



## **Annex SFB**

# Studienfachbeschreibung (subject description, SFB) for the subject Technology of Functional Materials as a Master's with 1 major with the degree "Master of Science" (120 ECTS credits)

Responsible: Faculty of Chemistry and Pharmacy Examination regulations version: 2009 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:

#### ASP02007

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

### 21-Jul-2009 (2009-43) except for mandatory electives added in Fast Track procedure at a later time

### 05-Oct-2009 (2009-84)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS	D	uration	(in semesters)	Method of grading	Module level					
	Courses		To be spe	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	ssessmer	nt								
	Only after su completion of		if applica	ble							
	Other prereq	uisites	if applica	if applicable							
	Participants on of places		ati- if applica	ble							
	Additional in	formatio	n if applica	if applicable							
	Referred to in	n LPO I	if applica	ble (examination r	regulations for teaching	g-degree programmes)					

Compulsory Course	es (35 EC	CTS cree	dits)								
11-E5T-092-m01	Mecha	nical ar	nd Therma	al Mate	rial Properties						
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	-		V + Ü	(no information on	SWS (weekly contact	hours) and course lang	guage available)	1.5		
	Metho	d of ass	essment	prox.	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/se- ninar presentation (approx. 30 minutes)						
	other p	prerequi	isites	to qu cours obtai for as	Admission prerequisite to assessment: successful completion of approx. 50% of exercises. 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 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- quent semester. For assessment at a later date, students will have to obtain the qualification for admission to assessment an- w.						
11-MOE-092-m01	Opto-electronic Materi			al Prop	erties						
	ECTS 5 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses			V + Ü	(no information on	SWS (weekly contact	hours) and course lang	guage available)			
	Method of assessment			prox.	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (ap- prox. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes)						
	other prerequisites			to qu cours obtai for as	alify for admission e. Registration for t ned the qualificatio sessment into effe	to assessment. The le the course will be con on for admission to as ct. Students who mee	ecturer will inform stude sidered a declaration o sessment over the cou t all prerequisites will b	ents about the respective of will to seek admission rse of the semester, the be admitted to assessme	Certain prerequisites must be met e details at the beginning of the to assessment. If students have lecturer will put their registration ent in the current or in the subse- n for admission to assessment an-		
08-PCM4-092-m01	Nanos	cale Ma	terials								
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses			V + Ü	(no information on	SWS (weekly contact	hours) and course lang	guage available)			
	Metho	d of ass	essment	a) wri	tten examination (a	approx. 90 minutes) o	r b) oral examination (	approx. 20 minutes) or c	) talk (approx. 40 minutes)		
08-SAM-092-m01	Techno	ology of	Sensor a	nd Act	or Materials includ	ing Smart Fluids					
	ECTS	5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Course	es		V + P	no information on	SWS (weekly contact	hours) and course lang	guage available)	•		
	Method of assessment			writte	n examination (90	minutes)					

08-PR-092-m01	Resear	ch proje	ect									
	ECTS	10	Duratio	n	1 semester	Method of grading	g numerical grade	Modul level	graduate			
	Course	S		R (no	R (no information on SWS (weekly contact hours) and course language available)							
	Method of assessment				report (approx. 10 to 15 pages) Language of assessment: German or English							
08-MKoll-TF-092-	Master	Thesis	' Colloqui	um	1							
m01	ECTS 5 Duratio			n	1 semester	Method of grading	g numerical grade	Modul level	graduate			
	Course	S		K (no	information on SW	/S (weekly contact ho	ours) and course langua	ge available)				
	Metho	d of ass	essment	final	colloquium (approz	x. 90 minutes)						
<b>Compulsory Electi</b>	ves (6o E	ECTS cre	dits)									
General Compulso	ry Electiv	ves (30	ECTS crea	lits)								
11-A3-072-m01	Labora	tory and	d Measur	ement	Technology							
	ECTS	6	Duratio	n	1 semester	Method of grading	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	writte	en examination (ap	prox. 120 minutes)						
	other prerequisites			to qu cours obtai for as	alify for admission e. Registration for ned the qualification sessment into effe	to assessment. The l the course will be co on for admission to a ect. Students who me	ecturer will inform stud nsidered a declaration of ssessment over the cou et all prerequisites will	ents about the respectiv of will to seek admission rse of the semester, the be admitted to assessm	Certain prerequisites must be met e details at the beginning of the to assessment. If students have lecturer will put their registration ent in the current or in the subse- n for admission to assessment an-			
		oants ar of place		Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.								
11-NM-WP-072-	Nanom	atrix in	sulation s	system	s and photovoltai	:s						
m01	ECTS	6	Duratio		1 semester		g numerical grade	Modul level	undergraduate			
	Course	S		V + R	(no information or	SWS (weekly contac	t hours) and course lang	guage available)				
	Method of assessment						or b) talk (approx. 30 m tes) or d) project report		ation of one candidate each or			
11-NM-HM-072-	Nanom	atrix se	micondu	ctor ma	aterials							
m01	ECTS	6	Duratio	n	1 semester	Method of grading	g numerical grade	Modul level	undergraduate			
	Course	S		V + R	(no information or	SWS (weekly contac	t hours) and course lang	guage available)				
	Metho	d of ass	essment				or b) talk (approx. 30 m tes) or d) project report		ation of one candidate each or			

