institution.	
Intende	ed lear	ning outcomes			
Studen	ts have	e developed skills which	qualify them to work	in their profession.	
Course	s (type	, number of weekly conta	ict hours, language –	if other than Germa	an)
E (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
ster, in method c) oral d didates	formati ls of as examin s (appro	ion on whether module ca ssessment: a) written exa lation of one candidate e ox. 20 minutes per candio	an be chosen to earn mination (approx. 45 ach (approx. 30 minu date) or e) presentati	a bonus) to 60 minutes) or b tes) or d) oral exam on (approx. 20 to 30	ation offered — if not every seme-) log (approx. 10 to 20 pages) or ination in groups of up to 3 can- o minutes); students will be infor-
Allocat		e method and length of th places			
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	e			
Referre	d to in	LPOI (examination regu	lations for teaching-	legree programmes)	
Module	e appea	ars in			
Bachel Bachel Bachel Bachel Bachel	or' deg or' deg or' deg or' deg or' deg	ree (1 major) Biology (20: 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	10) s (2012) s (2013) nal Mathematics (20 nal Mathematics (20	-	

	e title			<u>.</u>	Abbreviation
Interdi	sciplin	ary Project I			07-S1-IP1-102-m01
Module	e coord	inator		Module offered by	
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Methe	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			regular attendance of project se
			sions as specified a	t the beginning of th	e course; please consult with
			academic advisory s	service in advance.	
Conten	ts				
		e project to be determine	ed by the competent	coordinators: conter	nts will vary according to topic.
		ning outcomes	,		
		e developed skills which	qualify them to work	in their profession.	
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	an)
		tion on SWS (weekly cont			
· ·			·	<u> </u>	ation offered — if not every seme
		ion on whether module c			tion oncica in not every serve
			mination (approx. 45	to 60 minutes) or b	
c) oral didates med at	examin 5 (appro 9 out the	ation of one candidate e ox. 20 minutes per candi e method and length of tl	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b 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
c) oral didates med ab	examin 5 (appro 9 out the	ation of one candidate e ox. 20 minutes per candi e method and length of tl	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat	examin 5 (appro 5 out the ion of j	ation of one candidate e ox. 20 minutes per candi e method and length of tl places	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat	examin 5 (appro 5 out the ion of j	ation of one candidate e ox. 20 minutes per candi e method and length of tl	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat	examin 5 (appro 5 out the ion of j	ation of one candidate e ox. 20 minutes per candi e method and length of tl places	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat	examin s (appro oout the ion of p	ation of one candidate e ox. 20 minutes per candi e method and length of tl places	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat Additio	examin s (appro oout the ion of p	ation of one candidate e ox. 20 minutes per candi e method and length of tl places	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat Additio	examin s (appro- oout the ion of p onal inf	ation of one candidate e ox. 20 minutes per candi e method and length of th places ormation	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med at Allocat Additio Worklo	examin s (appro- oout the ion of p onal inf	ation of one candidate e ox. 20 minutes per candi e method and length of th places ormation	mination (approx. 45 ach (approx. 30 minu date) or e) presentati	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30	ination in groups of up to 3 can-
c) oral didates med ab Allocat Additio Worklo Teachin	examin s (appro- oout the ion of p onal inf pad	ation of one candidate e ox. 20 minutes per candi e method and length of th places ormation	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be infor
c) oral didates med ab Allocat Additio Worklo Teachin 	examin s (appro- oout the ion of p onal inf pad	ation of one candidate e ox. 20 minutes per candi e method and length of tl places ormation	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be infor
c) oral didates med ab Allocat Additio Worklo Teachin	examin s (appro- oout the ion of p onal inf pad ng cycl	ation of one candidate e ox. 20 minutes per candi e method and length of th places formation e LPOI (examination regu	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be infor
c) oral didates med at Allocat Additio Worklo Teachin Referre Module	examin s (appro- bout the ion of p mal inf mad ng cycl ed to in	ation of one candidate e ox. 20 minutes per candi e method and length of th places formation e LPOI (examination regu	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be infor
c) oral didates med ab Allocat Additio Worklo Teachin Referre Bachel Bachel	examin s (appro- bout the ion of p onal inf bad ng cycl ed to in e appea or' deg or' deg	ation of one candidate e ox. 20 minutes per candi e method and length of the places formation e LPO I (examination regu- ars in ree (1 major) Biology (20 ree (1 major) Biology (20	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t allations for teaching-o	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be infor
c) oral didates med at Allocat Additio Worklo Teachin Referre Bachel Bachel Bachel Bachel	examin s (appro- bout the ion of p onal inf ad ad ed to in e appea or' deg or' deg or' deg	ation of one candidate e ox. 20 minutes per candi e method and length of the places formation e LPO I (examination regu ars in ree (1 major) Biology (20 ree (1 major) Biology (20 ree (1 major) Mathematic	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t allations for teaching-o	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be info
c) oral didates med at Allocat Additio Worklo Teachin Referre Bachel Bachel Bachel Bachel Bachel	examin s (appro- bout the ion of p mal inf mad ng cycl ed to in e appea or' deg or' deg or' deg or' deg	e E E E E E E E E E E E E E E E E E E E	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t allations for teaching-of 11) 10) 25 (2012) 25 (2013)	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course	ination in groups of up to 3 can- o minutes); students will be info
c) oral didates med at Allocat Additio Worklo Teachin Referre Bachel Bachel Bachel Bachel Bachel Bachel	examin s (appro- bout the ion of p onal inf ead ad ad ad ad ad ad ad ad ad ad ad ad a	e LPO I (examination regularies in a filor) Biology (20) ree (1 major) Biology (20) ree (1 major) Mathematic ree (1 major) Computatio	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t alations for teaching-o (11) 10) 25 (2012) 25 (2013) nal Mathematics (20)	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course degree programmes)	ination in groups of up to 3 can- o minutes); students will be info
c) oral didates med at Allocat Additio Worklo Teachin Referre Bachel Bachel Bachel Bachel Bachel Bachel Bachel Bachel	examin s (appro- bout the ion of p onal inf bad ad ad ad ad ad ad ad ad ad ad ad ad a	e E E E E E E E E E E E E E E E E E E E	imination (approx. 45 ach (approx. 30 minu date) or e) presentati he assessment prior t allations for teaching-of allations for teaching-of allation	to 60 minutes) or b ites) or d) oral exam on (approx. 20 to 30 to the course degree programmes)	ination in groups of up to 3 can- o minutes); students will be info

