



Annex SFB

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

Responsible: Faculty of Chemistry and Pharmacy Examination regulations version: 2012 Abbreviations used: Course types: $\mathbf{E} = \text{field trip}$, $\mathbf{K} = \text{colloquium}$, $\mathbf{O} = \text{conversatorium}$, $\mathbf{P} = \text{placement/lab course}$, $\mathbf{R} = \text{project}$, $\mathbf{S} = \text{seminar}$, $\mathbf{T} = \text{tutorial}$, $\mathbf{\ddot{U}} = \text{exercise}$, \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) Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not cre-Conventions for the modules in this SFB: ditable for bonus. Should there be the option to choose between several methods of assessment, the lecturer will agree with the module coordinator on the me-Information on thod of assessment to be used in the current semester by two weeks after the start of the course at the latest and will communicate this in the assessment procedures: customary manner. Should a module comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise stated below. Should the assessment comprise several individual assessments, successful completion of the module will require successful completion of all individual assessments.

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

ASP02009

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

11-Dec-2012 (2012-186)

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

Every module will be described using the following form:

Abbreviation	Module title	Module title									
	ECTS		Duration	(in semesters)	Method of grading		Module level				
	Courses		To be spe	To be specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y							
	Method of as	ssessm	ent								
	Only after su completion of		Il if applica	ble							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		ocati- if applica	ble							
	Additional information		on if applica	if applicable							
	Referred to in	n LPO I	if applica	ble (examination re	gulations for teaching	g-degree programmes)					

o-M-FUN12-122-	Mathe	matics 1	and 2 for	r students of Functiona	al Materials		
no1	ECTS	18	Duratio	n 2 semester	Method of grading numerical grade	Modul level	undergraduate
	Courses			 10-M-FUN12-1 10-M-FUN12-2- 	es 2 module components. Information on courses 122: V + Ü (no information on SWS (weekly contact 122: V + Ü (no information on SWS (weekly contact	t hours) and course la t hours) and course la	nguage available) inguage available)
	Metho	d of ass	essment	stated otherwise, such Assessment in modul students of Functional • 10 ECTS, Metho • written examin 20 minutes) or • Language of as • Other prerequi students about a declaration of assessment of dents who methods students of Functional • 8 ECTS, Metho • written examin 20 minutes) or • Language of as • Other prerequi students about a declaration of assessment of dents who methods • 0 Cher prerequi students about a declaration of assessment of dents who methods	od of grading: (not) successfully completed nation (approx. 90 to 120 minutes, usually chosen) oral examination in groups (groups of 2, approx. 3 seessment: German, English if agreed upon with the sites: Certain prerequisites must be met to qualify f t the respective details at the beginning of the co of will to seek admission to assessment. If studen ver the course of the semester, the lecturer will pu et all prerequisites will be admitted to assessment a later date, students will have to obtain the quali le component 10-M-FUN12-2-122: Mathematics 2 f	cessful completion of or students of Functio or oral examination of 30 minutes) ne examiner for admission to asses ourse. Registration for nts have obtained the ut their registration for ification for admission for students of Function for students of Function of admission to asses ourse. Registration for nts have obtained the ut their registration for nts have obtained the ut their registration for nts have obtained the ut their registration for nt in the current or in	all individual assessments. nal Materials Mathematics 1 for of one candidate each (approx. ssment. The lecturer will inform the course will be considered qualification for admission to or assessment into effect. Stu- the subsequent semester. For n to assessment anew. onal Materials Mathematics 2 for of one candidate each (approx. ssment. The lecturer will inform the course will be considered qualification for admission to or assessment into effect. Stu- the subsequent semester. For
	other prerequisites			Buyyou of exception	additional prerequisites are listed in the section or		