m01	Manomatria	x Semicondı	ictor Pr	ocessing						
	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V + R	no information on	SWS (weekly contact	hours) and course lan	guage available)			
	Method of	assessment				r b) talk (approx. 30 m es) or d) project report		ination of one candidate each or		
1-NM-BV-072-	Nanomatrix Biophysical Analyzing Systems and Processes									
n01	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V + R	/ + R (no information on SWS (weekly contact hours) and course language available)						
	Method of	assessment		) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or ral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages)						
o-M-ODE-082-	Ordinary D	ifferential E	uation	5	· · · · -					
n01	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V + Ü	· Ü (no information on SWS (weekly contact hours) and course language available)						
	Method of	assessment	exam	itten examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral amination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) nguage of assessment: German, English if agreed upon with the examiner						
08-FS5-092-m01	other prere	quisites	on to the le sessn	ive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek admis on to assessment. If students have obtained the qualification for admission to assessment over the course of the semester he lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted to as essment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the qua- ication for admission to assessment anew. / - Characterization Techniques and Applications						
	<u>ci</u> · · · ·									
08-FS5-092-m01			ogy - Ch		hniques and Applicat					
08-FS5-092-m01	ECTS 5	lanotechnol Duratic	ogy - Ch on	1 semester	hniques and Applicat Method of grading	numerical grade	Modul level			
08-FS5-092-m01			ogy - Ch on This n •	1 semester nodule comprises 08-FS5-1-092: V (	hniques and Applicat Method of grading module components no information on SW	numerical grade . Information on cours 6 (weekly contact hour		ately for each module componen e available)		
08-FS5-092-m01	ECTS 5 Courses	Duratio	ogy - Ch on This n • Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod	hniques and Applicat Method of grading module components no information on SW (no information on SW ule comprises the ass	numerical grade . Information on cours 5 (weekly contact hour S (weekly contact hou essments in the indivi	ses will be listed separa rs) and course languag rs) and course languag dual module compone	ately for each module componen e available)		
08-FS5-092-m01	ECTS 5 Courses	Duratio	Asses stated Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod d otherwise, succes sment in module of 2 ECTS, Method of oral examination sment in module of 3 ECTS, Method of	hniques and Applicat Method of grading module components no information on SW ule comprises the ass ssful completion of th component o8-FS5-1-co of grading: numerical g (approx. 15 minutes) component o8-FS5-2-co f grading: numerical g	numerical grade Information on cours (weekly contact hours (weekly contact hours (weekl	ses will be listed separa rs) and course languag rs) and course languag dual module compone successful completion 2: Thin Film Processin	ately for each module componen e available) e available) nts as specified below. Unless of all individual assessments.		
08-FS5-092-m01	ECTS 5 Courses Method of	Duratic	Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod d otherwise, succes sment in module of 2 ECTS, Method of oral examination sment in module of 3 ECTS, Method of	hniques and Applicat Method of grading module components no information on SW (no information on SW ule comprises the ass ssful completion of th component o8-FS5-1-co of grading: numerical g (approx. 15 minutes) component o8-FS5-2-co of grading: numerical g (approx. 20 minutes)	numerical grade Information on cours (weekly contact hours (weekly contact hours (weekl	ses will be listed separa rs) and course languag rs) and course languag dual module compone successful completion 2: Thin Film Processin	ately for each module componen e available) e available) nts as specified below. Unless of all individual assessments. g		
	ECTS 5 Courses Method of	Duratic	Asses stated Asses stated Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod d otherwise, succes sment in module of 2 ECTS, Method of oral examination 3 ECTS, Method of oral examination	hniques and Applicat Method of grading module components no information on SW (no information on SW ule comprises the ass ssful completion of th component o8-FS5-1-co of grading: numerical g (approx. 15 minutes) component o8-FS5-2-co of grading: numerical g (approx. 20 minutes)	numerical grade Information on cours (weekly contact hours (weekly contact hours (weekly contact hours e module will require s <b>92:</b> Sol-Gel Chemistry rade <b>92:</b> Application Orien rade	ses will be listed separa rs) and course languag rs) and course languag dual module compone successful completion 2: Thin Film Processin	ately for each module componen e available) e available) nts as specified below. Unless of all individual assessments. g		
	ECTS 5 Courses Method of	Duratic assessment	Asses stated Asses stated Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod d otherwise, succes sment in module of 2 ECTS, Method of oral examination 3 ECTS, Method of oral examination Vapour Deposition 1 semester	hniques and Applicat Method of grading module components no information on SW ule comprises the ass ssful completion of th component o8-FS5-1-co f grading: numerical g (approx. 15 minutes) component o8-FS5-2-co f grading: numerical g (approx. 20 minutes) Method of grading	numerical grade Information on cours (weekly contact hours (weekly contact hours (weekly contact hours e module will require s <b>92:</b> Sol-Gel Chemistry rade <b>92:</b> Application Orien rade	ses will be listed separa rs) and course languag rs) and course languag dual module compone successful completion 2: Thin Film Processin ted Charakterization of Modul level	ately for each module componen e available) re available) nts as specified below. Unless of all individual assessments. g f Colloidal (Molecular) Systems		
	ECTS 5 Courses Method of ECTS 5 Courses	Duratic assessment chnology ba	Asses Asses stated Asses stated Asses	1 semester nodule comprises 08-FS5-1-092: V ( 08-FS5-2-092: V ( sment in this mod d otherwise, succes sment in module of 2 ECTS, Method of oral examination 3 ECTS, Method of oral examination Vapour Deposition 1 semester	hniques and Applicat Method of grading module components no information on SW (no information on SW ule comprises the ass ssful completion of th component o8-FS5-1-co of grading: numerical g (approx. 15 minutes) component o8-FS5-2-co f grading: numerical g (approx. 20 minutes) Method of grading n on SWS (weekly cont	numerical grade Information on cours (weekly contact hours (weekly contact hours (weekly contact hours e module will require s <b>92:</b> Sol-Gel Chemistry rade <b>92:</b> Application Orien rade	ses will be listed separa rs) and course languag rs) and course languag dual module compone successful completion 2: Thin Film Processin ted Charakterization of Modul level	ately for each module componen e available) re available) nts as specified below. Unless of all individual assessments. g f Colloidal (Molecular) Systems		

