

## **Annex SFB**

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

Responsible: Institute of Mathematics

Examination regulations version: 2008

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

= lecture

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

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

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

= list of modules

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

Conventions for the modules in this SFB:

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

ditable for bonus.

Information on assessment procedures:

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

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

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

individual assessments.

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

## ASP02007

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

09-Dec-2008 (2008-32)

15-Mar-2010 (2010-11)

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

Every module will be described using the following form:

Abbreviation	Module title										
	ECTS		Duration	(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	ssessme	ent								
	Only after su completion o		l if applica	if applicable							
	Other prereq	uisites	if applica	if applicable							
	Participants and allocation of places		ocati- if applica	if applicable							
	Additional information		on if applica	if applicable							
	Referred to in	n LPO I	if applica	if applicable (examination regulations for teaching-degree programmes)							

Compulsory Courses (91 ECTS credits)												
10-M-PPM-082-	Propaedeutics of Mathematics											
mo1	ECTS	Duration 1 semester Method of grading (not) successfully completed Modul level undergraduate										
	Course	Courses V + Ü (no information on SWS (weekly contact hours) and course language available)										
Method of assessment project assignments (type and expenditure of time to be specified by the lecturer at the beginning of the cases a seasy winter semester Language of assessment: German, English if agreed upon with the examiner												
	other p	rerequis	ites	Admis	sion prerequisite to	assessment: regula	r attendance of courses (as s	pecified at the be	ginning of the course).			

10-M-GEO-082-	Introd	uction to	Geometry	1							
mo1	ECTS	8	Duration	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	es	٦	This module has 2 components; information on courses listed separately for each component.  • 10-M-GEO-1-082: V + Ü (no information on language and number of weekly contact hours available)  • 10-M-GEO-2-082: V + Ü (no information on language and number of weekly contact hours available)							
	Metho	d of asse		This module has the following 2 assessment components. To pass the module as a whole students must pass one of the two assessment components.							
				<ul> <li>Assessment component to module component 10-M-GEO-1-082: Einführung in die Projektive Geometrie</li> <li>8 ECTS credits, method of grading: numerical grade</li> <li>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)</li> <li>Language of assessment: English, German if agreed upon with the examiner</li> <li>Other prerequisites: 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 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.</li> <li>Assessment component to module component 10-M-GEO-2-082: Einführung in die Differentialgeometrie</li> <li>8 ECTS credits, method of grading: numerical grade</li> <li>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)</li> <li>Language of assessment: English, German if agreed upon with the examiner</li> <li>Other prerequisites: 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 in</li></ul>							
	othern	rerequisi	ites F		ve to obtain the qualification for admission to a dditional prerequisites are listed in the section						
		ed to in LF		§ 73 (1) 4. Mathematik Geometrie							
		- to III EI	٠,	3 / J (1) 4. mathematik							

10-M-ZAL-082-m01	Number Theor	y and Algo	ebra								
	ECTS 13	Duration	1	2 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		•	10-M-ZAL-1-082: V 10-M-ZAL-2-082: V	/ + Ü (no information / + Ü (no informatior	ts. Information on cours on SWS (weekly contac on SWS (weekly conta SWS (weekly contact h	ct hours) and course la ct hours) and course la	nguage available)			
	Method 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.							
			Asses	4 ECTS, Method of written examination or all examination of 30 minutes) Language of assess Other prerequisite students about the adeclaration of wassessment over dents who meet a assessment at a lassment in module of 7 ECTS, Method of written examination or all examination of a minutes) Language of assess Other prerequisite students about the	f grading: (not) success (approx. 90 minuted of one candidate earns (see the seed of the seek admission the course of the seek admission (approxement 10-M-ZAL of grading: (not) success (approxement 90 minuted of one candidate earns (seek admission the candidate earns	essfully completed es); if announced by the ch (approx. 20 minutes) glish if agreed upon wit ites must be met to qual at the beginning of the n to assessment. If stu mester, the lecturer wi be admitted to assessi vill have to obtain the q -2-082: Introduction to essfully completed res); if announced by the ch (approx. 20 minutes) glish if agreed upon wit ites must be met to qual at the beginning of the	e lecturer, the written ex or an oral examination that the examiner lify for admission to asset e course. Registration of dents have obtained that the put their registration ment in the current or ualification for admission Algebra Introduction to the lecturer, the written ex or an oral examination that the examiner lify for admission to asset e course. Registration for	camination can be replaced by an in groups (groups of 2, approx. sessment. The lecturer will inform or the course will be considered			
			_	a declaration of w assessment over dents who meet a assessment at a la	vill to seek admissio the course of the se all prerequisites will ater date, students v	n to assessment. If stu mester, the lecturer wi be admitted to assessi vill have to obtain the q	dents have obtained the ll put their registration ment in the current or ualification for admiss	ne qualification for admission to for assessment into effect. Stu- in the subsequent semester. For ion to assessment anew.			
			Asses	2 ECTS, Method of oral examination of Language of asses Only after success	f grading: numerical of one candidate eac ssment: German, En sful completion of mo	ch (approx. 30 minutes) glish if agreed upon wit	h the examiner cessful completion of r	nodule component 10-M-ZAL-1 or			
! L	other prerequi	_		<del></del>		are listed in the sectio					
	Referred to in	LPO I	§ 73 (1) 2. Mathematik Lineare Algebra, Algebra und Elemente der Zahlentheorie								

10-M-NM1-082-	Numer	ical Mat	hematics	1							
mo1	ECTS	8	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Course	es		V + Ü	(no information on S						
	Metho	d of asso	essment	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	orerequi		tive do on to the le sessm	etails at the beginning assessment. If stude cturer will put their r	ng of the course. Reg ents have obtained the egistration for asses r in the subsequent s	istration for the course will be ne qualification for admission sment into effect. Students wh	considered a de to assessment o o meet all prere	form students about the respec- claration of will to seek admissi- ver the course of the semester, quisites will be admitted to as- nts will have to obtain the quali-		
	Referre	ed to in L	PO I	§ 73 (	ı) 5. Mathematik Ang	gewandte Mathemat	ik				

10-M-ANA-082-	Analysis												
mo1	ECTS	17	Duration	n	2 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course			•	This module comprises 3 module components. Information on courses will be listed separately for each module component.  10-M-ANA-1-082: V + Ü (no information on SWS (weekly contact hours) and course language available)  10-M-ANA-2-082: V + Ü (no information on SWS (weekly contact hours) and course language available)  10-M-ANA-P-082: M (no information on SWS (weekly contact hours) and course language available)								
	Method	d of asso	essment	stated <b>Asses</b>	d otherwise, successisment in module o	ssful completion of the component 10-M-ANA-	essments in the individual mo e module will require successf -1-082: Analysis 1 Analysis 1						
				<ul> <li>8 ECTS, Method of grading: (not) successfully completed</li> <li>a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)</li> <li>Language of assessment: German, English if agreed upon with the examiner</li> <li>Other prerequisites: Modules 10-M-VKM and 10-M-PPM are recommended.</li> <li>Assessment in module component 10-M-ANA-2-082: Analysis 2</li> <li>7 ECTS, Method of grading: (not) successfully completed</li> <li>a) written examination (approx. 90 minutes; usually chosen) or b) oral examination of one candidate each (approx. 20 minutes) or c) oral examination in groups (groups of 2, approx. 30 minutes)</li> <li>Language of assessment: German, English if agreed upon with the examiner</li> <li>Other prerequisites: Modules 10-M-VKM and 10-M-PPM are recommended; in addition, module component 10-M-ANA-1 is recommended for module component 10-M-ANA-2.</li> </ul>									
		<ul> <li>Assessment in module component 10-M-ANA</li> <li>2 ECTS, Method of grading: numerical</li> <li>oral examination of one candidate eac</li> <li>Language of assessment: German, Eng</li> <li>Only after successful completion of mo 10-M-ANA-1, 10-M-ANL-1, 10-M-ANA-2, P.</li> </ul>			grade n (approx. 30 minutes) lish if agreed upon with the ex dule components: Successful co	aminer ompletion of any							
	other p	rerequi	sites	By wa	y of exception, add	ditional prerequisites	are listed in the section on ass	sessments.					
	Referre	d to in L	PO I	§ 73 (1) 1. Mathematik Analysis									