11-MPI3-062-m01	Mathematics	Mathematics 3 for students of Physics and Engineering											
	ECTS 8	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		V + Ü	(no information on S	SWS (weekly contact	hours) and course language av	ailable)						
	Method of as	sessment	writte	written examination (approx. 120 minutes)									
	other prerequ	uisites	to qua cours obtain for as	Admission prerequisite to assessment: successful completion of approx. 50% of exercises. Certain prerequisites must be met o qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the ourse. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration or assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subse- juent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment an- ew.									
11-ENNF1-062-m01	Introduction	to Physics	Part 1	Part 1 for students of Physics Related Minor Subjects									
	ECTS 7	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		V + Ü	(no information on S	SWS (weekly contact	hours) and course language av	ailable)						
	Method of as	sessment	writte	n examination (app	rox. 120 minutes)								
	Participants and allo- cation of places		Only a	Only as part of pool of general key skills (ASQ): 20 places. Places will be allocated by lot.									
11-ENNF2-062-m01	Introduction	to Physics	Part 2 for students of Physics Related Minor Subjects										
	ECTS 7	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate					
	Courses		V + Ü	(no information on S	SWS (weekly contact	hours) and course language av	ailable)						
	Method of as	sessment	writte	n examination (app	rox. 120 minutes)								
	Participants a cation of place		Only a	as part of pool of ge	neral key skills (ASQ)): 20 places. Places will be alloc	ated by lot.						
11-PNNF-062-m01	Physics Labo	ratory Cou	rse for	rse for students of Physics Related Minor Subjects									
	ECTS 3	Duratio		1 semester	0 0	(not) successfully completed		undergraduate					
	Courses					irs) and course language availa							
	Method of as	sessment	a) ora	l test (approx. 15 mi	nutes) during experi	ment and b) ungraded written e	xamination (ap	prox. 90 minutes)					
	Participants and allo- cation of places		Only a	as part of pool of gen	neral key skills (ASQ)): 15 places. Places will be alloc	ated by lot.						

08-IAC-122-m01	Experi	mental (hemistry	, Gene	General and analytical Chemistry Lab for engineering students						
	ECTS	10	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	!S		 This module comprises 2 module components. Information on courses will be listed separately for each module component. 08-IAC-1-062: V (no information on SWS (weekly contact hours) and course language available) 08-IAC-2-122: P (no information on SWS (weekly contact hours) and course language available) 							
	Metho	d of asso	essment	stated	otherwise, success	ful completion of the	essments in the individual mod module will require successfu				
				Asses	5 ECTS, Method of g written examination sment in module con 5 ECTS, Method of g Vortestate (pre-exp pages), Nachtestate	grading: numerical g n (approx. 90 minute mponent 08-IAC-2-1 grading: (not) succes periment exams, app	s) 22: General and analytical Cher sfully completed rox. 15 minutes), assessment xams, approx. 15 minutes)				
				•	Language of assess Only after successf	sment: German or En ul completion of mo		ompletion of m	odule component o4-IAC-1 is a		

08-IOC-122-m01	Organic Chemistry for engineering students											
	ECTS	12	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Course	25		08-IOC-2-122:08-IOC-3-122:	es 3 module components. Information on c V + Ü (no information on SWS (weekly conta P (no information on SWS (weekly contact h V + Ü (no information on SWS (weekly cont	act hours) and course langunous) and course language	age available) available)					
	Metho	d of ass		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.								
				 Assessment in module component of the module will require successful completion of all individual assessments. Assessment in module component o8-IOC-2-122: Organic Chemistry 2 for engineering students Organic Chemistry 2 for engineering students 5 ECTS, Method of grading: numerical grade a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English Only after successful completion of module component o8-IOC-2. Other prerequisites for participation in module component o8-IOC-2. Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually and the successful completed) as well as regular attendance of grading; (not) successful completed Vortestate (pre-experiment exams, approx. 15 minutes), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes) Assessment offered: once a year, winter semester Language of assessment: German or English Only after successful completion of module component o8-IOC-3. 								
	other r	orerequi	isites		ance of exercises (usually a maximum of 2 i additional prerequisites are listed in the se							
		ed to in			organische und Bioorganische Chemie"							
	Keielle			3 02 (1) 2. Chenille 0	ngamsche und bioorgamsche chellie							

Bachelor's with 1 major Functional Materials (2012)	JMU Würzburg • generated 26-Aug-2024 • exam. reg. data record 82 g81 - - H 2012	page 6 / 19