08-PS3-092-m01										
	ECTS 5	Durati	on	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses		V (no	information on SWS	S (weekly contact hou	urs) and course language avai	lable)			
	Method of	fassessmen		1 written examination (approx. 90 minutes) or 2 written examinations (approx. 60 or 90 minutes each) or 3 written examinati- ons (approx. 60 minutes each) or oral examination of one candidate each (approx. 20 minutes) or oral examination in groups						
				approx. 60 minutes ps of 2, approx. 30 I		ation of one candidate each (a	approx. 20 minut	es) or oral examination in groups		
08-I0C4-092-m01	Organic (	homistry for		ts of engineering	ininutes)					
08-1004-092-11101	ECTS 5	Durati		1 semester	Method of grading	numorical grado	Modul level	undergraduate		
	Courses	Durati				hours) and course language a		undergraduate		
		faccoccmon				nouis) and course language (	avallable)			
	Method of assessment				-					
02-SP141-002-m01		other prerequisites       Registration for assessment: Yes, as specified.         Basic principles of cell biology and tissue regeneration								
	ECTS 5	Durati		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses	Durati				hours) and course language a		Siddute		
		fassessmen		en examination						
03-SP1A2-092-	Basics of tissue engineering and quality management									
m01	ECTS 5	Durati		1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses		S + Ü	(no information on	SWS (weekly contact	hours) and course language	available)			
	Method of	fassessmen	writte	en examination (90 i	minutes)					
03-SP2A1-092-	Materials	Is used for surgical implants								
m01	ECTS 5	Durati	on	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses		V + P	(no information on	SWS (weekly contact	hours) and course language a	available)			
				-		prox. 5 pages), weighted 3:1				
03-SP2A2-092-	Materials	for biosenso	rs, tiss	ue engineering and	tissue regeneration					
m01	ECTS 5	Durati		1 semester	Method of grading		Modul level	graduate		
	Courses				-	hours) and course language a	available)			
	Method of	fassessmen	writte	en examination (60 l	minutes) and log (app	prox. 5 pages), weighted 3:1				
03-SP3A1-092-				for therapeutic com	·					
m01	ECTS 5	Durati		1 semester	Method of grading		Modul level	graduate		
	Courses			-		hours) and course language	available)			
				en examination (90						
03-SP3A2-092-	Microsystems for biological and medical applications									
m01	ECTS 5	Durati	on	1 semester	Method of grading	numerical grade	Modul level	graduate		
	Courses		-			hours) and course language a	available)			
	Method of	fassessmen	writte	en examination (60	minutes) and log (app	prox. 5 pages), weighted 3:1				