10-M-LNA-082-	Linear Algebra												
mo1	ECTS	14	Duratio	n	2 semester	Method of grading	numerical grade	Modul level	undergraduate				
	Course			•	10-M-LNA-1-082: 10-M-LNA-2-082: 10-M-LNA-P-082:	: V + Ü (no information : V + Ü (no information : M (no information on	n on SWS (weekly conta n on SWS (weekly cont n SWS (weekly contact	act hours) and course lan act hours) and course lan hours) and course langua	nguage available) age available)				
	Method of assessment								ts as specified below. Unless f all individual assessments.				
				<ul> <li>Assessment in module component 10-M-LNA-1-082: Linear Algebra 1 Linear Algebra 1</li> <li>7 ECTS, Method of grading: (not) successfully completed</li> <li>written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replace oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, a 30 minutes)</li> <li>Language of assessment: German, English if agreed upon with the examiner</li> <li>Other prerequisites: Certain prerequisites must be met to qualify for admission to assessment. The lecturer will students about the respective details at the beginning of the course. Registration for the course will be consassessment or will to seek admission to assessment. If students have obtained the qualification for admiss assessment over the course of the semester, the lecturer will put their registration for assessment into effed dents who meet all prerequisites will be admitted to assessment in the current or in the subsequent semes assessment at a later date, students will have to obtain the qualification for admission to assessment anew.</li> <li>Assessment in module component 10-M-LNA-2-082: Linear Algebra 2 Linear Algebra 2</li> <li>5 ECTS, Method of grading: (not) successfully completed</li> <li>written examination (approx. 90 minutes); if announced by the lecturer, the written examination can be replace oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups (groups of 2, a 30 minutes)</li> </ul>									
				Asse:	Other prerequising students about to a declaration of assessment over dents who meet assessment at a ssment in module 2 ECTS, Methodoral examination Language of assessionly after succeor module comp	tes: Certain prerequis the respective details will to seek admission or the course of the set all prerequisites will later date, students we component 10-M-LNA of grading: numerical not one candidate each essment: German, Enssful completion of monent 10-M-LNA-2 is a	at the beginning of the note assessment. If students, the lecturer we be admitted to assessivill have to obtain the conference of the conf	alify for admission to asse e course. Registration fo udents have obtained the ill put their registration fo ment in the current or in qualification for admissio n Linear Algebra ) th the examiner uccessful completion of resipation in module compo	module component 10-M-LNA-1				
		rerequi		By way of exception, additional prerequisites are listed in the section on assessments.									
	Referre	d to in	LPO I	§ 73 (1) 2. Mathematik Lineare Algebra, Algebra und Elemente der Zahlentheorie									

10-M-ST1-082-mo1	Stocha	stics 1	,		,			'	
	ECTS	8	Duration	)	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Course	S		V + Ü	(no information on S	WS (weekly contact	hours) and course lar	nguage available)	
	Method	d of asse		exami	nation of one candic	date each (approx. 2		examination in groups (g	ion can be replaced by an oral roups of 2, approx. 30 minutes)
	other p	rerequis		tive do on to the le- sessm	etails at the beginnir assessment. If stude cturer will put their ro	ng of the course. Reg ents have obtained the egistration for asses in the subsequent s	istration for the cours ne qualification for ad sment into effect. Stu	se will be considered a de dmission to assessment c Idents who meet all prere	form students about the respec- claration of will to seek admissi- ver the course of the semester, quisites will be admitted to as- ents will have to obtain the quali-
	Referre	d to in L	PO I	§ 73 (	ı) 3. Mathematik Sto	chastik			

10-M-DFT-082-m01	Ordinary Differential Eq	uations and Complex Analysis								
	ECTS 13 Duratio	n 2 semester Method of grading numerical grade Modul level undergraduate								
	Courses	his module comprises 3 module components. Information on courses will be listed separately for each module component.  10-M-DFT-1-082: V + Ü (no information on SWS (weekly contact hours) and course language available)  10-M-DFT-2-082: V + Ü (no information on SWS (weekly contact hours) and course language available)  10-M-DFT-P-082: M (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 10-M-DFT-1-082: Ordinary Differential Equations Ordinary Differential Equations  4 ECTS, Method of grading: (not) successfully completed  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 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 in module component 10-M-DFT-2-082: Introduction to Complex Analysis Introduction to Complex Analysis  7 ECTS, Method of grading: (not) successfully completed  written 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: 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 assessmen								
		assessment at a later date, students will have to obtain the qualification for admission to assessment anew.  Assessment in module component 10-M-DFT-P-082: Examination in Ordinary Differential Equations and Complex Analysis  2 ECTS, Method of grading: numerical grade  oral examination of one candidate each (approx. 30 minutes)  Language of assessment: German, English if agreed upon with the examiner  Only after successful completion of module components: Successful completion of module component 10-M-DFT-1 or module component 10-M-DFT-2 is a prerequisite for participation in module component 10-M-DFT-P.								
! —	other prerequisites	By way of exception, additional prerequisites are listed in the section on assessments.								
	Referred to in LPO I	§ 73 (1) 1. Mathematik Analysis								

10-M-VAN-082-	Advanc	ed Ana	lysis										
mo1	ECTS	8	Duration	า	1 semester	Method of gradin	numerical grade	Modul level	undergraduate				
	Course	!S		Ü+V	(no information o	n SWS (weekly contac	t hours) and course lan	iguage available)					
	Method	d of ass	essment	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	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.								
	Referre	d to in	LPO I	§ 73 (	§ 73 (1) 1. Mathematik Analysis								
<b>Compulsory Electi</b>	ves (59 E	CTS cre	edits)										
Mathematics 1 (5 I	ECTS cred	dits)											
10-M-NM2-082-	Numer	ical Ma	thematics	2									
mo1	ECTS	5	Duration	1	1 semester	Method of gradin	numerical grade	Modul level	undergraduate				
	Course	S		V + Ü (no information on SWS (weekly contact hours) and course language available)									
	Method	d of ass	essment	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	rerequi	sites	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.									
	Referred to in LPO I			§ 73 (1) 5. Mathematik Angewandte Mathematik									

10-M-ST2-082-m01													
	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade		Modul level	undergraduate			
	Courses	S		V + Ü	(no information on	SWS (weekly contac	t hours) and course lar	nguage ava	ailable)				
	Method	l of asso	essment	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 sessn ficatio	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, he 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.								
	Referre	d to in L	PO I	§ 73 (	1) 3. Mathematik S	tochastik							
Mathematics 2 (10	ECTS cre	edits)											
10-M-EDM-072-	Introdu	ction to	Discrete	Mathe	ematics								
mo1	ECTS	5	Duration	)	1 semester	Method of grading	numerical grade		Modul level	undergraduate			
	Courses	S		V + Ü	+ Ü (no information on SWS (weekly contact hours) and course language available)								
	Method	l of asso	essment	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	rerequis	sites	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.									
	Referre	d to in L	PO I	§ 73 (	1) 2. Mathematik L	neare Algebra, Algeb	ora und Elemente der Z	ahlentheo	rie				
10-M-FAN-072-m01	Introdu	ction to	Function	al Ana	lysis								
	ECTS	5	Duration		1 semester		numerical grade		Modul level	undergraduate			
	Courses	S		V + Ü	(no information on	SWS (weekly contac	t hours) and course lar	nguage ava	ailable)				
				exam Langu	ination of one cand lage of assessmen	lidate each (approx. t: German, English if	20 minutes) or an oral agreed upon with the $\epsilon$	examinati examiner	on in groups (gr	ion can be replaced by an oral roups of 2, approx. 30 minutes)			
	other p	ŕ		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.									
	Referre	d to in L	PO I	§ 73 (	1) 1. Mathematik A	nalysis							

10-M-ORS-072-	Operations Research											
mo1	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S		V + Ü	(no information on	SWS (weekly contact	hours) and course language	available)				
	Method	l of asse	essment	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 pi	rerequis	sites	tive d on to the le sessn	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.							
	Referred to in LPO I			§ 73 (	§ 73 (1) 5. Mathematik Angewandte Mathematik							
10-M-NLD-072-	Non-Lin	near Dyr	namics									
mo1	ECTS 5 Duratio			ı	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5		V + Ü	(no information on	SWS (weekly contact	hours) and course language	available)				
	Method	l of asse	essment	exam	vritten 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) anguage of assessment: German, English if agreed upon with the examiner							
	other pi	rerequis	sites	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.								
	Referre	d to in L	.PO I	§ 73 (1) 1. Mathematik Analysis								
Mathematics 3 (4	ECTS cred	lits)										
10-M-RCN-082-	Reading	g Cours	e Numerio	cal Ma	thematics							
mo1	ECTS	4	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	5	,	A (no	information on SW:	S (weekly contact hou	urs) and course language ava	ilable)	·			
	Method	of asse	essment	a) tall	(approx. 30 minut	es) or b) written elab	oration (approx. 5 to 10 pages	5)				
10-M-RCS-082-	Reading	g Cours	e Stochas	stics				,				
mo1	ECTS	4	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S	,	A (no	information on SWS	S (weekly contact hou	urs) and course language ava	ilable)				
	Method	of asse	essment	a) tall	(approx. 30 minut	es) or b) written elab	oration (approx. 5 to 10 pages	5)				
10-M-RCD-082-	Reading	g Cours	e Discrete	Math	ematics							
mo1	ECTS	4	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses	S	,	A (no	information on SWS	S (weekly contact hou	ırs) and course language ava	ilable)				
	Method of assessment a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages)											
Bachelor's with 1 major	Mathematics	(2008)					JMU Würzburg • generated 11-Jan-	-2023 • exam. reg. data re	ecord 82 105 - - H 2008 page 13 / 39			