08-IPC-122-m01	Physical Chemistry 1 for engineering students										
	ECTS 18 Duratio	on 1 semester Method of grading numerical grade Modul level undergraduate									
	Courses	 This module comprises 3 module components. Information on courses will be listed separately for each module component. o8-IPC-2-o62: V + Ü (no information on SWS (weekly contact hours) and course language available) o8-IPC-1-o91: V + Ü (no information on SWS (weekly contact hours) and course language available) o8-IPC-3-122: P (no information on SWS (weekly contact hours) and course language available) 									
	Method of assessment	Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.									
		 Assessment in module component o8-IPC-2-o62: Physical Chemistry 2 (basics of quantum mechanics and spectroscopy) for engineering students Physical Chemistry 2 (basics of quantum mechanics and spectroscopy) for engineering students 8 ECTS, Method of grading: numerical grade written examination (approx. 90 minutes) Assessment in module component o8-IPC-1-o91: Physical Chemistry 1 (thermodynamics, electrochemistry) for engineering students Physical Chemistry 1 (thermodynamics, electrochemistry) for engineering students Physical Chemistry 1 (thermodynamics, electrochemistry) for engineering students 5 ECTS, Method of grading: numerical grade written examination (approx. 90 minutes) Assessment in module component o8-IPC-3-122: Physical Chemistry for engineering students, laboratory course 5 ECTS, Method of grading: (not) successfully completed Vortestate (pre-experiment exams, approx. 15 minutes), assessment of practical performance (log approx. 5 to 10 pages), Nachtestate (post-experiment exams, approx. 15 minutes) Assessment offered: once a year, summer semester Language of assessment: German or English Only after successful completion of module components: Successful completion of the two module components o8- 									
99-EL1-122-m01	IPC-1 and 08-IPC-2 is a prerequisite for participation in module component 08-IPC-3. Basics of Electronics 1										
	ECTS 5 Duratio										
	Courses	V + Ü (no information on SWS (weekly contact hours) and course language available)									
	Method of assessment	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner									
99-EL2-122-m01	Basics of Electronics 2										
	ECTS 5 Duratio	on 1 semester Method of grading numerical grade Modul level undergraduate									
	Courses	V + Ü (no information on SWS (weekly contact hours) and course language available)									
	Method of assessment	 a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner 									

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08-CT-122-m01	Molecular Materials (Lecture and practical course)											
	ECTS	10 Durati	on	1 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course	S	•	 This module comprises 2 module components. Information on courses will be listed separately for each module component. o8-CT-1-122: V + Ü (no information on SWS (weekly contact hours) and course language available) o8-CT-2-122: P (no information on SWS (weekly contact hours) and course language available) 								
	Method	d of assessmen		 Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments. Assessment in module component o8-CT-1-122: Molecular Materials (Lecture) Molecular Materials (Lecture) 5 ECTS, Method of grading: numerical grade presentation (approx. 30 minutes) and a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes). Should a module component comprise more than one graded assessment, all assessments will be equally weighted, unless otherwise specified; should the lecturer want to make changes to the way in which assessments are weighted, he or she must do so by two weeks after the start of the course at the latest and must communicate this to students in an appropriate manner. Language of assessment: German or English Other prerequisites: Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the beginning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence). Assessment in module component exams, approx. 15 minutes each) and logs (approx. 5 pages each) Assessment offered: once a year, winter semester Language of assessment: German or English Other prerequisites: Admission prerequisite to assessment: regular attendance (minimum 80%) of courses. 								
			Asse									
	other p	rerequisites	By wa	By way of exception, additional prerequisites are listed in the section on assessments.								
		pants and allo- of places		o8-CT-1-122: o8-CT-2-122: Stude gy): 4. Should ther places will be alloc thin one module co the courses of one will be allocated in at least one other r	ents from the Faculty e be more than 4 app ated among these ap omponent, several co module component. a standardised proce nodule component o	olications from students of Nar oplicants as follows: (1) Places urses with a restricted number In this case, places on all cours edure. In this procedure, applic	Nanostrukturted nostrukturtechn will be allocated of places, there ses of a module cants who alread given preferen	chnik (Nanostructure Technolo- ik (Nanostructure Technology), d by lot. (2) Should there be, wi- e will be a uniform regulation for component that are concerned dy have successfully completed tial consideration. (3) A waiting				