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11-0HL-092-m01	Organic Semiconductor								
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		V + Ü	(no information on S	SWS (weekly contact	hours) and course language a	available)		
	Method of asse	essment	prox.	a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes)					
	other prerequis		to qua cours obtain for as quent ew.	alify for admission to e. Registration for th ned the qualification sessment into effect semester. For asse	o assessment. The le le course will be cons l for admission to as t. Students who mee ssment at a later date	cturer will inform students ab sidered a declaration of will to sessment over the course of t t all prerequisites will be adm	out the respectiv seek admission he semester, the itted to assessme	Certain prerequisites must be met e details at the beginning of the to assessment. If students have lecturer will put their registration ent in the current or in the subse- n for admission to assessment an-	
08-PW1-092-m01		erials 1: T	echno	logy of Modifying P			<u>.</u>		
	ECTS 5	Duratio		1 semester	Method of grading	)	Modul level	graduate	
	Courses		V + P	(no information on S	SWS (weekly contact	hours) and course language a	available)		
				n examination (90 n	,				
08-PW2-092-m01	Polymeric Mat	erials 2: 1	<b>Fechno</b>	logy of Modifying F	illers for Polymers				
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		V + P	(no information on S	SWS (weekly contact	hours) and course language a	available)		
	Method of asse	essment	writte	written examination (90 minutes)					
08-EEW-092-m01	Electrochemica	al Energy	Storag	Storage and Conversion					
	ECTS 5	Duratio		1 semester	Method of grading	)	Modul level	graduate	
	Courses				. ,	act hours) and course langua	ge available)		
			nent written examination (90 minutes) and lab report (approx. 5 pages)						
08-MW-092-m01		Propertie	s of Mo	odern Materials: Exp	eriments and Simula				
	ECTS 5	Duratio		1 semester	Method of grading	¥	Modul level	graduate	
	Courses	-			SWS (weekly contact	hours) and course language a	available)		
				approx. 45 minutes)					
08-0F-092-m01	Organic function	onal mate	erials						
	ECTS 5	Duratio		1 semester	Method of grading	)	Modul level	graduate	
	Courses		V (no	information on SWS	(weekly contact hou	rs) and course language avai	lable)		
	Method of asse	essment	writte	n examination (90 n	ninutes)				
10-I-DB2-092-m01	Data bases 2								
	ECTS 5	Duratio		1 semester	Method of grading	)	Modul level	undergraduate	
	Courses		V + Ü	(no information on S	SWS (weekly contact	hours) and course language a	available)		
	Method of asse	essment		n examination (50 n nutes)	ninutes) or oral exam	ination (one candidate each:	15 minutes, grou	ps of 2: 20 minutes, groups of 3:	
Master's with 1 major Tec	hnology of Functional	Materials (20	09)			JMU Würzburg • generated 26-Aug-	2024 • exam. reg. data r	record 88 177 - - H 2009 page 7 / 13	

