

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: Faculty of Mathematics and Computer Science
Responsible: Institute of Mathematics

Examination regulations version: 2023
Examination regulations version: 2023

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 creditable 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:

ASPO2015

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

31-Jan-2023 (2022-81)

22-Nov-2023 (2023-102)

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 specified in the form X (y) with course type X abbreviated as specified above and number of weekly contact hours y					
	Method of assessment						
	Only after successful completion of	if applicable					
	Other prerequisites	if applicable					
	Participants and allocation of places	if applicable					
	Additional information	if applicable					
	Referred to in LPO I	if applicable (examination regulations for teaching-degree programmes)					

Compulsory Courses (40 ECTS credits)								
10-M-ANA-Ü-152-m01	Overview Analysis							
	ECTS	14	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-ANA1 and 10-M-ANA2. Language of assessment: German and/or English					
10-M-LNA-Ü-152-m01	Overview Linear Algebra							
	ECTS	14	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to the contents of modules 10-M-LNA1 and 10-M-LNA2. Language of assessment: German and/or English					
10-M-VAN-152-m01	Advanced Analysis							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-SEM-152-m01	Seminar Mathematics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		talk (60 to 120 minutes) Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 f)					
Compulsory Electives Mathematics (79 ECTS credits)								
Subfield Basics of Analysis (8 ECTS credits)								
10-M-ANA1-152-m01	Analysis 1							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English					

10-M-ANA2-152-mo1	Analysis 2							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English					
Subfield Basics of Linear Algebra (8 ECTS credits)								
10-M-LNA1-152-mo1	Linear Algebra 1							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English					
10-M-LNA2-152-mo1	Linear Algebra 2							
	ECTS	8	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 90 to 180 minutes) and written exercises (approx. 12 exercise sheets with approx. 4 exercises each) Language of assessment: German and/or English					
Subfield Basics of Applied Mathematics (9 ECTS credits)								
10-M-NUM1-152-mo1	Numerical Mathematics 1							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-NUM2-152-mo1	Numerical Mathematics 2							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-STO1-152-mo1	Stochastics 1							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-STO2-152-mo1	Stochastics 2							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
Subfield Pure Mathematics (9 ECTS credits)								
10-M-ALG-152-mo1	Introduction to Algebra							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-DGE-152-mo1	Introduction to Differential Geometry							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-DGL-152-mo1	Ordinary Differential Equations							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-FTH-152-mo1	Introduction to Complex Analysis							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-GAN-152-mo1	Geometric Analysis							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 f)					
10-M-PGE-152-mo1	Introduction to Projective Geometry							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-AALG-232-mo1	Applied Algebra							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
Subfield Basics Specialization of Mathematics (9 ECTS credits)								
10-M-NUM1-152-mo1	Numerical Mathematics 1							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-NUM2-152-m01	Numerical Mathematics 2							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-STO1-152-m01	Stochastics 1							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-STO2-152-m01	Stochastics 2							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-OML-232-m01	Optimization for Machine Learning							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester creditable for bonus					
10-M-ALG-152-m01	Introduction to Algebra							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-DGE-152-mo1	Introduction to Differential Geometry							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-DGL-152-mo1	Ordinary Differential Equations							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-FTH-152-mo1	Introduction to Complex Analysis							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-GAN-152-mo1	Geometric Analysis							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 f)					
10-M-DIM-152-mo1	Introduction to Discrete Mathematics							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-FAN-152-mo1	Introduction to Functional Analysis							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3 f)					
10-M-PAR-152-mo1	Introduction to Partial Differential Equations							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-PGE-152-mo1	Introduction to Projective Geometry							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-ZTH-152-mo1	Introduction to Number Theory							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					
10-M-AALG-232-mo1	Applied Algebra							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus					