11-TMS-102-m01	Introduction to Functional Materials										
	ECTS	5	Duratio	n	1 semester	Method of gradin	g numerical grade	Modul level	undergraduate		
	Course	!S		V + Ü	V + Ü (no information on SWS (weekly contact hours) and course language available)						
	Metho	d of ass	essment	Asses noun	written examination (approx. 120 minutes) Assessment offered: When and how often assessment will be offered depends on the method of assessment and will be an- nounced in due form under observance of Section 32 Subsection 3 ASPO (general academic and examination regulations) 2009.						
	other prerequisites			tive d on to the le sessr	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.						
03-FU-Zell-122-	Princip	les of C	ell Biolog	y and	Tissue Regeneration	n					
m01	ECTS	5	Duratio	n	1 semester	Method of gradin	g numerical grade	Modul level	undergraduate		
	Courses			V (no	information on SWS	5 (weekly contact h	ours) and course langu	age available)			
54.544				a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minut each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner							
03-FU-BM-122-m01											
	ECTS 7 Duratio				1 semester			Modul level	undergraduate		
	Course	S		 This module comprises 2 module components. Information on courses will be listed separately for each module component. o3-FU-BM-1-122: V (no information on SWS (weekly contact hours) and course language available) o3-FU-BM-2-122: P + P (no information on SWS (weekly contact hours) and course language available) 							
	Metho	d of ass	essment	Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.							
					 Assessment in module component og-FU-BM-1-122: Biomaterials (Lecture) 5 ECTS, Method of grading: numerical grade a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Assessment in module component og-FU-BM-2-122: Biomaterials (Practical course and seminar) Biomaterials (Practical course and seminar) 2 ECTS, Method of grading: (not) successfully completed Vortestate (pre-experiment exams, approx. 15 minutes each) and logs (approx. 5 pages each) Assessment offered: once a year, summer semester Language of assessment: German, English if agreed upon with the examiner 						

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08-FU-VP-122-m01	Advanced laboratory course of Functional Materials										
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate		
	Courses	5		P (no	P (no information on SWS (weekly contact hours) and course language available)						
	Method	ofasse	essment		talk (approx. 15 minutes)						
				Language of assessment: German, English if agreed upon with the examiner							
	other pi	rerequis	sites	Where applicable, topic-specific modules/module components as specified by supervisor (cf. Section 12 Subsection 4 FSB (subject-specific provisions)).							
Compulsory Electiv	es (25 E	CTS cre	dits)								
Compulsory Electiv	es Mech	anical a	and Elect	rical En	gineering (17 ECTS	credits)					
99-TM-122-m01	Basics	of Appli	ed Mecha	anics							
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses	5		V + Ü	(no information on S	SWS (weekly contact h	ours) and course language av	ailable)			
	Method of assessment				a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes						
				each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)							
							reed upon with the examiner				
99-IP-122-m01	Laborat	orv Cou	urse of mo	-	cal and electrical En						
	ECTS 6 Duratio				1 semester	<u> </u>	(not) successfully completed	Modul level	undergraduate		
	Courses	5	J	P (no	information on SWS	(weekly contact hour	s) and course language availal	ble)			
	Method	ofasse	essment	placement report / fieldwork report / report on practical training / report on practical course / project report / report on techni-							
				cal course (approx. 15 to 30 pages)							
						e a year, summer seme					
	other pi	oroqui	itor	Language of assessment: German, English if agreed upon with the examiner Admission prerequisite to assessment: regular attendance (minimum 80%) of courses.							
99-CA-122-m01					Assembly of Techni			i courses.			
99°CA-122-1101		6	Duratio		1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		Duration						undergraduate		
		-	essment		V + K (no information on SWS (weekly contact hours) and course language available) a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes						
	method	01 8556	essment								
					each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)						
							reed upon with the examiner				

Compulsory Elect		ves Physics (11 ECTS credits) Introduction to Nanoscience													
		6	Duratio			Method of grading numerical grade			Modul level	undergraduate					
	Courses	S		V + S	' + S (no information on SWS (weekly contact hours) and course language available)										
	Method	l of ass	essment	writte	written examination (approx. 120 minutes, for modules with less than 4 ECTS credits approx. 90 minutes; unless otherwise specified)										
	other pi	rerequi	sites	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.											
	Particip cation c	of place	es	Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.											
11-PPT-092-m01	Practical Course Physical Technology of Material Synthesis														
	ECTS 5 Duratio				1 semester		(not) successfully compl		Modul level	undergraduate					
	Courses	-			P (no information on SWS (weekly contact hours) and course language available)										
	Method	l of ass	essment	Preparing the experiment will be considered successfully completed if an oral test (duration: approx. 15 minutes) prior to the experiment is passed. Performing and evaluating the experiment will be considered successfully completed if a Testat (exam) is passed. An experiment log (approx. 8 pages) is to be prepared. Each component of the assessment can be repeated once in the respective semester. Only if both components of the assessment have been successfully completed in the same semester will the module component be considered successfully completed. Assessment offered: once a year, winter semester											
	other p	rerequi	sites	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.											