ELoar	ning								
		1							
ECTS	5	Duration		l		v		undergraduate	
Course	es		V + Ü	(no information on	SWS (weekly contact	hours) and course language av	ailable)		
Metho	d of asse	essment	writte	n examination (50 r	minutes) or oral exam	ination (one candidate each: 1	; minutes, grou	ps of 2: 20 minutes, groups of 3:	
			25 mi	nutes)					
Inform	ation Re	trieval							
ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
Course	es		V + Ü	(no information on	SWS (weekly contact	hours) and course language av	ailable)		
Metho	d of asse	essment	a) wri	tten examination (a	pprox. 50 minutes) o	r b) oral examination (one cand	idate each: app	prox. 15 minutes, groups of 2: ap-	
			prox.	20 minutes, groups	of 3: approx. 25 min	utes)			
Materi	als for h	igh volta	ge ins	ulation and high vo	ltage systems				
ECTS	5	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	unknown	
Course	es	•	V + Ü	+ P (no information	on SWS (weekly cont	tact hours) and course language	e available)		
Metho	d of asse	essment	written examination (approx. 90 minutes)						
Model	ling and	simulatio	on for t	echnology systems	5				
ECTS	5	Duration	ı	1 semester	Method of grading	numerical grade	Modul level	unknown	
Course	es	,	V + Ü	(no information on	SWS (weekly contact	hours) and course language av	ailable)		
Metho	d of asse	essment	written examination (approx. 90 minutes) or modelling assignment in the form of a project (expenditure of time for modell					expenditure of time for modelling	
			assig						
Introd	uction to	Function	al Ana	lysis					
ECTS	5	Duratio	ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
Course	es		V + Ü	(no information on	SWS (weekly contact	hours) and course language av	ailable)		
Metho	d of asse	essment	writte	n examination (app	prox. 90 minutes); if a	nnounced by the lecturer, the w	ritten examinat	tion can be replaced by an oral	
							on in groups (g	roups of 2, approx. 30 minutes)	
			Langu	age of assessment	: German, English if a	greed upon with the examiner			
other p	orerequis	sites							
Referre	ed to in L	.PO I							
	ECTS Course Metho ECTS Course Metho Model ECTS Course Metho Introde ECTS Course Metho Other p	OursesMethod of asseInformation ReECTS5CoursesMethod of asseMethod of asseIntroduction toECTS5CoursesMethod of asseOther prerequiseother prerequise	ECTS5DurationCoursesMethod of assessmentInformation RetrievalECTS5DurationCoursesMethod of assessmentMaterials for high voltageECTS5DurationCoursesMethod of assessmentMethod of assessmentModelling and simulationECTS5DurationCoursesMethod of assessmentModelling and simulationECTSECTS5DurationCoursesMethod of assessmentIntroduction to FunctionECTSECTS5Duration	ECTS5DurationCoursesV + ÜMethod of assessmentwritte 25 miInformation RetrievalECTS5DurationCoursesV + ÜMethod of assessmenta) wri prox.Materials for high voltage insu ECTS5DurationCoursesV + ÜMethod of assessmentwritte modelling and simulation for the ECTSV + ÜMethod of assessmentwritte assigModelling and simulation for the coursesV + ÜMethod of assessmentWritte assigIntroduction to Functional Ana ECTS5DurationCoursesV + ÜMethod of assessmentwritte assigIntroduction to Functional Ana ECTS5DurationcoursesV + ÜMethod of assessmentwritte assigIntroduction to Functional Ana ECTS5DurationcoursesV + ÜMethod of assessmentwritte exam Languother prerequisitesCerta tive d on to the le sessmentother prerequisitesCerta tive d on to the le sessment	ECTS5Duration1 semesterCoursesV + Ü (no information on written examination (5 or 25 minutes)Information RetrievalECTS5Duration1 semesterCoursesV + Ü (no information on Method of assessment a) written examination (ap prox. 20 minutes, groupsMaterialsfor high voltage insulation and high vo ECTS5Duration1 semester1 semester1 semesterCoursesV + Ü + P (no information on non Method of assessment for assessment1 semesterCoursesV + Ü + P (no information (app modelling and simulation for technology systems eCourses1 semesterECTS5Duration1 semesterCoursesV + Ü (no information on modelling and simulation for technology systems assignment to be specified)Introduction to Functional Analysis1 semesterECTS5Duration1 semesterCoursesV + Ü (no information on motel assessment assignment to be specified)Introduction to Functional Analysis1 semesterECTS5Duration1 semesterCoursesV + Ü (no information on motel assessment assignment to be specified)Introduction to Functional Analysis1 semesterCoursesV + Ü (no information on con formation on mation of one cand Language of assessment tive details at the beginn on to assessment. If study the lecturer will put their sessment in the current of fication for admission to	ECTS       5       Duration       1 semester       Method of grading         Courses       V + Ü (no information on SWS (weekly contact         Method of assessment       written examination (50 minutes) or oral exam         25 minutes)       Information Retrieval         ECTS       5       Duration       1 semester         Method of assessment       Nethod of grading         Courses       V + Ü (no information on SWS (weekly contact         Method of assessment       a) written examination (approx. 50 minutes) o         Materials       for high voltage insulation and high voltage systems         ECTS       5       Duration       1 semester         Method of assessment       written examination (approx. 90 minutes)         Method of assessment       written examination (approx. 90 minutes) or massignment to be specified at the beginning or massignment to be specified at the beginning or massignment to be specified at the beginning or function of assessment         Method of assessment       Written examination (approx. 90 minutes); if a examination of one candidate each (approx. 2 Language of assessment: German, English if a other prerequisites <tr< td=""><td>ECTS       5       Duration       1 semester       Method of grading       numerical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       written examination (50 minutes) or oral examination (one candidate each: 19 25 minutes)         Information Retrieval       1 semester       Method of grading       numerical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       a) written examination (approx. 50 minutes) or b) oral examination (one cand prox. 20 minutes, groups of 3: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester         Method of assessment       written examination (approx. 50 minutes) or b) oral examination (one cand prox. 20 minutes, groups of 3: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade         Courses       V + Ü + P (no information on SWS (weekly contact hours) and course language av         Method of assessment       written examination (approx. 90 minutes)       merical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       written</td><td>ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)         Method of assessment       written examination (50 minutes) or oral examination (one candidate each: 15 minutes, grou 25 minutes)         Information Retrieval       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)       Modul level         Method of assessment       a) written examination (approx. 50 minutes) or b) oral examination (one candidate each: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü + P (no information on SWS (weekly contact hours) and course language available)       Modul level         Modelling and simulation for technology systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)       Method of assessment       Written examination (approx. 90 minutes)       Modul l</td></tr<>	ECTS       5       Duration       1 semester       Method of grading       numerical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       written examination (50 minutes) or oral examination (one candidate each: 19 25 minutes)         Information Retrieval       1 semester       Method of grading       numerical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       a) written examination (approx. 50 minutes) or b) oral examination (one cand prox. 20 minutes, groups of 3: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester         Method of assessment       written examination (approx. 50 minutes) or b) oral examination (one cand prox. 20 minutes, groups of 3: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade         Courses       V + Ü + P (no information on SWS (weekly contact hours) and course language av         Method of assessment       written examination (approx. 90 minutes)       merical grade         Courses       V + Ü (no information on SWS (weekly contact hours) and course language av         Method of assessment       written	ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)         Method of assessment       written examination (50 minutes) or oral examination (one candidate each: 15 minutes, grou 25 minutes)         Information Retrieval       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)       Modul level         Method of assessment       a) written examination (approx. 50 minutes) or b) oral examination (one candidate each: approx. 25 minutes)         Materials for high voltage insulation and high voltage systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü + P (no information on SWS (weekly contact hours) and course language available)       Modul level         Modelling and simulation for technology systems       ECTS       5       Duration       1 semester       Method of grading       numerical grade       Modul level         Courses       V + Ü (no information on SWS (weekly contact hours) and course language available)       Method of assessment       Written examination (approx. 90 minutes)       Modul l	