10-M-RCF-082-m01	Readin	g Cours	e Functio	nal An	alysis						
	ECTS	4	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		A (no	information on SWS	S (weekly contact hours) and course language availa	able)				
	Method	d of ass	essment	a) tall	k (approx. 30 minut	es) or b) written elaboration (approx. 5 to 10 pages)					
10-M-RCO-082-	Readin	g Cours	e Operati	ons Re	esearch						
mo1	ECTS	4	Duratio			Method of grading numerical grade	Modul level	undergraduate			
	Courses			A (no	A (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment		a) tall	a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages)							
10-M-RCY-082-	Readin	g Cours	e Dynami	cal Sy	stems			20			
mo1	ECTS 4 Duration			1	1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course				(no information on SWS (weekly contact hours) and course language available)						
					a) talk (approx. 30 minutes) or b) written elaboration (approx. 5 to 10 pages)						
10-M-RCP-082-	Readin	g Cours	e Optimisation								
m01	, ,		Duratio		1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Course					6 (weekly contact hours) and course language availa	able)				
	Method	d of ass	essment	a) tall	k (approx. 30 minut	es) or b) written elaboration (approx. 5 to 10 pages)					
Mathematics 4 (5 E	CTS cred	dits)									
10-M-BSA-072-	Semina	ar in Ana	alysis								
mo1	ECTS	5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course	S		S (no	S (no information on SWS (weekly contact hours) and course language available)						
	Method	d of ass	essment		talk (approx. 60 minutes)						
						ne semester in which the course is offered					
	Doforro	d to in l	DO I		1) 1. Mathematik An	German, English if agreed upon with the examiner					
10-M-BSL-072-m01				- , -	1) 1. Mathematik An	diysis					
10-M-63L-0/2-11101		5	Duration		1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Course		Duration			(weekly contact hours) and course language availa		undergraduate			
			occmont		approx. 60 minutes		inie)				
	Method	J 01 a55	essillelli			ne semester in which the course is offered					
						German, English if agreed upon with the examiner					
	Referre	d to in l	PO I	§ 73 (	1) 2. Mathematik Li	neare Algebra, Algebra und Elemente der Zahlenthe	orie				
	•				·						

10-M-BSE-072-	Semina	r in Alg	gebra								
mo1	ECTS	5	Duratio	า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	5		S (no	information on SWS	(weekly contact hours) and course language	available)				
	Method	l of ass	essment	Asses		ne semester in which the course is offered German, English if agreed upon with the exam	niner				
	Referre	d to in I	LPO I		73 (1) 2. Mathematik Lineare Algebra, Algebra und Elemente der Zahlentheorie						
10-M-BSG-072-	Seminar in Geometry										
mo1	ECTS	5	Duration	<u> </u>	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			S (no	information on SWS	(weekly contact hours) and course language a	available)				
	Method of assessment			Asses	alk (approx. 60 minutes) ssessment offered: in the semester in which the course is offered anguage of assessment: German, English if agreed upon with the examiner						
	Referre	d to in I	LPO I	§ 73 (	3 (1) 4. Mathematik Geometrie						
10-M-BSZ-072- m01	Semina	r in Nu	mber The	ory							
	ECTS 5 Duratio			1	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	5		S (no	information on SWS	$\mathbf{S}$ (weekly contact hours) and course language $\mathbf{a}$	available)				
	Method of assessment			Asses	Assessment offered: in the semester in which the course is offered Language of assessment: German, English if agreed upon with the examiner						
	Referred to in LPO I			§ 73 (	1) 2. Mathematik Lin	neare Algebra, Algebra und Elemente der Zahle	entheorie				
10-M-BSW-072-	Seminar in Ordinary Differential Equations										
mo1	ECTS	5	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses	5		S (no	S (no information on SWS (weekly contact hours) and course language available)						
	Method of assessment			Asses	talk (approx. 60 minutes) Assessment offered: in the semester in which the course is offered Language of assessment: German, English if agreed upon with the examiner						
	Referre	d to in I	LPO I	§ 73 (	1) 1. Mathematik An	alysis					
10-M-BSC-072-	Semina	r in Co	mplex Ana	alysis							
mo1	ECTS	5	Duratio	1	1 semester	Method of grading   numerical grade	Modul level	undergraduate			
	Courses	5		S (no	information on SWS	G (weekly contact hours) and course language a	available)				
	Method of assessment			talk (approx. 60 minutes) Assessment offered: in the semester in which the course is offered Language of assessment: German, English if agreed upon with the examiner							
	Referre	d to in I	LPO I	§ 73 (1) 1. Mathematik Analysis							

10-M-BSN-072-	Seminar in Numerical Mathematics										
mo1	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	<del></del> ;	S (no	information on SWS	(weekly contact hours) and course language av	/ailable)					
	Method of ass	sessment		talk (approx. 60 minutes)							
				Assessment offered: in the semester in which the course is offered Language of assessment: German, English if agreed upon with the examiner							
	Referred to in	LPO I	§ 73 (	73 (1) 5. Mathematik Angewandte Mathematik							
10-M-BSS-072-	Seminar in St	ochastics									
m01	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		S (no	information on SWS	(weekly contact hours) and course language av	/ailable)					
	Method of ass	sessment	Asses	alk (approx. 60 minutes) Assessment offered: in the semester in which the course is offered anguage of assessment: German, English if agreed upon with the examiner							
	Referred to in	LPO I	§ 73 (	1) 3. Mathematik St	ochastik						
10-M-BSF-072-m01	Seminar in Functional Analysis										
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses		S (no	S (no information on SWS (weekly contact hours) and course language available)							
	Method of ass	sessment	talk (a	approx. 60 minutes)							
10-M-BSO-072-	Seminar in O	peration R	esearcl	h							
mo1	ECTS 5	Duratio	n	1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses		S (no	information on SWS	6 (weekly contact hours) and course language av	/ailable)					
	Method of as:	sessment	talk (a	approx. 60 minutes)							
10-M-BSD-072-	Seminar in Di	screte Ma	themat	iematics							
mo1	ECTS 5 Duratio		n	1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Courses		S (no	S (no information on SWS (weekly contact hours) and course language available)							
	Method of ass	sessment	talk (approx. 60 minutes)								

Application-oriente	ed Subje	ct (35 EC	TS credit	ts)						
Application-oriente	ed Subje	ct Biolog	gy (35 EC	TS cred	lits)					
Application-oriente	ed Subje	ct Biolog	gy Compu	ılsory	Courses (10 ECTS cre	edits)				
07-2A2GN-	Geneti	cs, Neur	obiology,	Behav	viour .					
V-072-m01	ECTS	6	Duration		1 semester	Method of grading		Modul level	undergraduate	
	Course			This module comprises 3 module components. Information on courses will be listed separately for each module component.  or-2A2GNV-1G-072: V + Ü (no information on SWS (weekly contact hours) and course language available)  or-2A2GNV-3V-072: V + Ü (no information on SWS (weekly contact hours) and course language available)  or-2A2GNV-3V-072: V + Ü (no information on SWS (weekly contact hours) and course language available)  Assessment in this module comprises the assessments in the individual module components as specified below. Unless						
	Method	d of asse	ssment						ts as specified below. Unless fall individual assessments.	
	Assessment in module component o7-2A2GNV-1G-072: Basic Genetics Basic Genetics  2 ECTS, Method of grading: numerical grade written examination (approx. 30 minutes) Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and succ tion of the respective exercises as specified at the beginning of the course.  Assessment in module component o7-2A2GNV-2N-072: Basic Neurobiology Basic Neurobiology 2 ECTS, Method of grading: numerical grade written examination (approx. 30 minutes) Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and succ tion of the respective exercises as specified at the beginning of the course.  Assessment in module component o7-2A2GNV-3V-072: Behavioural Biology Behavioural Biology 2 ECTS, Method of grading: numerical grade written examination (approx. 30 minutes, word problems and/or multiple choice questions) Other prerequisites: Admission prerequisite to assessment: regular attendance of exercises and succe									
		rerequis					are listed in the section	on assessments.		
		oants an of places		Only a	is part of "spezielles	Studienangebot": 1	o places.			
07-1A1Z-072-m01		ire and F	unction c	of Cells						
	ECTS 4 Duration 1 semester Method of grading numerical grade Modul level undergraduate									
	Course						hours) and course lang	guage available)		
		d of asse		written examination (60 minutes)						
	other prerequisites Admission prerequisite to assessment: regular attendance of exercises and successful completion of the respective exercises as specified at the beginning of the course.									