10-M-LOG-232-m01	Introduction to Mathematical Logic							
	ECTS	9	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses		V (4) + Ü (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Creditable for bonus Assessment offered: In the semester in which the course is offered and in the following semester					
Subfield Overview Applied Mathematics (12 ECTS credits)								
10-M-STO-Ü-152-m01	Overview Stochastics 1 and Stochastics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-NUM-Ü-152-m01	Overview Numerical Mathematics 1 and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-NUST-Ü-152-m01	Overview Numerical Mathematics 1 and Stochastics 1							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
Subfield Overview Pure Mathematics (12 ECTS credits)								
10-M-ALGD-Ü-152-m01	Overview Algebra and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-DGGD-Ü-152-m01	Overview Differential Geometry and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-ALFT-Ü-152-m01	Overview Algebra and Complex Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FTDG-Ü-152-m01	Overview Complex Analysis and Differential Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FTGD-Ü-152-m01	Overview Complex Analysis and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GADG-Ü-152-m01	Overview Geometric Analysis and Differential Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-GAGD-Ü-152-m01	Overview Geometric Analysis and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GAFT-Ü-152-m01	Overview Geometric Analysis and Complex Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-ALPG-Ü-152-m01	Overview Algebra and Projective Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-ALAA-Ü-232-m01	Overview Algebra and Applied Algebra							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
Subfield Overview Advanced Mathematics (12 ECTS credits)								
10-M-ALGD-Ü-152-m01	Overview Algebra and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-DGGD-Ü-152-mo1	Overview Differential Geometry and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-ALFT-Ü-152-mo1	Overview Algebra and Complex Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-FTDG-Ü-152-mo1	Overview Complex Analysis and Differential Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-FTGD-Ü-152-mo1	Overview Complex Analysis and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-GADG-Ü-152-mo1	Overview Geometric Analysis and Differential Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						

10-M-GAGD-Ü-152-mo1	Overview Geometric Analysis and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-GAFT-Ü-152-mo1	Overview Geometric Analysis and Complex Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-ALPG-Ü-152-mo1	Overview Algebra and Projective Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-ALDI-Ü-152-mo1	Overview Algebra and Discrete Mathematics							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-DIPG-Ü-152-mo1	Overview Discrete Mathematics and Projective Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						

10-M-FADG-Ü-152-m01	Overview Functional Analysis and Differential Geometry							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FAGD-Ü-152-m01	Overview Functional Analysis and Ordinary Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FAFT-Ü-152-m01	Overview Functional Analysis and Complex Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FAGA-Ü-152-m01	Overview Functional Analysis and Geometric Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-ALZT-Ü-152-m01	Overview Algebra and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-DGZT-Ü-152-m01	Overview Differential Geometry and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GDZT-Ü-152-m01	Overview Ordinary Differential Equations and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FTZT-Ü-152-m01	Overview Complex Analysis and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GAZT-Ü-152-m01	Overview Geometric Analysis and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-PGZT-Ü-152-m01	Overview Projective Geometry and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-DIZT-Ü-152-m01	Overview Discrete Mathematics and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FAZT-Ü-152-m01	Overview Functional Analysis and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-DGPA-Ü-152-m01	Overview Differential Geometry and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GDPA-Ü-152-m01	Overview Ordinary Differential Equations and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FTPA-Ü-152-m01	Overview Complex Analysis and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-GAPA-Ü-152-m01	Overview Geometric Analysis and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FAPA-Ü-152-m01	Overview Functional Analysis and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-PAZT-Ü-152-m01	Overview Partial Differential Equations and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-STO-Ü-152-m01	Overview Stochastics 1 and Stochastics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-NUM-Ü-152-m01	Overview Numerical Mathematics 1 and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-GD- NU1-Ü-152-m01	Overview Ordinary Differential Equations and Numerical Mathematics 1							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-GD- NU2-Ü-152-m01	Overview Ordinary Differential Equations and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FA- NU1-Ü-152-m01	Overview Functional Analysis and Numerical Mathematics 1							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-FA- NU2-Ü-152-m01	Overview Functional Analysis and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-OM- NU1-Ü-232-m01	Overview Optimization for Machine Learning and Numerical Mathematics 1							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-OM-NU2-Ü-232-mo1	Overview Optimization for Machine Learning and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-PA-NU1-Ü-152-mo1	Overview Partial Differential Equations and Numerical Mathematics 1							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-PA-NU2-Ü-152-mo1	Overview Partial Differential Equations and Numerical Mathematics 2							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-OMFA-Ü-232-mo1	Overview Optimization for Machine Learning and Functional Analysis							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					
10-M-OM-PA-Ü-232-mo1	Overview Optimization for Machine Learning and Partial Differential Equations							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure and applied mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English					