10-M-COM-122-	Compu	tationa	l Mathem	atics									
m01	ECTS	4	Duration	ı	1 semester	Methoo	of grading	g (not) succ	essfully co	mpleted	Modul level	undergra	aduate
	Course	S		V + Ü	V + Ü (no information on SWS (weekly contact hours) and course language available)								
	Method	d of ass	sessment	project in the form of programming exercises (type and expenditure of time to be specified by the lecturer at the beginning of the course) Language of assessment: German, English if agreed upon with the examiner									
	other p	prerequ	isites	tive of on to the le sessi	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.								
10-M-DGA-122-	Ordina	Ordinary Differential Equations for other Subjects											
m01	ECTS 10 Duratio			า	1 semester	Method	of grading	g numerical	lgrade		Modul level	undergra	aduate
	Courses			V + Ü	′ + Ü (no information on SWS (weekly contact hours) and course language available)								
	Methoo	Method of assessment			written examination (approx. 90 to 180 minutes) if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner								
	other p	other prerequisites			Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admission to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to assessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment anew.								
10-M-FAA-122-mo:	Introdu	uction t	o Function	al Ana	alysis for other S	ubjects							
	ECTS	10	Duration		1 semester		of grading	g numerical	lgrade		Modul level	undergra	aduate
	Course	S		V + Ü	(no information	on SWS (wee	kly contac	t hours) and	l course la	nguage av	ailable)		
	Methoo	d of ass	sessment	written examination (approx. 90 to 180 minutes) if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner									
	other prerequisites			tive on to on to the le sessi	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.								

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10-M-NUW-122-	Numerical Mathematics 1 for Economathematics												
m01	ECTS	10	Duration	า	1 semester	Metho	d of grading	numerical	grade	Modul level	undergraduate		
	Course	S		V + Ü	(no information	on SWS (we	ekly contac	t hours) and	course language a	vailable)			
	Methoo	1 of ass	essment	if ann 20 mi	written examination (approx. 90 to 180 minutes) if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner								
	other p	prerequi	sites	tive d on to the le sessr	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- cive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.								
10-M-NUA-122-	Numeri	Numerical Mathematics 2 for other Subjects											
m01	ECTS	10	Duration	า	1 semester	Metho	d of grading	numerical	grade	Modul level	undergraduate		
	Course	S	-	V + Ü	+ Ü (no information on SWS (weekly contact hours) and course language available)								
	Methoo	1 of ass	essment	written examination (approx. 90 to 180 minutes) if announced by the lecturer, the written examination can be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner									
	other p	prerequi	sites	tive d on to the le sessr	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.								
10-M-PRG-122-m01	Program	mming	course for	r stude	ents of Mathema	tics and oth	er subjects						
	ECTS	3	Duration	า	1 semester	Methor	d of grading	(not) succe	essfully completed	Modul level	undergraduate		
	Course	S		P (no	P (no information on SWS (weekly contact hours) and course language available)								
	Method of assessment			the co	project in the form of programming exercises (type and expenditure of time to be specified by the lecturer at the beginning of the course) Language of assessment: German, English if agreed upon with the examiner								
	other prerequisites			tive d on to the le sessr	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the respec- tive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admissi- on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester, the lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as- sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the quali- fication for admission to assessment anew.								