07-3A3BI-072-m01	·			,	ake an appropriate ch						
	ECTS 2	Duratio	n 1 semester		Method of grading	numerical grade	Modul level	undergraduate			
	Courses	,	•	This module comprises 2 module components. Information on courses will be listed separately for each module component.  o7-3A3BI-1B-072: V (no information on SWS (weekly contact hours) and course language available)  o7-3A3BI-2B-072: S (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 o7-3A3BI-1B-072: Bioinformatics (Lecture)  1 ECTS, Method of grading: numerical grade written examination (approx. 20 minutes)  Assessment in module component o7-3A3BI-2B-072: Bioinformatics (Seminar)  1 ECTS, Method of grading: (not) successfully completed term paper (approx. 5 to 10 pages)								
	Participants a cation of place		Only a	s part of Biochemis	try Master's: 5 places	s. Places will be alloca	ted by lot.				
7-3A30E-072-	Ecology of plants and animals										
01	ECTS 6 Duratio		n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component.  or-3A3OE-1T-072: V + Ü (no information on SWS (weekly contact hours) and course language available)  or-3A3OE-2P-072: V + Ü (no information on SWS (weekly contact hours) and course language available)								
	Method of as	sessment	stated	l otherwise, success	sful completion of the	e module will require s	successful completion of	s as specified below. Unless all individual assessments.  ce) Ecology of Animals (Lecture			
			<ul> <li>and Practice)</li> <li>3 ECTS, Method of grading: numerical grade</li> <li>written examination (45 minutes)</li> <li>Assessment in module component 07-3A30E-2P-072: Ecology of Plant (Lecture and Practice) Ecology of Plant (Lecture and Practice)</li> </ul>								
			Practi	/		1					
7 (DEM7) 000	Dioinform et	es for a dua	Practi • •	3 ECTS, Method of written examinatio	grading: numerical g n (60 minutes)	rade					
7-4BFMZ4-092-	Bioinformation	cs for adva	Practi • • nced st	3 ECTS, Method of written examinatio	grading: numerical g n (60 minutes)		Modul level	undergraduate			

Method of assessment | log (approx. 10 to 20 pages)

07-4BFN-	Ecology of Animals for advanced students										
V03-092-m01	ECTS 5	Duration	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	vailable)				
	Method of as	sessment	writter	n examination (60 n	ninutes)						
07-4BF-	Biophysics - I	Basic cour	se								
PS2-092-m01	ECTS 5	Duration	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	vailable)				
	Method of as	sessment	writter	written examination (60 minutes)							
07-4S1M-	Special Bioin	formatics I									
Z6-092-m01	ECTS 5	Duration	1	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	vailable)	-			
	Method of as	sessment	log (ap	oprox. 10 to 20 page	es)						
07-4S1N-	Neurobiology	1									
V01-092-m01	ECTS 5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses										
	Method of as	sessment	log (ap	oprox. 10 to 20 page	es)						
07-4S1N-	Ecology of po	pulations									
V05-092-m01	ECTS 5	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component.  o7-4S1NVO5-1PO-092: V + Ü (no information on SWS (weekly contact hours) and course language available)  o7-4S1NVO5-2PO-092: S (no information on SWS (weekly contact hours) and course language available)								
			Asses: Popula  Asses:	ssessment in this module comprises the assessments in the individual module components as specified below. Unless tated otherwise, successful completion of the module will require successful completion of all individual assessments.  ssessment in module component o7-4S1NVO5-1PO-092: Basic Ecology of Populations (Lecture, Practice) Basic Ecology of opulations (Lecture, Practice)  4 ECTS, Method of grading: numerical grade  written examination (45 minutes)  ssessment in module component o7-4S1NVO5-2PO-092: Ecology of Populations (Seminar)  1 ECTS, Method of grading: (not) successfully completed  presentation (approx. 20 to 30 minutes)							
07-4S1PS1-092-	Molecular mo			<u> </u>							
mo1	ECTS 5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses			`		hours) and course language av	vailable)				
	Method of as	sessment	compu	uterised practical ex	kamination (4 hours)						

07-5S2M-	Specific	Bioinf	ormatics	II				"			
Z3-092-m01	ECTS :	10	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V + Ü	(no information on S	SWS (weekly contact	hours) and course language a	vailable)			
	Method	of asse	essment						nination of one candidate each		
							groups (groups of up to 3 can	didates, approx	. 60 minutes) or e) presentation		
07-1A1E-072-m01	Evolution	n - Ras	ics and P		ox. 20 to 30 minutes es (Lecture and Prac						
	ECTS		Duration		1 semester		numerical grade	Modul level	undergraduate		
	Courses		Duration		1 semester Method of grading numerical grade Modul level undergraduate (no information on SWS (weekly contact hours) and course language available)						
			essment		n examination (30 m		ara course language avait	ubic)			
07-1A1T-072-m01				WIICC	- CXAIIIIIALIOII (Jo II	minutes)					
, , , , , , , , , , , , , , , , , , , ,	The Animal Kingdom ECTS 4 Duratio			1	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V + Ü	(no information on S		hours) and course language a				
	Method of assessment				written examination (approx. 60 minutes)						
	other prerequisites				Admission prerequisite to assessment: regular attendance of and participation in exercises as well as successful completion						
				of the	respective exercise	s as specified at the	beginning of the course.				
07-1A1P-072-m01	The Plan										
	ECTS .	4	Duration		1 semester	Method of grading		Modul level	undergraduate		
	Courses						hours) and course language a	vailable)			
	Method of assessment				written examination (approx. 60 minutes)						
	other prerequisites			Admission prerequisite to assessment: regular attendance of exercises as well as successful completion of the respective exercises.							
07-3A3GE-072-	Genetics	5	,					,			
mo1	ECTS	2	Duration	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate		
	Courses			V + S	(no information on S	SWS (weekly contact	hours) and course language a	vailable)			
	Method	of asse	essment	writte	n examination (30 п	ninutes)					
Application-oriente	ed Subjec	t Chem	istry (35	ECTS (	redits)						
Application-oriente	ed Subjec	t Chem	istry Con	npulso	ry Courses (26 ECTS	credits)					
08-0C1-072-m01	mo1 Organic Chemistry 1										
	ECTS	5	Duration	1	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 asse	essment	writte	written examination (90 minutes)						
	other prerequisites			Regis	tration for assessme	ent: Yes, as specified					

08-PC1-072-m01	Principles of quantum mechanics and spectroscopy											
00 : 01 0, 101		8	Duration		1 semester	Method of grading   numerical grade	Modul level	undergraduate				
	Course	L			+ V + Ü (no informa	tion on SWS (weekly contact hours) and course lang						
	Method	d of ass			_	tions (1 written examination: 90 minutes; 2 written e						
						es each) or b) oral examination in groups (groups of						
11-EFNF-072-m01	Introdu	iction to	<b>Physics</b>	for Stu	idents of Non-physi	ics-related Minor Subjects						
	ECTS	7	Duration	1	2 semester Method of grading numerical grade Modul level undergraduate							
	Course	S		V + V	/ + V (no information on SWS (weekly contact hours) and course language available)							
	Method	d of ass	essment	writte	vritten examination (approx. 120 minutes)							
	Participants and allo- cation of places			Only	as part of pool of ge	eneral key skills (ASQ): 10 places. Places will be alloo	cated by lot.					
08-CM1-072-m01	Genera	l Chemi	istry for N	lathen	natics Majors							
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			V (no	/ (no information on SWS (weekly contact hours) and course language available)							
	Method of assessment   written examination (approx. 60 minutes)											
Application-oriented Subject Chemisty Compulsory Electives (9 ECTS credits)												
08-0C2-072-m01	Organi	c Chem	istry 2									
	ECTS 9 Duration			1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V + Ü	$V$ + $\ddot{U}$ + $V$ (no information on SWS (weekly contact hours) and course language available)							
	Method	d of ass	essment	a) 1 to 3 written examinations (1 written examination: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes)								
08-PC3-082-m01	Physica	al and T	heoretica	l Cher	nistry 3: Symmetry	and Quantum Chemistry						
	ECTS	6	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		V + Ü + V + Ü (no information on SWS (weekly contact hours) and course language available)								
	Method	d of ass	essment	writte	n examination (90 r	minutes)						
	other p	rerequi	sites	Regis	tration for assessm	ent: Yes, as specified.						
08-TC-082-m01	Theore	tical Mo	odels in C	hemis	nemistry							
	ECTS	3	Duration	1	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Course	S		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: 90 minutes; 2 written examinations: 60 or 90 minutes each; 3 written examinations: 60 minutes each) or b) oral examination in groups (groups of 2, approx. 30 minutes)								

Application-oriente	pplication-oriented Subject Geography (35 ECTS credits)											
Application-oriente	ed Subject Geography Co	mpulsory Electives 1 (15 ECTS credits)										
09-HG1-082-m01	General Human Geography											
	ECTS 15 Duratio	n 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.  og-HG1-1-082: V + T (no information on SWS (weekly contact hours) and course language available)  og-HG1-2-082: V + T (no information on SWS (weekly contact hours) and course language available)  og-HG1-3-082: V + T (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 o9-HG1-1-082: Introduction to the Geography of Cities, Towns and Villages Introduction to the Geography of Cities, Towns and Villages  • 5 ECTS, Method of grading: numerical grade  • written examination (approx. 45 minutes)										
		Assessment in module component og-HG1-2-082: Introduction to Economic Geography Introduction to Economic Geography  • 5 ECTS, Method of grading: numerical grade  • written examination (approx. 45 minutes)										
		Assessment in module component o9-HG1-3-082: Introduction to Social and Population Geography Introduction to Social and Population Geography  • 5 ECTS, Method of grading: numerical grade  • written examination (approx. 45 minutes)										
	Referred to in LPO I	§ 47 (1) 1. Geographie Humangeographie § 66 (1) 1. Geographie Humangeographie										