10-M-ALAA-Ü-232-m01	Overview Algebra and Applied Algebra							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-AAZT-Ü-232-m01	Overview Applied Algebra and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-AADI-Ü-232-m01	Overview Applied Algebra and Discrete Mathematics							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-ALLO-Ü-232-m01	Overview Algebra and Logic							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-AALO-Ü-232-m01	Overview Applied Algebra and Logic							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						

10-M-DILO-Ü-232-m01	Overview Discrete Mathematics and Logic							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
10-M-LOZT-Ü-232-m01	Overview Logic and Number Theory							
	ECTS	12	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	V (4) + Ü (2)						
	Method of assessment	oral examination of one candidate each (20 to 40 minutes) Assessment will have reference to two topics in pure mathematics as agreed upon with the examiner. Each topic may only be selected as the subject of one examination in the sub-fields Gesamtüberblick (Overview). Language of assessment: German and/or English						
Compulsory Electives Application-oriented Subject (30 ECTS credits) Students must successfully complete modules worth 30 ECTS credits in a single one of the focuses listed below. In addition, students must successfully complete, in the area of mandatory electives application-oriented subject, modules with numerical grading worth no less than 15 ECTS credits, cf. Section 3 Subsection 2 Sentences 2 through 4 FSB (subject-specific provisions).								
Focus Biology (0 or 30 ECTS credits)								
Modules General Biology I								
07-1A1Z-PF-152-m01	The Plant Kingdom							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (1.5) + Ü (2.5)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance of exercises (minimum 80%) and successful completion of the respective exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
07-1A1TI-152-m01	Evolution and the Animal Kingdom							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (3)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 41 I Nr. 1 (4 ECTS credits) and § 41 I Nr. 4 (1 ECTS credits) § 61 I Nr. 1 (4 ECTS credits) and § 61 I Nr. 4 (1 ECTS credits)						

Modules General Biology II								
07-2A2PHYF-152-m01	Plant Physiology							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (1) + Ü (2)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 61 I Nr. 2						
07-2A2PHY-TI-152-m01	Animal Physiology							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (1) + Ü (2)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 41 I Nr. 2 § 61 I Nr. 2						
07-2A2GEN-V-152-m01	Genetics, Neurobiology, Behaviour							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3)						
	Method of assessment	written examination (approx. 60 to 90 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 61 I Nr. 2 (2 ECTS credits) § 61 I Nr. 3 (1 ECTS credits) § 61 I Nr. 4 (1 ECTS credits)						
Modules General Biology III								
07-3A3EBIO-TI-152-m01	Developmental Biology of Animals							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (1) + Ü (3)						
	Method of assessment	written examination (approx. 60 minutes) creditable for bonus						
	other prerequisites	Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.						
	Referred to in LPO I	§ 61 I Nr. 5						

07-3A3E-BIOPF-152-m01	Developmental Biology of Plants							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (1) + Ü (3)					
	Method of assessment		written examination (approx. 60 minutes) creditable for bonus					
	other prerequisites		Admission prerequisite to assessment: exercises. Regular attendance (minimum 80%) and successful completion of exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.					
	Referred to in LPO I		§ 61 I Nr. 5					
07-3A3OE-KO-152-m01	Plant and Animal Ecology							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 90 minutes) creditable for bonus					
	Referred to in LPO I		§ 61 I Nr. 4					
07-3A3GEM-T-152-m01	Genes, Molecules, Technologies							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4)					
	Method of assessment		written examination (approx. 90 minutes) creditable for bonus					
07-3A3BC-152-m01	Basic Biochemistry							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (1) + Ü (2)					
	Method of assessment		written examination (approx. 60 minutes) creditable for bonus					
	other prerequisites		Admission prerequisite to assessment: exercises. Regular attendance of exercises (minimum 80%) and successful completion of the respective exercises (approx. 25 to 30 hours) are prerequisites for admission to assessment.					
Modules Mathematics/Quantitative Biology								
07-M-BST-152-m01	Mathematical Biology and Biostatistics							
	ECTS	4	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 minutes) creditable for bonus					