10-I-DB-102-m01	Databa	ises			-							
	ECTS	5	Duratio	ก	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V + Ü	(no information c	on SWS (weekly contact hours) and course la	anguage available)					
	Metho	d of ass	essment	if ann exam tes, g	written examination (approx. 50 to 60 minutes) if announced by the lecturer by four weeks prior to the examination date, the written examination can be replaced by an oral examination of one candidate each or an oral examination in groups (one candidate each: 15 minutes, groups of 2: 20 minu- tes, groups of 3: 25 minutes) Language of assessment: German, English if agreed upon with the examiner							
		other prerequisites			Admission prerequisite to assessment: exercises (type and scope to be announced by the lecturer at the beginning of the course).							
		ed to in l	-	§ 69	§ 49 (1) 1. b) Datenbanksysteme und Softwaretechnologie § 69 (1) 1. b) Datenbanksysteme und Softwaretechnologie							
10-I-EIN-111-m01		uction to			ence for Students							
	ECTS	10	Duratio		1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	'S		V + Ü	+ Ü (no information on SWS (weekly contact hours) and course language available)							
	Method of assessment				a) written examination (80 to 90 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or oral examina- tion in groups of 2 or 3 candidates (30 or 40 minutes respectively)							
	other prerequisites				Admission prerequisite to assessment: academic requirements to be met in exercises as specified at the beginning of the course.							
Compulsory Election	ves Chen	nistry (1	8 ECTS ci	edits)								
08-PKC-102-m01	Programming course for Chemistry Major											
	ECTS	5	Duratio	ກ	1 semester	Method of grading (not) successfully c	completed Modul level	undergraduate				
	Course	:S		S + Ü	S + Ü (no information on SWS (weekly contact hours) and course language available)							
	Metho	d of ass	essment	practical examination: completion of programming exercises and oral description of algorithms used Language of assessment: German, English								
	other prerequisites			ning	Admission prerequisite to assessment: successful completion of exercises in the respective classes as specified at the begin- ning of the course (usually 70% of exercises to be successfully completed) as well as regular attendance of exercises (usually a maximum of 2 incidents of unexcused absence).							
08-BC-TF-122-m01	Bioche	mistry f	for Studer	nts of I	unctional materi	als						
	ECTS 3 Duratio			ก	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V + Ü	(no information c	on SWS (weekly contact hours) and course la	anguage available)					
	Methoo	d of ass	essment	each; c) ora	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English							

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08-PTF2-122-m01	Drug P	roduct [Developm	ent, Q	uality assurance and	industrialization						
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	:S		S (no	S (no information on SWS (weekly contact hours) and course language available)							
	Metho	d of asso	essment	each; c) ora	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English							
08-NT-122-m01	Chemi	cally and	d bio-insp	oired N	anotechnology for N	y for Material Synthesis						
	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	graduate				
	Course	-		 This module comprises 2 module components. Information on courses will be listed separately for each module component. o8-NT-1-122: V (no information on SWS (weekly contact hours) and course language available) o8-NT-2-122: V (no information on SWS (weekly contact hours) and course language available) 								
	Metho	d of ass	essment	stated Asses	d otherwise, success sment in module co 2 ECTS, Method of g a) written examinat oral examination in sment in module co 3 ECTS, Method of g a) written examinat	e comprises the assessments in the individual m ful completion of the module will require succes mponent o8-NT-1-122: Sol-Gel Chemistry 1: Fund grading: numerical grade tion (approx. 45 minutes) or b) oral examination groups (groups of 2, approx. 30 minutes) mponent o8-NT-2-122: From Biomineralisation to grading: numerical grade tion (approx. 45 minutes) or b) oral examination groups (groups of 2, approx. 30 minutes)	sful completion of amentals of one candidate e o biologically inspi	all individual assessments. each (approx. 20 minutes) or c) ired Materials Synthesis				

03-FU-TV-122-m01	Techno	ology of	F Composi	te Mate	erials (Lecture an	d practical course)							
	ECTS	5	Duratio	n	1 semester	Method of grading	g numerical grade	Modul level	undergraduate				
	Course	es		•	 This module comprises 2 module components. Information on courses will be listed separately for each module component. o3-FU-TV-1-122: V (no information on SWS (weekly contact hours) and course language available) o3-FU-TV-2-122: P (no information on SWS (weekly contact hours) and course language available) 								
	Metho	d of ass	essment						s as specified below. Unless all individual assessments.				
				Asses	3 ECTS, Method a) 1 to 3 written minutes each; 3 20 minutes) or o Language of ass sment in module 2 ECTS, Method Vortestate (pre- Assessment offer	of grading: numerical examinations (1 writte written examinations:) oral examination in essment: German, En component o3-FU-TV of grading: (not) succ experiment exams, ap ered: once a year, sum	en examination: approx. 90 approx. 60 minutes each) of groups (groups of 2, approx glish if agreed upon with th - 2-122: Technology of Com essfully completed prox. 15 minutes each) and	o minutes; 2 written ex or b) oral examination o x. 30 minutes) ne examiner iposite Materials (Prac d logs (approx. 5 pages	xaminations: approx. 60 or 90 of one candidate each (approx. tical course)				
3-FU-FBM-122-	Functionalized Biomaterials												
101	ECTS 5 Duration			n	1 semester	Method of grading	g numerical grade	Modul level	undergraduate				
	Courses			 This module comprises 2 module components. Information on courses will be listed separately for each module component. o3-FU-FBM-1-122: V (no information on SWS (weekly contact hours) and course language available) o3-FU-FBM-2-122: P (no information on SWS (weekly contact hours) and course language available) 									
	Metho	Method of assessment			Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.								
				Asses	3 ECTS, Method a) 1 to 3 written minutes each; 3 20 minutes) or o Language of ass sment in module 2 ECTS, Method Vortestate (pre- Assessment offer	of grading: numerical examinations (1 writte written examinations:) oral examination in essment: German, En component 03-FU-FB of grading: (not) succ experiment exams, ap ered: once a year, sum	en examination: approx. 90 approx. 60 minutes each) of groups (groups of 2, appro glish if agreed upon with th M-2-122: Functionalized Bi essfully completed prox. 15 minutes each), log	o minutes; 2 written ex or b) oral examination (x. 30 minutes) ne examiner iomaterials (Practical o gs (approx. 5 pages ea					