09-PG1-082-m01	General Physical Geography											
	ECTS	15	Duration	1	semester	Method of gradir	ng numerical grade		Modul level	undergraduate		
	Course	2.S		• (	09-PG1-1-082: V + 09-PG1-2-082: V -	T (no information of T (no inf	nts. Information on co on SWS (weekly cont on SWS (weekly cont on SWS (weekly cont	act hours) and act hours) and	d course langua d course langua	age available)		
	Method	d of ass	essment							s as specified below. Unless all individual assessments.		
				Assessment in module component og-PG1-1-082: General Physical Geography 3 (Earth System: Exogenic Dynamics)  • 5 ECTS, Method of grading: numerical grade  • written examination (45 minutes)  Assessment in module component og-PG1-2-082: General Physical Geography 2 (Earth System: Climate System) General Physical Geography 2 (Earth System: Climate System)  • 5 ECTS, Method of grading: numerical grade  • written examination (approx. 45 minutes)  Assessment in module component og-PG1-3-082: General Physical Geography 3 (Earth System: Endogenic Dynamics) General Physical Geography 3 (Earth System: Endogenic Dynamics)								
				• 5	ECTS, Method o	f grading: numerica on (approx. 45 mini	l grade					
	Referre	ed to in I			1. Geographie Ph 1. Geographie Ph	nysiogeographie hysiogeographie						
Application-oriente	ed Subje	ct Geog	raphy Co	mpulsory Electives 2 (10 ECTS credits)								
09-KART-082-m01	Cartog	raphy a	nd Geoinf	Geoinformation								
	ECTS	10	Duration	1	semester	Method of gradir	ng numerical grade		Modul level	undergraduate		
	Course	!S		• (	09-KART-1-082: V	+ T (no information	nts. Information on co on SWS (weekly con SWS (weekly contac	tact hours) ar	nd course langu			
	Method	d of ass	essment							s as specified below. Unless all individual assessments.		
				• 5 • v • 8 • 5 • 5	s ECTS, Method o written examinati grams); weighted ment in module o s ECTS, Method o oractice work (ap	f grading: numerica ion (approx. 75 min 1:1 component og-KAR f grading: numerica prox. 5 pieces of prox.	utes) and practice w <b>T-2-082:</b> Geographical I grade actice work to be com	vork (approx. al Information	30 hours for co	reating approx. 3 maps or dia-		
	Referre	d to in I	LPOT	§ 66 (1)	2. Geographie N	lethoden der Geogr	aphie					

09-FERN-082-m01	1 Remote Sensing											
	ECTS	10	Duration	ı semestei		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.  og-FERN-1-082: V + T (no information on SWS (weekly contact hours) and course language available)  og-FERN-2-082: V + T (no information on SWS (weekly contact hours) and course language available)								
	Method	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-FERN-1-082: Introduction to Geographical Remote Sensing Introduction to Geographica Remote Sensing  • 5 ECTS, Method of grading: numerical grade  • written examination (approx. 45 minutes)  Assessment in module component og-FERN-2-082: Applications of Remote Sensing in Geography Applications of Remote Sensing in Geography  • 5 ECTS, Method of grading: numerical grade  • written examination (45 minutes)								
	Referre	d to in	LPO I	§ 66 (1) 2. Geogra	phie M	lethoden der Geograpl	nie					
Application-oriente	d Subje	ct Geog	graphy Co	mpulsory Electives	3 (10	ECTS credits)						
09-PG2-082-m01	Special Problems of Physical Geography											
	ECTS	10	Duration	ı semestei		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.  og-PG2-1-082: V (no information on SWS (weekly contact hours) and course language available)  og-PG2-2-082: S (no information on SWS (weekly contact hours) and course language available)								
	Method of assessment									s as specified below. Unless all individual assessments.		
				ment)  • 5 ECTS, Me  • written exa  Assessment in m  ment)	thod o minati odule o	f grading: numerical g on (approx. 45 minute	rade s) <b>082:</b> Special Problen	·		(Earth System: Man and Environ- 2 (Earth System: Man and Environ-		
						prox. 30 minutes) with		(approx. 20	pages), weight	ted 1:1		

09-PG3-082-m01												
	ECTS	10	Duratio	1	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.  og-PG3-1-082: S (no information on SWS (weekly contact hours) and course language available)  og-PG3-2-082: S (no information on SWS (weekly contact hours) and course language available)								
	Method	l 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.								
				Asses	Assessment in module component og-PG3-1-082: Project Seminar: Establishing Current Status and Data Acquisition  • 5 ECTS, Method of grading: numerical grade  • presentation (30 minutes) with written elaboration (20 pages), weighted 1:1  Assessment in module component og-PG3-2-082: Project Seminar: Data Evaluation, Data Visualisation and Presentation  • 5 ECTS, Method of grading: numerical grade  • project report (20 pages)							
09-MT1-082-m01	Data Ad	quisiti	on and Pr	ocessi	cessing in Physical Geography							
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			S (no	information on SWS	(weekly contact hou	rs) and course language availa	ıble)				
	Method	of ass	essment	presentation (approx. 15 minutes) with written elaboration (15 pages), weighted 1:1								
09-MT3-082-m01	Working Methods: Solid Earth System											
	ECTS	10	Duratio	1	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.  og-MT3-1-082: S (no information on SWS (weekly contact hours) and course language available)  og-MT3-2-082: Ü (no information on SWS (weekly contact hours) and course language available)					available)			
	Method	l 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.								
				<ul> <li>Assessment in module component og-MT3-1-082: Mineral and Rock Identification</li> <li>5 ECTS, Method of grading: numerical grade</li> <li>written or oral examination of one candidate each (30 minutes each)</li> </ul>								
				Asses	ssment in module co 5 ECTS, Method of	omponent 09-MT3-2- grading: numerical g	<b>082:</b> Geological Maps and Stru		paper (approx. 20 pages)			
	Referre	d to in I	PO I	§ 66 (	(1) 2. Geographie Me	ethoden der Geograp	hie					

09-MT5-082-m01	Workin	g Meth	ods of Ph	ysical (	Geography								
	ECTS	10	Duration	ı	1 semester	Method of grading numeric	al grade	Modul level	undergraduate				
	Course	S		This n	<ul> <li>is module comprises 2 module components. Information on courses will be listed separately for each module component.</li> <li>o9-MT5-1-082: P (no information on SWS (weekly contact hours) and course language available)</li> <li>o9-MT5-2-082: S (no information on SWS (weekly contact hours) and course language available)</li> </ul>								
	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	Assessment in module component og-MT5-1-o82: Introduction to physiogeographical Fieldwork Skills, Field Mapping and Measuring  • 5 ECTS, Method of grading: numerical grade  • placement report / fieldwork report / report on practical training / report on practical course / project report / report on technical course (approx. 15 pages)  • Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended.  Assessment in module component og-MT5-2-o82: Data management, -analysis and -interpretation  • 5 ECTS, Method of grading: numerical grade  • presentation of project (approx. 30 minutes) and written elaboration (approx. 20 pages); weighted 1:1  • Other prerequisites: A basic knowledge of inorganic chemistry and physics is recommended.								
	other prerequisites  Special Issues of Human			By way of exception, additional prerequisites are listed in the section on assessments.									
09-HG2-082-m01					· · ·			l.,					
		10	Duration		1 semester	Method of grading numeric		Modul level	undergraduate				
	Courses This			•	This module comprises 2 module components. Information on courses will be listed separately for each module component.  og-HG2-1-082: S (no information on SWS (weekly contact hours) and course language available)  og-HG2-2-082: S (no information on SWS (weekly contact hours) and course language available)								
						lle comprises the assessments sful completion of the module							
				Assessment in module component og-HG2-1-082: Special Issues of Human Geography 1  • 5 ECTS, Method of grading: numerical grade  • presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1  Assessment in module component og-HG2-2-082: Special Issues of Human Geography 2  • 5 ECTS, Method of grading: numerical grade  • presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1									

09-HG3-082-m01		l Huma	n Geogra <sub>l</sub>	ohy								
	ECTS	10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5			09-HG3-1-082: S (	module components. Information on courses will be no information on SWS (weekly contact hours) and conformation on SWS (weekly contact hours) and conformation on SWS (weekly contact hours)	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 og-HG3-1-082: Project-oriented Seminar 1 for Applied Human Geography  • 5 ECTS, Method of grading: numerical grade  • presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1  Assessment in module component og-HG3-2-082: Project-oriented Seminar 2 for Applied Human Geography  • 5 ECTS, Method of grading: numerical grade  • presentation (approx. 30 minutes) with written elaboration (approx. 20 pages), weighted 1:1								
09-MT2-082-m01		ories and Methodology in Human Geography										
	ECTS	5	Duratio	n	1 semester Method of grading numerical grade Modul level undergraduate							
	Courses	S		S (no	S (no information on SWS (weekly contact hours) and course language available)							
	Method	l of ass	essment	written examination (45 minutes) and presentation (approx. 20 minutes), weighted 1:1								
	Referre	d to in I	LPO I	§ 66 (1) 2. Geographie Methoden der Geographie								
09-MT4-082-m01	Quantit	ative a	nd Qualit	ative Regional Analysis								
	ECTS	10	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses	5	This module comprises 2 module components. Information on courses will be listed separately for each module compone  og-MT4-1-082: S (no information on SWS (weekly contact hours) and course language available)  og-MT4-2-082: S (no information on SWS (weekly contact hours) and course language available)									
	Method	l of ass	essment			ale comprises the assessments in the individual mo- sful completion of the module will require successfu						
				• • Asses	5 ECTS, Method of presentation (30 n ssment in module co 5 ECTS, Method of	omponent o9-MT4-1-082: Quantitative Regional Analgrading: numerical grade ninutes) with written elaboration (approx. 20 pages) omponent o9-MT4-2-082: Qualitative Regional Analgrading: numerical grade ninutes) with written elaboration (approx. 20 pages)	, weighted 1:1 ysis					
	Module comple		essfully	09-M	T2 as well as one m	odule component of modules 09-KART and 09-STAT	each					