Module	e title				Abbreviation
Labora	tory pra	actical course I			07-S1-LP1-102-m01
Module	coord	inator		Module offered by	<u> </u>
		ioCareers		Faculty of Biology	
ECTS		od of grading	Only after succ. com		
5		rical grade			
Duratio	L	Module level	Other prerequisites		
1 seme		undergraduate		site to assessment:	regular attendance of lab course
		0			rse; please consult with acade-
			mic advisory service	in advance.	
Conten	ts				
		coursed is offered by an i titution.	institution that is par	t of the University. C	ontents to be determined by the
Intende	ed learı	ning outcomes			
Studen	ts have	e developed skills which	qualify them to work	in their profession.	
Course	s (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)
		e ssment (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) 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-
Allocat	ion of p	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teachir	ng cycl	e			
	_ /				
Referre	d to in	LPOI (examination regu	lations for teaching-c	legree programmes)	
		``			
Module	e appea	irs in			
-		ree (1 major) Biology (201	11)		
	-	ree (1 major) Biology (201			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-		
	-	ree (1 major) Computation			
	-	ree (1 major) Computation		13)	
васпец	or s aeg	gree (1 major, 1 minor) Bi	ology (Millor, 2010)		

Modul	e title				Abbreviation
Excurs	ion II				07-S2-EX2-102-m01
Module coordinator				Module offered by	l
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	1	od of grading	Only after succ. com	, ,,	
10		rical grade		1 ()	
Duratio	on	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	advance.	
Conter	Its				
[Versio	n 1: Co	ntents of the field trip to	be determined by the	e respective institution	on.] [Version 2: Contents of the
		letermined by the compe			
Intend	ed lear	ning outcomes			
Studer	nts have	e developed skills which	qualify them to work	in their profession.	
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	an)
E (no ir	nformat	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		·			tion offered — if not every seme-
		on on whether module c			and one every serie
metho	ds of as	sessment: a) written exa	mination (approx. 45	to 60 minutes) or b) log (approx. 10 to 20 pages) or
c) oral	examin	ation of one candidate e	ach (approx. 30 minu	ites) or d) oral exami	ination in groups of up to 3 can-
					minutes); students will be infor-
		e method and length of th •	te assessment prior t	to the course	
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-o	legree programmes)	
Modul	e appea	urs in			
Bachel	or' deg	ree (1 major) Biology (20:	11)		
Bachel	or' deg	ree (1 major) Biology (202	10)		
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-		
	-	ree (1 major) Computatio			
		ree (1 major) Computatio		13)	
Bachel	or s de	gree (1 major, 1 minor) Bi	ology (Millior, 2010)		