10-M-COMg-082-	Compu	tationa	l Mathem	atics,	advanced	,						
m01	ECTS	4	Duratio	n	1 semester	Method of grading	g (not) successfully complete	ed Modul level	undergraduate			
	Course	S	_	Ü + V	Ü + V (no information on SWS (weekly contact hours) and course language available)							
	Methoc	l of ass	essment	the co Asses	project in the form of programming exercises (type and expenditure of time to be specified by the lecturer at the beginning of the course) Assessment offered: once a year, summer semester Language of assessment: German, English if agreed upon with the examiner							
	other p	rerequi	sites		ssion prerequisite cused absence).	e to assessment: regu	ar attendance of exercises (a	tendance monito	red, a maximum of one incident of			
	Referre	d to in l	PO I	§73 (	(1) 5. Mathematik	Angewandte Mathema	atik					
10-M-NM1-082-	Numeri	cal Mat	hematics	1								
m01	ECTS	8	Duratio		1 semester		g numerical grade	Modul level	undergraduate			
	Courses			V + Ü	(no information of	on SWS (weekly contac	t hours) and course language	available)				
	Method of assessment			exam	ritten examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replaced by an oral camination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, approx. 30 minutes) anguage of assessment: German, English if agreed upon with the examiner							
	other prerequisites			tive d on to the le sessr fication	Certain prerequisites must be met to qualify for admission to assessment. The lecturer will inform students about the ive details at the beginning of the course. Registration for the course will be considered a declaration of will to seek a on to assessment. If students have obtained the qualification for admission to assessment over the course of the sem he lecturer will put their registration for assessment into effect. Students who meet all prerequisites will be admitted sessment in the current or in the subsequent semester. For assessment at a later date, students will have to obtain the ication for admission to assessment anew.							
	Referre		-		§ 73 (1) 5. Mathematik Angewandte Mathematik							
10-M-NM2-082-			hematics									
m01		5	Duratio		1 semester		g numerical grade	Modul level	undergraduate			
	Course					· · ·	t hours) and course language	-				
	Method of assessment			exam	written examination (approx. 90 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			tive d on to the le sessr fication	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.							
	Referre	d to in l	PO I	§73 (	(1) 5. Mathematik	Angewandte Mathema	atik					