09-MT6-082-m01	Methods of Planr	ning in I	Human Geograp	ıy	1								
	ECTS 10 D	Duration	1 semest	er	Method of grading	numerical grade		Modul level	undergraduate				
	Courses		This module comprises 2 module components. Information on courses will be listed separately for each module component.  og-MT6-1-082: S (no information on SWS (weekly contact hours) and course language available)  og-MT6-2-082: S (no information on SWS (weekly contact hours) and course language available)										
	Method of assess			ssessment in this module comprises the assessments in the individual module components as specified below. Unless ated otherwise, successful completion of the module will require successful completion of all individual assessments.									
			<ul> <li>5 ECTS, N</li> <li>a) preser prox. 20 pted 1:1</li> <li>Assessment in preser</li> <li>a) preser</li> </ul>	ethod of tation ( pages) of nodule ethod of tation (	component og-MT6-2 of grading: numerical (approx. 25 minutes)	grade with written elaboration essments (total length e- <b>082:</b> Methods of Pla grade with written elaboration	on (approx. h/expenditu anning in Hu on (approx.	12 pages), we are of time com aman Geograph 12 pages), we	ighted 1:1 or b) term paper (apparable to a) and/or b)), weigh-				
	Modules success completed		og-MT2 as well as one module component of modules og-KART and og-STAT each										
Application-oriento	Subject Computer Science (35 ECTS credits)												
Application-oriente	•		nce Compulsory Electives (35 ECTS credits)										
10-l-lÜ-072-m01	Information trans					_							
	ECTS 8 D	Duration	1 semest	er	Method of grading	numerical grade		Modul level	undergraduate				
	Courses		V + Ü (no inform	ation or	n SWS (weekly contac	t hours) and course la	anguage ava	ailable)					
	Method of assess		written examina 40 minutes)	tion (8c	o minutes) or oral exa	mination (one candid	ate each: 20	o minutes, grou	ups of 2: 30 minutes, groups of 3:				
10-I-RAL-072-m01	Digital computer	system	S		,								
	ECTS 8 D	Duration	1 semest	er	Method of grading	numerical grade		Modul level	undergraduate				
	Courses		V + Ü (no inform	ation or	n SWS (weekly contac	t hours) and course la	anguage ava	ailable)					
	Method of assess		written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3 40 minutes)										
10-I-TI-072-m01	Theoretical inform	matics											
	ECTS 8 D	Duration	1 semest	er	Method of grading	numerical grade		Modul level	undergraduate				
	Courses		V + Ü (no information on SWS (weekly contact hours) and course language available)										
	Method of assess	of assessment written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3: 40 minutes)											

10-I-ADS-072-m01												
	ECTS	8	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	•	V + Ü	(no information on	SWS (weekly contact	hours) and course language	e available)				
	Method	d of ass	essment		written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3:							
					40 minutes)							
10-I-AR-072-m01	Automation and control											
	ECTS	8	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses			/ + Ü (no information on SWS (weekly contact hours) and course language available)								
	Method	d of ass	essment	writte	n examination (80	minutes)						
10-I-DB-072-m01	Data ba	ases										
	ECTS	5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Course				-		hours) and course language	· · · · · · · · · · · · · · · · · · ·				
	Method of assessment				vritten examination (50 minutes) or oral examination (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes)							
10-l-GT-072-m01	Grapht	heoreti	cal conce		ts and algorithms							
	ECTS	8	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V + Ü	(no information on	SWS (weekly contact	hours) and course language	e available)					
	Method of assessment			n examination (80 nutes)	minutes) or oral exan	nination (one candidate eacl	h: 20 minutes, grou	ups of 2: 30 minutes, groups of 3:				
10-I-KT-072-m01	Theory of complexity											
•	ECTS	8	Duration	<u> </u>	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S		V + Ü	(no information on	SWS (weekly contact	hours) and course language	e available)				
	Method of assessment				written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3: 40 minutes)							
10-I-LOG-072-m01	Logic fo	or infor	matics									
	ECTS	5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	S	•	V + Ü	(no information on	SWS (weekly contact	hours) and course language	e available)				
	Method of assessment				n examination (50 nutes)	minutes) or oral exam	ination (one candidate each	n: 15 minutes, grou	ps of 2: 20 minutes, groups of 3:			
10-I-00P-072-m01												
-	ECTS	5	Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course			V + Ü	V + Ü (no information on SWS (weekly contact hours) and course language available)							
_	Method	d of assessment written examination (50 minutes) or oral examination (one candidate each: 15 minutes, groups of 2: 20 minutes, groups of 3: 25 minutes)										

10-I-PP-072-m01	Practic	al cours	e in prog	rammi	ng	-					
	ECTS	9	Duration	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course	S	-	P (no	information on SWS	S (weekly contact hours) and course language avail	able)				
	Method of assessment			completion of programming exercises (expenditure of time as specified) and final examination: written examination (60 to go ninutes) or oral examination (one candidate each: 10 to 15 minutes, groups of 2: 20 minutes, groups of 3: 30 minutes)							
10-I-RAK-072-m01	Compu	ter arch	itecture								
	ECTS	5	Duration	ı	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	d of asse	essment		n examination (80 inutes)	minutes) or oral examination (one candidate each:	20 minutes, gro	ups of 2: 30 minutes, groups of 3:			
10-I-RK-072-m01	Compu	ter netw	orks and	comm	unication systems						
	ECTS	8	Duration	า	1 semester	Method of grading numerical grade	Modul level	undergraduate			
	Courses			V + Ü	(no information on	SWS (weekly contact hours) and course language a	vailable)				
	Method of assessment				vritten examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3: 0 minutes)						
10-I-ST-072-m01	Software technology										
	ECTS 8 Duration		า	1 semester	Method of grading numerical grade	Modul level	undergraduate				
	Courses			V + Ü	V + Ü (no information on SWS (weekly contact hours) and course language available)						
	Method	nod of assessment written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes)						ups of 2: 30 minutes, groups of 3:			
10-I-SWP-072-m01	Practic	al cours	e in softv	vare	,		'				
	ECTS	10	Duration	1	1 semester	Method of grading (not) successfully completed	Modul level	undergraduate			
	Course	S	-	P (no	information on SWS	S (weekly contact hours) and course language avail	able)	-			
	Method	d of asse	of assessment periodic presentations on project progress with regard to detailing problem specifications, the corresponding solution ponents (software) and the documentation of these; if project is completed in groups, proof of contributions made vidual student required; software and project documentation as specified in assignment, final presentation (10 to per group)								
10-I-WMS-072-m01	Knowle	edge ma	nagemen	t syst	ems and data minin	g					
	ECTS	10	Duration	า	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)							
				written examination (80 minutes) or oral examination (one candidate each: 20 minutes, groups of 2: 30 minutes, groups of 3: 40 minutes)							

Application-oriente	ed Subject Philosopl	1y (35 E0	CTS credits)							
Application-oriente	ed Subject Philosopl	ny Comp	ulsory Courses (20 E	CTS credits)						
06-B-P1-072-m01	Principles of Philos	sophy								
	ECTS 10 Du	ration	1 semester	Method of grading numerical grade	Modul lev	el undergraduate				
	Courses	Th	<ul> <li>06-B-P1-1-072: Ü</li> <li>06-B-P1-2-072: Ü</li> </ul>	s 3 module components. Information on of the contact of the contac	t hours) and course langu t hours) and course langu	age available) age available)				
	Method of assessm	sta	ated otherwise, successes sessment in module	dule comprises the assessments in the intesting the module will require component of-B-P1-1-072: Introduction	uire successful completio	n of all individual assessments.				
		As	<ul> <li>2 ECTS, Method of grading: (not) successfully completed</li> <li>2 to 3 written assessments (approx. 1 page each) and/or oral assessments (approx. 5 minutes each)</li> <li>Assessment in module component o6-B-P1-2-072: Formal Logic</li> <li>3 ECTS, Method of grading: (not) successfully completed</li> <li>written examination (90 minutes)</li> <li>Assessment in module component o6-B-P1-3-072: Principles of Philosophy: historical epochs, main works, authors</li> <li>5 ECTS, Method of grading: numerical grade</li> <li>oral examination (approx. 25 minutes)</li> </ul>							
06-B-P2-072-m01	Philosophy and the	science	es							
	ECTS 10 Du	ration	1 semester	Method of grading numerical grade	Modul lev	el undergraduate				
	Courses	Th	• 06-B-P2-1-072: S	s 2 module components. Information on of the components of the contact of the con	t hours) and course langu	age available)				
	Method of assessm	sta	ated otherwise, successes sessment in module	dule comprises the assessments in the intesting the module will require component of the module will require component of the module will require the component of the module will require the module will require the component of the module will require the component of the compo	uire successful completio	n of all individual assessments.				
	<ul> <li>5 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 120 minutes)</li> <li>Assessment in module component o6-B-P2-2-072: Philosophical principles of natural sciences and technology</li> <li>5 ECTS, Method of grading: numerical grade</li> <li>written examination (approx. 120 minutes)</li> </ul>									
Application-oriente	ed Subject Philosopl	ny Comp	ulsory Electives (15 l	ECTS credits)						
06-B-P3-072-m01	Theoretical philosophy									
	ECTS 10 Du	ration	1 semester	Method of grading numerical grade		9				
	Courses	Ü	+ $\ddot{U}$ + $\overline{S}$ + $S$ (no inform	nation on SWS (weekly contact hours) an	d course language availa	ole)				
	Method of assessm	nent wr	itten examination (a <sub>l</sub>	pprox. 180 minutes)						