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bachetor s with 1 major 1 unctional materials (2012)	JMO Wulzburg • generated zo-Aug-2024 • exam. reg. data record 82[801]-[1][2012	page 10 / 19

03-FU-PM1-122-	Polyme	r Chem	istry									
m01	ECTS	5	Duratior	ו ו	1 semester	Method of grading	numerical grade		Modul level	undergraduate		
	Courses	S		 This module comprises 2 module components. Information on courses will be listed separately for each module component. o3-FU-PM1-1-122: V (no information on SWS (weekly contact hours) and course language available) o3-FU-PM1-2-122: P (no information on SWS (weekly contact hours) and course language available) 								
	Method	l of asse	essment		Assessment in this module comprises the assessments in the individual module components as specified below. Unless stated otherwise, successful completion of the module will require successful completion of all individual assessments.							
				 Assessment in module component o3-FU-PM1-1-122: Polymer Chemistry (Lecture) 3 ECTS, Method of grading: numerical grade a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German, English if agreed upon with the examiner Assessment in module component o3-FU-PM1-2-122: Polymer Chemistry (Practical course) 2 ECTS, Method of grading: (not) successfully completed Vortestate (pre-experiment exams, approx. 15 minutes each) and logs (approx. 5 pages each) Assessment offered: once a year, summer semester Language of assessment: German, English if agreed upon with the examiner 								
03-FU-TE-122-m01	Princip	les of Ti	issue Eng	ineering	5							
	ECTS 5 Duratio			ו ו	1 semester	Method of grading	numerical grade		Modul level	graduate		
	Courses			S + Ü (r	no information on	SWS (weekly contact	hours) and course la	nguage av	ailable)			
	Method of assessment			Students will be informed about the method, length and scope of the assessment prior to the course. Usually, one of the fol- lowing options will be chosen: a) written examination (30 to 60 minutes, including multiple choice questions) or b) log (ap- prox. 10 to 30 pages) or c) oral examination of one candidate each (30 to 60 minutes) or d) oral examination in groups of up to 3 candidates (approx. 30 to 60 minutes) or e) presentation (20 to 45 minutes) Language of assessment: German, English if agreed upon with the examiner								
Compulsory Electiv	es Addit	ional Q	ualificatio	ons (20	ECTS credits)							
08-FU-IP1-122-m01	Industr	ial Inte	rnship (Sł	1ort)								
	ECTS	5	Duratior	ו ו:	1 semester	Method of grading	(not) successfully co	ompleted	Modul level	undergraduate		
	Courses	S		P (no information on SWS (weekly contact hours) and course language available)								
	Method of assessment		essment	written report (approx. 5 to 10 pages) Language of assessment: German, English if agreed upon with the examiner								
08-FU-APM1-122-	Foreign	Studie	s (Short)									
m01	ECTS 5 Duratio			ו :	1 semester	Method of grading	(not) successfully co	ompleted	Modul level	graduate		
	Courses			P (no ir	P (no information on SWS (weekly contact hours) and course language available)							
				report (approx. 2 pages); proof of having completed lab course Language of assessment: German or English; language of the respective placement country where required								
	other p	rerequis	sites	Admiss	ion prerequisite t	o assessment: regula	r attendance of place	ement.				