Module	e title				Abbreviation
Interdi	sciplina	ary Project II			07-S2-IP2-102-m01
Module coordinator				Module offered by	l
Coordi	nator B	ioCareers		Faculty of Biology	
ECTS	Metho	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	Admission prerequi	site to assessment:	regular attendance of project ses
			sions as specified a	t the beginning of th	e course; please consult with
			academic advisory s	ervice in advance.	
Conten	ts		·		
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	ts have	e developed skills which	qualify them to work	in their profession.	
Course	s (type	, number of weekly conta	ict hours, language —	if other than Germa	in)
R (no ir	format	tion on SWS (weekly cont	act hours) and cours	e language available	e)
Metho	d of ass	sessment (type, scope, la	inguage — if other tha	an German, examina	tion offered — if not every seme-
		on on whether module c			
didates	s (appro		date) or e) presentati	on (approx. 20 to 30	ination in groups of up to 3 can- minutes); students will be infor-
Allocat	ion of _l	olaces			
Additio	nal inf	ormation			
Worklo	ad				
Teachi	ng cycl	е			
Referre	d to in	LPOI (examination regu	lations for teaching-o	legree programmes)	
Module	e appea	ars in			
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Biology (20:			
	-	ree (1 major) Mathematic			
	-	ree (1 major) Mathematic	-	`	
		ree (1 major) Computatio			
		ree (1 major) Computatio		13)	
Dachel	ur s ae	gree (1 major, 1 minor) Bi	ology (Millior, 2010)		

Module	e title				Abbreviation
Laboratory Practical Course II					07-S2-LP2-102-m01
Module coordinator				Module offered by	
Coordir	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				
		coursed is offered by an itution.	institution that is par	t of the University. C	ontents to be determined by the
Intende	ed learr	ning outcomes			
		amiliar with the structure rofession.	es of internal institution	ons and have develo	pped skills which qualify them to
Course	s (type,	, number of weekly conta	ct hours, language —	· if other than Germa	an)
P (no in	format	ion on SWS (weekly cont	act hours) and cours	e language available	2)
		essment (type, scope, la on on whether module ca			tion offered — if not every seme-
c) oral e 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 ination in groups of up to 3 can- minutes); students will be infor-
Allocat					
Additio	nal info	ormation			
Worklo	ad				
Teachir	ng cvcl	9			
	5 29 50	-			
Referre	d to in	LPOI (examination regu	lations for teaching-	legree programmes)	
Module					
Bachelo Bachelo Bachelo Bachelo Bachelo	or' degi or' degi or' degi or' degi or' degi	ree (1 major) Biology (202 ree (1 major) Biology (202 ree (1 major) Mathematic ree (1 major) Mathematic ree (1 major) Computatio ree (1 major) Computatio gree (1 major, 1 minor) Bi	10) s (2012) s (2013) nal Mathematics (202 nal Mathematics (202		

Module title				Abbreviation		
Organisation	and Safety in Bioscience	S		07-SQF-OSB-102-m01		
Module coord	inator		Module offered by			
Coordinator B	Coordinator BioCareers		Faculty of Biology			
ECTS Meth	od of grading	Only after succ. con	npl. of module(s)			
5 nume	rical grade					
Duration	Module level	Other prerequisites				
1 semester	undergraduate					
Contents						
nisms, hygien help ensure a the bioscienc	Safety procedures in the biosciences, in particular radiation protection, handling of genetically modified orga- nisms, hygiene procedures and hazardous substances, working with lab animals. Fundamental concepts that help ensure an effective and efficient workflow in the biosciences. Structure and organisation of institutions in the bioscience/biotech sector. Process-based project management. HR management in the biosciences, respon- sibilities of managers/supervisors, appraisal interviews, target agreements, management styles.					
Intended lear	ning outcomes					
and are famili		nisational principles	that are relevant for	g work in the bioscience sector work in research and producti- work in the biosciences.		
Courses (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)		
V + S (no info	rmation on SWS (weekly o	contact hours) and co	ourse language availa	able)		
	sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
a) written exa 10 pages)	mination (30 to 60 minute	es) and b) presentati	on (approx. 10 minut	tes) or term paper (approx. 5 to		
Allocation of	places					
allocated as fi logy) with 180 ces will be all 5% of places 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 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	ollows: Places will primar ECTS credits. Should the ocated to students of the (a minimum of one partici Biology) with 60 ECTS cred d Mathematik (Mathemati as well as potentially to st ota exceed the number of ta. Should there be, withi will be a uniform regulation nodule component that an its who already have succe vill be given preferential c available. Selection proce ious academic achievement s they have achieved and mponents in the subject of thematics)) at the time of ing to their average grade v, according to their total of hird ranking will be calcu s third ranking. Among ap nking or otherwise by lot. tas: Quota 1 (50% of plac	ily be allocated to stra 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%): Play 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	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 naining places will b onent, several course one module compon allocated in a standa at least one other mo ng list will be mainta aces will primarily be e, applicants will be r of all assessments to (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	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- f the application-oriented sub- ould the number of places availa- e allocated to applicants from es with a restricted number of eent. In this case, places on all ardised procedure. In this proce- odule component of the respec- ined 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' nd places will be allocated ac- ill be allocated according to the achieved in modules/module 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

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)