06-B-P4-072-m01	Practical Philo	sophy					·		'			
	ECTS 10	Duration	1	1 semester	Method of grading	numerical grade	Modul	level	undergraduate			
	Courses		Ü + Ü -	+ S + S (no informat	tion on SWS (weekly	contact hours) and o	course language ava	ailable)				
	Method of asse	Method of assessment   written examination (approx. 180 minutes)										
06-B-P5-072-m01												
	ECTS 10	Duration	n	1 semester	Method of grading numerical grade		Modul	level	undergraduate			
	Courses		Ü+Ü-	+ S + S (no informat	tion on SWS (weekly	contact hours) and c	course language ava	ailable)	1			
	Method of assessment		writter	vritten examination (approx. 180 minutes)								
06-B-P6-072-m01	Issue of research in philosophy											
	ECTS 10	Duration	n [	1 semester	Method of grading	numerical grade	Modul	level	undergraduate			
	Courses		V + S +	' + S + S (no information on SWS (weekly contact hours) and course language available)								
	Method of asse	essment	term p	aper (approx. 12 pa	ages)							
06-B-W1-072-m01	Text analysis:	Ancient P	hilosop	ohy			·					
	ECTS 5	Duration		1 semester	Method of grading	•	Modul	level	undergraduate			
	Courses		S (no i	nformation on SWS	(weekly contact hou	ırs) and course langı	uage available)					
	Method of asse	essment	term paper (approx. 12 pages)									
06-B-W2-072-m01	Text Analysis:	Medieval	Philos	ophy			'					
	ECTS 5	Duration	ı	1 semester	Method of grading	numerical grade	Modul	level	undergraduate			
	Courses		S (no i	nformation on SWS	(weekly contact hou	ırs) and course langı	uage available)					
	Method of assessment		term p	aper (approx. 12 pa	ages)							
06-B-W3-072-m01	Text analysis:	modern p	hilosop	ohy								
	ECTS 5	Duration		1 semester	Method of grading		Modul	level	undergraduate			
	Courses				(weekly contact hou	ırs) and course langı	uage available)					
			•	aper (approx. 12 pa	ages)							
06-B-W4-072-m01	Text analysis:	contempo	orary pl	nilosophy								
	ECTS 5	Duration		1 semester	Method of grading		Modul	level	undergraduate			
	Courses		S (no i	nformation on SWS	(weekly contact hou	ırs) and course langı	uage available)					
				aper (approx. 12 pa								
06-B-W5-072-m01		es of the	oretical	philosophy: meta <sub>l</sub>	physics and epistem							
	ECTS 5	Duration		1 semester	Method of grading		Modul	level	undergraduate			
	Courses		S (no i	nformation on SWS	S (weekly contact hoι	ırs) and course langı	uage available)					
				aper (approx. 12 pa	ages)							
06-B-W6-072-m01		lines of th	neoreti	cal philosophy								
	ECTS 5	Duration		1 semester	Method of grading	_	Modul	level	undergraduate			
	Courses		S (no i	nformation on SWS	(weekly contact hou	ırs) and course langı	uage available)					
	Method of asse	essment	term paper (approx. 12 pages)									
Bachelor's with 1 major N	Anthomatics (2009)					IMII Würzburg • gone	erated 11-lan-2023 • exam. r	og data r	acord Calanel I IIIIaaaQ	nage 32 / 30		

- ( D ) W	Basic disciplines of practical philosophy: ethics and theory of action											
o6-B-W7-072-mo1				<del>, , , , , , , , , , , , , , , , , , , </del>		T						
	ECTS 5	Duration		1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses				(weekly contact hours) and course language availa	ble)						
				paper (approx. 12 pa	iges)							
06-B-W8-072-m01	Specific discip	olines of p	ractica	al philosophy								
	ECTS 5	Duratio		1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses	,	S (no	S (no information on SWS (weekly contact hours) and course language available)								
	Method of ass	essment	term	term paper (approx. 12 pages)								
o6-B-W9-072-mo1	Problems of O	lder Philo	sophy	: Ancient/Medieval								
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses		S (no	information on SWS	(weekly contact hours) and course language availa	ble)						
	Method of ass	Method of assessment oral examination (approx. 25 minutes)										
06-B-W10-072-	Problems of M	lodern/Co	ntemp	orary Philosophy								
mo1	ECTS 5	Duration	n	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses		S (no	S (no information on SWS (weekly contact hours) and course language available)								
	Method of ass	essment	oral e	xamination (approx.	. 25 minutes)							
06-B-W11-072-m01	Problems of T	heoretical	Philos	sophy								
	ECTS 5	Duratio	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses	ourses S (no information on SWS (weekly contact hours) and course language available)										
	Method of ass	essment	oral examination (approx. 25 minutes)									
06-B-W12-072-	Problems of P	ractical Pl	hilosoj	ohy								
mo1	ECTS 5	Duration	n	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses	•	S (no	information on SWS	(weekly contact hours) and course language availa	ble)						
	Method of ass	essment	oral e	xamination (approx.	. 25 minutes)							
Application-oriente	ed Subject Phys	ics (min.	35 ECT	S credits)								
Application-oriente	ed Subject Phys	I Subject Physics (min. 35 ECTS credits) I Subject Physics Compulsory Courses (16 ECTS credits) d from the examination committee, modules 11-ENNF1 and 11-ENNF2 (7 ECTS credits each) may be replaced with modules 11-E1 and 11-E2 (8 ECTS credits each)										
11-ENNF1-062-m01	Introduction to	o Physics	Part 1	for students of Phys	ics Related Minor Subjects							
	ECTS 7	Duration	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 ass	essment	writte	n examination (appi	rox. 120 minutes)							
	Participants ar											

11-ENNF2-062-m01	Introdu	ction to	Physics	Part 2	for students of Phys	sics Related Minor S	ubjects					
	ECTS	7	Duration	<u> </u>	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 asse	essment	writte	n examination (appr							
		ants an		Only a	Only as part of pool of general key skills (ASQ): 20 places. Places will be allocated by lot.							
11-PFR-072-m01	Measur	Measurements and Data Analysis										
	ECTS	2	Duration	n	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Course	<u> </u>		V + Ü	/ + Ü (no information on SWS (weekly contact hours) and course language available)							
	Method	of asse	essment	writte	written examination (approx. 120 minutes)							
Application-oriente	d Subje	ct Physi	ics Comp	ulsory	Electives 1 (3-4 ECTS	S credits)						
11-PNNF-062-m01	Physics	s Labora	atory Cou	rse for	students of Physics	Related Minor Subj	ects					
	ECTS	3	Duratio	n	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Courses	S	-	P (no	information on SWS	(weekly contact hou	rs) and course language availa	ble)	•			
	Method	of asse	essment	a) oral test (approx. 15 minutes) during experiment and b) ungraded written examination (approx. 90 minutes)								
		ants an of place		Only as part of pool of general key skills (ASQ): 15 places. Places will be allocated by lot.								

11-PG-IAF-072-m01	Practical C	Course	"	'								
	ECTS 4	Duration	1 semester	Method of	f grading (	not) successful	ly completed	Modul level	undergraduate			
	Courses		weekly contact hou Klassische Physik ( Elektrizitätslehre u Wellenoptik (Physic Atom- und Kernphy	Reispiele aus Mechanik, Wärmelehre und Elektrik (Examples from Mechanics, Thermodynamics and Electricity, BAM): P (2 weekly contact hours)  Classische Physik (Classical Physics, KLP): P (2 weekly contact hours)  Elektrizitätslehre und Schaltungen (Electricity and Circuits, ELS): P (2 weekly contact hours)  Vellenoptik (Physical Optics, WOP): P (2 weekly contact hours)  Atom- und Kernphysik (Atomic and Nuclear Physics, AKP): P (2 weekly contact hours)  Computer und Messtechnik (Computers and Measurement Technology, CMT): P (2 weekly contact hours)								
	Method of		<ol> <li>This module has the following assessment components</li> <li>Lab course in part 1: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes).</li> <li>Lab course in part 2: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes).</li> <li>Students must register for assessment components 1 and 2 online (registration deadline to be announced).</li> <li>Students will be offered one opportunity to retake element a) and/or element b). To pass an assessment component, they must pass both elements a) and b).</li> <li>To pass this module, students must successfully complete two out of the six courses.</li> <li>Students must attend BAM, KLP or ELS courses prior to attending WOP, AKP or CMT courses.</li> <li>To pass this module, students must pass both assessment component 1 and assessment component 2.</li> </ol>									
	other prere	equisites	Module 11-PFR recommended.									
Application-orient	ed Subject P	hysics Comp	ics Compulsory Electives 2 (16 ECTS credits)									
11-E3-072-m01	Experimen	ital Physics 3	(Optics, Quantum P	henomena, Introd	luction Ato	mic Physics)						
	ECTS 8	Duration	1 semester	Method of	f grading r	umerical grade		Modul level	undergraduate			
	Courses		V + Ü (no information	on on SWS (weekly	y contact h	ours) and cours	e language ava	ailable)				
	Method of	assessment	written examination	n (approx. 120 min	nutes)							
11-E4-072-m01	Experimen	ital Physics 4	(Introduction to Sol	id State Physics)				,				
	ECTS 8	Duration	1 semester	Method of	f grading r	ıumerical grade		Modul level	undergraduate			
	Courses	ì	V + Ü (no information	on on SWS (weekly	y contact h	ours) and cours	e language ava	ailable)	•			
	Method of	ethod of assessment   written examination (approx. 120 minutes)										
11-T1-072-m01	Theoretical Physics 1 (Theoretical Mechanics)											
	ECTS 8	Duration	1 semester	Method of	f grading r	umerical grade		Modul level	undergraduate			
	Courses		V + Ü (no information	+ Ü (no information on SWS (weekly contact hours) and course language available)								
	Method of		<u> </u>	rritten examination (approx. 120 minutes)								
	Method of assessment   whiten examination (approx. 120 initiates)											