10-M-PRG-082-	Program	ming c	ourse fo	r stude	ents of Mathematic	s and other subjects						
m01	ECTS 3	;	Duratio	า	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			P (no	information on SW	S (weekly contact hou	irs) and course language availa	ble)				
	Method o	of asse	ssment				as specified at the beginning o	f the course)				
							greed upon with the examiner					
	other pre	requis	ites	abser	nission prerequisite to assessment: regular attendance (attendance monitored, a maximum of one incident of unexcused sence).							
	Referred	to in L	POI	§73 (	§ 73 (1) 5. Mathematik Angewandte Mathematik							
10-M-COM-082-	Compute	rorien	ted Math	ematio	cs							
m01	ECTS 3	;	Duratio	1	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses			V + Ü	(no information on	SWS (weekly contact	hours) and course language av	ailable)				
	Method o	of asse	ssment				as specified at the beginning o	f the course)				
						e a year, summer sen						
		<u> </u>	••		_	-	greed upon with the examiner					
	other pre				nission prerequisite to assessment: regular attendance of exercises (attendance monitored, a maximum of one incident of excused absence).							
	Referred	d to in LPO I § 73 (1) 5. Mathematik Angewandte Mathematik										
08-PCM5-102-m01	Physical	chemi	stry of si	ıpramo	olecular assemblie	s						
	ECTS 5		Duratio	1	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses					. ,	hours) and course language av	-				
	Method o	ofasse	ssment		written examination (90 minutes) and/or oral examination of one candidate each (20 minutes) and/or talk (30 minutes) Language of assessment: German or English							
08-NT-122-m01	Chemical	lly and	bio-insp	ired N	anotechnology for	Material Synthesis						
	ECTS 5		Duratio	า	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses								ely for each module component.			
							(weekly contact hours) and cou					
		<u> </u>	<u> </u>				(weekly contact hours) and cou					
	Method o	of asse	ssment				essments in the individual moc e module will require successfu					
						f grading: numerical g	2: Sol-Gel Chemistry 1: Fundam	ientals				
				•				one candidate e	each (approx, 20 minutes) or c)			
				• a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)								
							<b>22:</b> From Biomineralisation to b	iologically inspi	ired Materials Synthesis			
						f grading: numerical g						
				•			utes) or b) oral examination of ( , approx. 30 minutes)	one candidate e	each (approx. 20 minutes) or c)			

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Focus Area (30 ECT	S credits)										
Focus Topic A: Bio-compatible materials (30 ECTS credits) 03-SP1A1-092-m01 Basic principles of cell biology and tissue regeneration											
03-SP1A1-092-m01	Basic principle	es of cell l	biology	iology and tissue regeneration							
	ECTS 5	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	graduate			
	Courses		V + Ü	Ü (no information on SWS (weekly contact hours) and course language available)							
	Method of ass	essment	writte	written examination							
03-SP1A2-092-	<b>Basics of tissu</b>	e engine	ering a	ring and quality management							
m01	ECTS 5	Duratio		1 semester	Method of grading		Modul level	graduate			
	Courses		S + Ü	(no information on S	SWS (weekly contact	hours) and course language av	ailable)				
	Method of ass	essment	writte	n examination (90 n	ninutes)						
03-SP2A1-092-	Materials used			plants							
m01	ECTS 5	Duratio		1 semester	Method of grading		Modul level	graduate			
	Courses					hours) and course language av	ailable)				
						prox. 5 pages), weighted 3:1					
03-SP2A2-092-		oiosensor	s, tissu	e engineering and t							
m01	ECTS 5	Duratio		1 semester	Method of grading		Modul level	graduate			
	Courses			-		hours) and course language av	ailable)				
		_	sment written examination (60 minutes) and log (approx. 5 pages), weighted 3:1								
03-SP3A1-092-				for therapeutic comp		r					
m01	ECTS 5	Duratio		1 semester	Method of grading		Modul level	graduate			
	Courses			<u>.</u>	<u> </u>	hours) and course language av	ailable)				
				n examination (90 n	-						
03-SP3A2-092-		-		nd medical applicati	1	1					
m01	ECTS 5	Duratio		1 semester	Method of grading	Ÿ	Modul level	graduate			
	Courses			-	. ,	hours) and course language av	ailable)				
				· · ·	ninutes) and log (app	prox. 5 pages), weighted 3:1					
Focus Topic B: Tech	inical Materials	(30 ECTS	credit	s)							
11-NM-WP-072-	Nanomatrix in	sulation s	system	s and photovoltaics							
m01	ECTS 6	Duratio	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses					hours) and course language av					
	Method of ass	essment				r b) talk (approx. 30 minutes) o es) or d) project report (approx.		nation of one candidate each or			