Modules General Biology IV							
07-4A4FLO-211-m01	The Flora of Germany						
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level undergraduate
	Courses	V (1) + Ü (2) + E (2,5)					
	Method of assessment	written examination (approx. 45 minutes) and practical identification assignment (approx. 45 minutes), weighted or portfolio 1:1 Assessment offered: Once a year, summer semester creditable for bonus					
	other prerequisites	Admission prerequisite to assessment: Regular participation in the excursions (at least 80% attendance) and exercises. The prerequisite for admission to the exam is regular attendance at the exercises (at least 80% attendance) and the completion of the exercises to the extent of approx. 25 -30 hours					
	Participants and allocation of places	<p>180 yes</p> <p>Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available.</p> <p>Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot.</p> <p>Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery.</p> <p>Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.</p>					
	Referred to in LPO I	§ 41 I Nr. 1 (3 LP) and § 41 I Nr. 4 (2 LP) § 61 I Nr. 1 (3 LP) and § 61 I Nr. 4 (2 LP)					

07-4A4FAU-152-mo1	The Fauna of Germany							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (1) + Ü (2) + E (2.5)					
	Method of assessment		written examination (approx. 45 minutes) and practical identification assignment (approx. 45 minutes), weighted 1:1 Assessment offered: Once a year, summer semester creditable for bonus					
	other prerequisites		Admission prerequisite to assessment: regular attendance of field trips (minimum 80%) and completion of exercises. Regular attendance of exercises (minimum 80%) and successful completion of the respective exercises (approx. 25 to 30 hours) is a prerequisite for admission to assessment.					
	Participants and allocation of places		<p>180 places.</p> <p>Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration.</p> <p>A waiting list will be maintained and places re-allocated as they become available.</p> <p>Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot.</p> <p>Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery.</p> <p>Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.</p>					

Modules Special Biosciences I								
07-4S1N- VO1-152-mo1	Neurobiology 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (4) + S (1)					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus					
	Participants and allocation of places		20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-4S1N- VO2-152-m01	Integrative Behavioral Biology 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + S (2)					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus					
	Participants and allocation of places		20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-4S1N- VO5-152-m01	Biology and Ecology of Arthropods							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (4) + S (1)					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus					
	Participants and allocation of places		15 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-4S1AM-B-152-m01	Methods in Biotechnology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + S (2)					
	Method of assessment		written examination (approx. 30 to 60 minutes) creditable for bonus					
	Participants and allocation of places		<p>25 places.</p> <p>Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration.</p> <p>A waiting list will be maintained and places re-allocated as they become available.</p> <p>Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot.</p> <p>Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery.</p> <p>Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.</p>					

07-4S1MOLB-152-mo1	Aspects of Molecular Biotechnology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + S (2)					
	Method of assessment		written examination (approx. 30 to 60 minutes) creditable for bonus					
	Participants and allocation of places		<p>25 places.</p> <p>Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration.</p> <p>A waiting list will be maintained and places re-allocated as they become available.</p> <p>Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot.</p> <p>Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery.</p> <p>Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.</p>					