11-T2-072-m01	Theoretical Physics	2 (Theore	tical Electrostatic	s and Electrodynamics)							
	ECTS 8 Dur	ration	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses	V + Ü	(no information o	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessm	ent writt	en examination (a	pprox. 120 minutes)							
11-T3-072-m01	Theoretical Physics	3 (Theore	tical Quantum Me	chanics)							
	ECTS 8 Dur	ration	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses			on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessment   written examination (approx. 120 minutes)										
11-T4-072-m01		4 (Theore	tical Thermodyna	mics and Statistics)							
	ECTS 8 Dur	ration	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses		_	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessm	ent writt	en examination (a	pprox. 120 minutes)							
Application-orient	ed Subject Business	Managem	ent and Economics	s (35 ECTS credits)							
Application-orient	ed Subject Business	Managem	ent and Economics	s Compulsory Courses (30 ECTS credits)							
12-IntUR-G-072-	Managerial Accoun	ting									
mo1	ECTS 5 Dur	ration	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses	V + Ü	(no information o	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessm	ent writt	en examination (a	pprox. 6o minutes)							
12-ExtUR-G-072-	Financial Accounting										
mo1	ECTS 5 Dur	ration	1 semester	Method of grading numerical grade	Modul level	undergraduate					
	Courses	V + Ü	(no information o	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessm	ent writt	en examination (a	pprox. 60 minutes)							
12-EBWL-G-072-	Introduction to Bus	iness Adn	inistration								
mo1	ECTS 5 Dur	ration	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses			on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessm	ent writt	en examination (a	pprox. 60 minutes)							
12-EVWL-G-072-	Introduction to Eco	nomics									
mo1	ECTS 5 Dur	ration	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses	V + Ü	(no information o	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessment   written examination (approx. 60 minutes)										
12-Mak1-G-072-	Macroeconomics 1										
m01	ECTS 5 Dur	ration	1 semester	Method of grading   numerical grade	Modul level	undergraduate					
	Courses		-	on SWS (weekly contact hours) and course la	nguage available)						
	Method of assessment   written examination (approx. 60 minutes)										

12-Mik1-G-072-	Microeconomi	CS 1									
mo1	ECTS 5	Duratio	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V + Ü	(no information on	SWS (weekly contact	nours) and course language	available)				
	Method of asse	essment	writte	n examination (app	rox. 60 minutes)						
Application-oriente	ed Subject Busir	ness Man	ageme	nt and Economics C	Compulsory Electives (	5 ECTS credits)					
12-Mark-G-072-	Introduction to	Market-	Oriento	ed Management							
mo1	ECTS 5	Duratio	า	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		V + Ü	(no information on	SWS (weekly contact	nours) and course language	available)				
	Method of asse	essment	writte	written examination (approx. 60 minutes)							
12-BPL-G-072-m01	Supply, Produc	ction and	Opera	tions Management.	An Introduction						
	ECTS 5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses		V + Ü	(no information on	SWS (weekly contact	nours) and course language	available)				
				n examination (app	rox. 60 minutes)						
12-I&F-G-072-m01	Investment and	_		troduction				_			
	ECTS 5	Duratio		1 semester	Method of grading		Modul level	undergraduate			
	Courses			·		nours) and course language	available)				
			writte	n examination (app	rox. 60 minutes)		,				
12-Mak2-G-072-	Macroeconomi										
mo1	ECTS 5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses	_			<u> </u>	nours) and course language	available)				
		assessment written examination (approx. 60 minutes)									
12-Mik2-G-072-	Microeconomi										
mo1	ECTS 5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses			·		nours) and course language	available)				
				n examination (app	rox. 60 minutes)						
12-WiPo-G-072- mo1	Introduction to	_			Tarat I c III I		1				
11101	ECTS 5	Duration		1 semester	Method of grading		Modul level	undergraduate			
	Courses			·		nours) and course language	available)	_			
		essment	writte	n examination (app	rox. 60 minutes)						
Thesis (10 ECTS cre											
10-M-BAM-072-	Thesis Mathen										
mo1	ECTS 10	Duration		1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses		no courses assigned								
	Method of asse	essment	written thesis								
	othor proroacti	citos	Language of assessment: German, English if agreed upon with the examiner  Registration for assessment: as specified.								
	other prerequis	sites	Kegis	tration for assessme	ent: as specified.						
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Subject-specific K	ey Skills	(10 ECT	'S credits)										
10-M-COMg-082- mo1	Computational Mathematics, advanced												
	ECTS 4 Duration			1 semester	Me	ethod of grad	ding	(not) succ	essfully c	ompleted	Modul level	undergraduate	
	Course	S	,	Ü + V (	no information o	on SWS	(weekly cor	tact h	ours) and	course la	anguage av	/ailable)	
	Method	d of ass		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			Admission prerequisite to assessment: regular attendance of exercises (attendance monitored, a maximum of one incident of unexcused absence).									
	Referre		_	§ 73 (1) 5. Mathematik Angewandte Mathematik									
10-M-PRGk-082- m01	Programming course for students of Mathematics and other subjects, simple												
	ECTS	2	Duration	I	1 semester	Me	ethod of grad	ling	(not) succ	essfully c	ompleted	Modul level	undergraduate
	Course	S		P (no information on SWS (weekly contact hours) and course language available)									
	Method	d of ass		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	rerequi		Admission prerequisite to assessment: regular attendance (attendance monitored, a maximum of one incident of unexcused absence).									
	Referre	d to in	LPO I	§ 73 (1) 5. Mathematik Angewandte Mathematik									
10-M-VKM-082-	Preparatory Course Mathematics												
mo1	ECTS 1 Duratio				1 semester	Me	ethod of grad	ding	(not) succ	essfully c	ompleted	Modul level	undergraduate
	Courses			V + Ü (no information on SWS (weekly contact hours) and course language available)									
	Method of assessment			project assignments (type and expenditure of time to be specified by the lecturer at the beginning of the course) Assessment offered: once a year, winter semester Language of assessment: German, English if agreed upon with the examiner									
	other p	rerequi	sites	Admission prerequisite to assessment: regular attendance of courses (as specified at the beginning of the course).									
10-M-PRG-082- m01	Prograi	mming	course for	students of Mathematics and other subjects									
	ECTS 3 Duratio				1 semester	Me	ethod of grad	ling	(not) succ	essfully c	ompleted	Modul level	undergraduate
	Courses			P (no information on SWS (weekly contact hours) and course language available)									
	Method	d of ass	essment	project in the form of programming exercises (as specified at the beginning of the course) Language of assessment: German, English if agreed upon with the examiner									
	other p	rerequi		Admission prerequisite to assessment: regular attendance (attendance monitored, a maximum of one incident of unexcused absence).									
	Referred to in LPO I			§ 73 (1) 5. Mathematik Angewandte Mathematik									

10-M-COM-082-	Computeroriented Mathematics											
mo1	ECTS	ECTS 3 Duration			1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate			
	Course	S	-	V + Ü (no information on SWS (weekly contact hours) and course language available)								
	Method	d of asse	essment	project in the form of programming exercises (as specified 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 prerequisites			Admission prerequisite to assessment: regular attendance of exercises (attendance monitored, a maximum of one incident of unexcused absence).								
	Referred to in LPO I			§ 73 (1) 5. Mathematik Angewandte Mathematik								
10-M-BAK-082- m01	Defense of Bachelor Thesis in Mathematics											
	ECTS 3 Dura		Duration	1	1 semester	Method of grading	numerical grade	Modul level	undergraduate			
	Courses			A (no	A (no information on SWS (weekly contact hours) and course language available)							
	Method of assessment			talk (approx. 15 minutes) with subsequent discussion (approx. 15 minutes)								