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11-NM-HM-072-	Nanomatrix semiconductor materials									
m01	ECTS 6 Duration			n	1 semester	Method of grading	numerical grade	Modul level	undergraduate	
	Courses			V + R	no information on S	SWS (weekly contact	hours) and course langu	age available)		
	Method	ofasse	essment		a) written examination (approx. 90 minutes) or b) talk (approx. 30 minutes) or c) oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or d) project report (approx. 10 pages)					
11-0HL-092-m01	Organic	Organic Semiconductor								
		5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		1	V + Ü	no information on S		hours) and course langu		10	
	Method of assessment			a) written examination (approx. 90 minutes) or b) oral examination of one candidate each or oral examination in groups (approx. 30 minutes per candidate, for modules with less than 4 ECTS credits approx. 20 minutes) or c) project report (approx. 10 pages, time to complete: 1 to 4 weeks) or d) presentation/seminar presentation (approx. 30 minutes)						
	other pr	erequis	sites	to qua cours obtain for as	alify for admission to e. Registration for th ned the qualificatior sessment into effect	o assessment. The le ne course will be com n for admission to as t. Students who mee	cturer will inform studen sidered a declaration of v sessment over the course t all prerequisites will be	ts about the respectiv will to seek admission e of the semester, the admitted to assessme	Certain prerequisites must be met e details at the beginning of the to assessment. If students have lecturer will put their registration ent in the current or in the subse- n for admission to assessment an-	
08-PW1-092-m01	Polymer	ric Mate	erials 1: T	echno	logy of Modifying Po	olymers				
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses			V + P	(no information on S	SWS (weekly contact	hours) and course langu	age available)	•	
	Method	ofasse	essment	written examination (90 minutes)						
08-PW2-092-m01	Polymeric Materials 2: Technology of Modifying Fillers for Polymers									
	ECTS 5 Duratio			n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		,	V + P	, (no information on S	SWS (weekly contact	hours) and course langu	age available)		
	Method of assessment			writte	n examination (90 n	ninutes)				
08-EEW-092-m01	Electrochemical Energy Storage and Conversion									
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		,	V + P	+ E (no information of	on SWS (weekly cont	act hours) and course la	nguage available)	•	
	Method	ofasse	essment	writte	n examination (90 n	ninutes) and lab repo	ort (approx. 5 pages)			
08-MW-092-m01	Structure and Properties of Modern Materials: Experiments and Simulations									
	ECTS	5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		,	V + S	no information on S	SWS (weekly contact	hours) and course langu	age available)	•	
	Method of assessment talk (approx. 45 minutes)									
08-0F-092-m01	Organic functional materials									
		5	Duration		1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses		,	V (no			irs) and course language	available)		
	Method of assessment written examination (90 minutes)									
Master's with 1 major Te					~	· · · · · · · · · · · · · · · · · · ·	IMIL Würzburg • generated a	e6-Aug-2024 • exam. reg. data r	ecord 88 177 - - H 2009 page 12 / 13	

Thesis (25 ECTS credits)									
08-MT-TF-092-m01	01 Master-Thesis								
	ECTS 25 Duration		1	1 semester	Method of grading	numerical grade	Modul level	graduate	
	Courses				urses assigned				
	Method of assessment written thesis								
				Language of assessment: German, English					
	other p	rerequis	ites	Registration for assessment on a continuous basis as agreed upon with supervisor.					

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