07-4S1M- Z6-152-m01	Special Bioinformatics 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (1) + Ü (5)					
	Method of assessment		Log (approx. 10 to 20 pages) Language of assessment: German or English creditable for bonus					
	Participants and allo- cation of places		20 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-4S1PS2-211-m01	Methods in Plant Ecophysiology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (4) + S (1)					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus					
	Participants and allocation of places		15 yes Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-4S1PS3-152-mo1	Pharmaceutical Drugs in Plants							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		Ü (4) + S (1)					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus					
	Participants and allocation of places		15 places. Should the number of applications exceed the number of available places, places will be allocated as follows: Students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits will be given preferential consideration. Should the module be used in other subjects, there will be two quotas: 95% of places will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits and 5% of places (a minimum of one place in total) will be allocated to students of the Bachelor's degree subject Biologie (Biology) with 60 ECTS credits and to students of the Bachelor's degree subjects Computational Mathematics and Mathematik (Mathematics), each with 180 ECTS credits, as part of the application-oriented subject Biology (as well as potentially to students of other 'importing' subjects). Should the number of places available in one quota exceed the number of applications, the remaining places will be allocated to applicants from the other quota. Should there be, within one module component, several courses with a restricted number of places, there will be a uniform regulation for the courses of one module component. In this case, places on all courses of a module component that are concerned will be allocated in the same procedure. In this procedure, applicants who already have successfully completed at least one other module component of the respective module will be given preferential consideration. A waiting list will be maintained and places re-allocated as they become available. Selection process group 1 (95%): Places will primarily be allocated according to the applicants' previous academic achievements. For this purpose, applicants will be ranked according to the number of ECTS credits they have achieved and their average grade of all assessments taken during their studies or of all module components in the subject of Biologie (Biology) (excluding Chemie (Chemistry), Physik (Physics), Mathematik (Mathematics)) at the time of application. This will be done as follows: First, applicants will be ranked, firstly, according to their average grade weighted according to the number of ECTS credits (qualitative ranking) and, secondly, according to their total number of ECTS credits achieved (quantitative ranking). The applicants' position in a third ranking will be calculated as the sum of these two rankings, and places will be allocated according to this third ranking. Among applicants with the same ranking, places will be allocated according to the qualitative ranking or otherwise by lot. Selection process group 2 (5%): Places will be allocated according to the following quotas: Quota 1 (50 % of places): total number of ECTS credits already achieved in modules/module components of the Faculty of Biology; among applicants with the same number of ECTS credits achieved, places will be allocated by lot. Quota 2 (25 % of places): number of subject semesters of the respective applicant; among applicants with the same number of subject semesters, places will be allocated by lot. Quota 3 (25 % of places): lottery. Should the module be used only in the Bachelor's degree subject Biologie (Biology) with 180 ECTS credits, places will be allocated according to the selection process of group 1.					

07-S1-LP1-152-m01	Laboratory Practical Course I							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	P (5) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						
07-S1-Ex1-152-m01	Excursion I							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	E (2) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						
07-S1-IP1-152-m01	Interdisciplinary Project I							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	R (5) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						

Modules Special Biosciences II								
07-5EP-152-m01	External Practical Course							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	P (1) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German and/or English creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						
07-S2-EX2-152-m01	Excursion II							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	E (8) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German and/or English creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						
07-S2-IP2-152-m01	Interdisciplinary Project II							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	R (8) Module taught in: German and/or English						
	Method of assessment	a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German and/or English creditable for bonus						
	other prerequisites	Please consult with course advisory service in advance.						

o7-S2-LP2-152-mo1	Laboratory Practical Course II							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		P (8) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 45 to 60 minutes) or b) log (approx. 10 to 20 pages) or c) oral examination of one candidate each (approx. 30 minutes) or d) oral examination in groups of up to 3 candidates (approx. 20 minutes per candidate) or e) presentation (approx. 20 to 30 minutes) or f) practical examination (on average approx. 2 hours; time to complete will vary according to subject area but will not exceed a maximum of 4 hours). Students will be informed about the method and length of the assessment prior to the course. Language of assessment: German and/or English creditable for bonus					
	other prerequisites		Please consult with course advisory service in advance.					
Focus Chemistry (0 or 30 ECTS credits)								
Compulsory (21 ECTS credits)								
o8-AC-Ex-Chem-152-mo1	Experimental Chemistry							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4)					
	Method of assessment		written examination (approx. 90 minutes) Language of assessment: German and/or English					
o8-OC1-152-mo1	Organic Chemistry 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (1)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English					
	Referred to in LPO I		§ 62 I Nr. 2					
o8-PC-QMS-FU-152-mo1	Principles of quantum mechanics and spectroscopy for engineering students							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					

o8-TC-152-m01	Quantum Chemistry							
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (1)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 1 h) § 22 II Nr. 2 f) § 22 II Nr. 3 f)					
Compulsory Electives (9 ECTS credits)								
o8-OC2-152-m01	Organic Chemistry 2 and analytical methods in organic chemistry							
	ECTS	9	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (1) + V (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English					
	Referred to in LPO I							
o8-PC-TKE-152-m01	Thermodynamics, Kinetics, Electrochemistry							
	ECTS	9	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 62 I Nr. 1					
o8-PC-SBL-152-m01	Symmetry, chemical bonding and light							
	ECTS	9	Duration	2 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (2) + V (2) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English					
	Referred to in LPO I							