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08-FU-WP1-122-	Course	s relate	d to Func	tional I	Materials outside of	the Natural Sciences				
m01	ECTS	5	Duration	า	1 semester	Method of grading (not) successfully con	npleted	Modul level	graduate	
	Course	s		V (no information on SWS (weekly contact hours) and course language available)						
	Metho	d of ass	essment	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) or d) successful completion as certified by lecturer Language of assessment: German, English if agreed upon with the examiner Please consult with course advisory service.						
	other p	orerequi	sites							
08-FU-WP2-122-	Course	s relate	d to Func	tional Materials inside of the Natural Sciences						
m01	ECTS 5 Duration			า	1 semester	Method of grading (not) successfully con	npleted	Modul level	graduate	
	Course	es		V (no information on SWS (weekly contact hours) and course language available)						
	Metho	d of ass	essment	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) or d) successful completion as certified by lecturer Language of assessment: German, English if agreed upon with the examiner						
	other p	orerequi	sites	Please consult with course advisory service.						
Thesis (12 ECTS cro	edits)									
08-FU-BT-122-m01	Bachelor Thesis Functional Materials									
	ECTS 12 Duratio			า	1 semester	Method of grading numerical grade		Modul level	undergraduate	
	Course	:5		 This module has 2 components; information on courses listed separately for each component. o8-FU-BT-2-122: K (no information on language and number of weekly contact hours available) o8-FU-BT-1-122: A (no information on language and number of weekly contact hours available) 						
		d of ass		 This module has the following 2 assessment components. Unless stated otherwise, students must pass all of these assessment components to pass the module as a whole Assessment component to module component o8-FU-BT-2-122: Kolloquium zur Bachelor-Arbeit 2 ECTS credits, method of grading: numerical grade Abschlusskolloquium mit talk (approx. 20 minutes) and Diskussion (approx. 20 minutes) Language of assessment: German or English Assessment component to module component o8-FU-BT-1-122: Bachelor-Arbeit 10 ECTS credits, method of grading: numerical grade written thesis (approx. 20-40 pages) Language of assessment: German or English Other prerequisites: Where applicable, topic-specific modules/module components as specified by supervisor (cf. Section 12 Subsection 4 FSB (subject-specific provisions)). By way of exception, additional prerequisites are listed in the section on assessments. 						
	Additional Information			Additional information listed separately for each module component. • o8-FU-BT-1-122: Additional information on module duration: 8 weeks. • o8-FU-BT-2-122:						

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08-FS1-122-m01	01 Material Science 1 (basic introduction)									
	ECTS	5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Course	S		V + Ü (no information on SWS (weekly contact hours) and course language available)						
	Methoo	d of ass	essment	a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English						
08-FS2-122-m01	Material Science 2 (the material groups)									
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses			V + Ü (no information on SWS (weekly contact hours) and course language available)						
				a) 1 to 3 written examinations (1 written examination: approx. 90 minutes; 2 written examinations: approx. 60 or 90 minutes each; 3 written examinations: approx. 60 minutes each) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes) Language of assessment: German or English						
08-MAM-122-m01										
	ECTS	5	Duratio		1 semester	Method of grading	_	Modul level	undergraduate	
	Courses			 This module has 2 components; information on courses listed separately for each component. o8-MAM-1-122: V (no information on language and number of weekly contact hours available) o8-MAM-2-122: P (no information on language and number of weekly contact hours available) 						
	Method of assessment			This module has the following 2 assessment components. Unless stated otherwise, students must pass all of these assessment components to pass the module as a whole						
	 Assessment component to module component o8-MAM-1-122: Moderne Bio-Analytik 3 ECTS credits, method of grading: numerical grade a) 1-3 written examinations (1 written examination: approx. 90 minutes, 2 written examinations: approx. 60 or 9 minutes each, 3 written examinations: approx. 60 minutes each) or b) oral examination of on candidate each (approx 20 minutes) or c) oral examination in groups (groups of two, approx. 30 minutes). Language of assessment: German or English Assessment component to module component o8-MAM-2-122: Praktikum zu Moderne Bio-Analytik 2 ECTS credits, method of grading: (not) successfully completed Vortestate (je approx. 15 minutes) and logs (je approx. 5 pages) Assessment offered once a year, summer semester. Language of assessment: German or English 								n of on candidate each (approx.	

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