o8-AS1-152-mo1	Inorganic Chemistry of the Elements							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + V (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes) or b) oral examination of one candidate each (20 to 30 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) or d) log (approx. 20 pages) or e) presentation (approx. 30 minutes) Language of assessment: German and/or English					
	Referred to in LPO I		§ 62 I Nr. 1					
Focus Geography (0 or 30 ECTS credits)								
o4-Geo-PG1Ex-152-mo1	General Physical Geography: Exogenic Dynamics - Geomorphology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + T (1) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 47 I Nr. 1 § 66 I Nr. 1					
o4-Geo-PG1En-152-mo1	General Physical Geography: Endogenic Dynamics - Introduction to Geology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + T (1) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 47 I Nr. 1 § 66 I Nr. 1					
o4-Geo-PG1KL-152-mo1	General Physical Geography: Climate System							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English					
	Referred to in LPO I		§ 47 I Nr. 1 § 66 I Nr. 1					

o4-Geo-HG1S-152-m01	General Human Geography: Introduction to the Geography of Cities, Towns and Villages							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3) Module taught in: German and/or English						
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: German and/or English						
	Referred to in LPO I	§ 47 I Nr. 1 § 66 I Nr. 1						
o4-Geo-HG1W-152-m01	General Human Geography: Introduction to Economic Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3) Module taught in: German and/or English						
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: German and/or English						
	Referred to in LPO I	§ 47 I Nr. 1 § 66 I Nr. 1						
o4-Geo-HG1B-152-m01	General Human Geography: Introduction to Social and Population Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (3) Module taught in: German and/or English						
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: German and/or English						
	Referred to in LPO I	§ 47 I Nr. 1 § 66 I Nr. 1						
o4-Geo-KART-152-m01	Cartography and Geoinformation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + T (2) Module taught in: German and/or English						
	Method of assessment	written examination (approx. 75 minutes) Language of assessment: German and/or English creditable for bonus						
	Referred to in LPO I	§ 66 I Nr. 2						

o4-Geo-FER-NE-152-mo1	Introduction to Geographical Remote Sensing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 66 I Nr. 2					
o4-Geo-FER-NA-152-mo1	Applications of Remote Sensing in Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus					
o4-Geo-RG-V1-152-mo1	Regional Geography - Lecture course 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English					
	Referred to in LPO I		§ 47 I Nr. 2 § 66 I Nr. 1					
o4-Geo-RG-V2-152-mo1	Regional Geography - Lecture course 2							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 15 minutes) or c) oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: German and/or English					
	Referred to in LPO I		§ 47 I Nr. 2 § 66 I Nr. 1					

Focus Computer Science (0 or 30 ECTS credits)								
10-I-GdP-172-m01	Fundamentals of Programming							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (2) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus						
10-I-ADS-152-m01	Algorithms and data structures							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus						
	Referred to in LPO I	§ 49 I Nr. 1a § 69 I Nr. 1a						
10-I-ST-152-m01	Software Technology							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus						
	Referred to in LPO I	§ 49 I Nr. 1b § 69 I Nr. 1b						
10-I-PP-191-m01	Practical Course in Programming							
	ECTS	10	Duration		Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (6)						
	Method of assessment	practical examination (programming exercises, approx. 240 hours) and written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).						
	other prerequisites	Intended learning outcomes of the following module are required: 10-I-GdP. It is therefore strongly recommended to complete this before.						

10-I-SWP-152-m01	Practical course in software							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		practical project (Completion of a larger software project in groups (approx. 300 hours per person) and final presentation (approx. 10 minutes per group))					
	Modules successfully completed		10-I-PP, 10-I-ST					
	other prerequisites		In addition, the knowledge and skills acquired in module 10-I-ADS are required. Prior attendance of this module is therefore highly recommended.					
	Referred to in LPO I		§ 69 I Nr. 1d					
10-I-RAL-152-m01	Digital computer systems							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus					
10-I-RIÜ-191-m01	Computer Networks and Information Transmission							
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). creditable for bonus					
10-I-HWP-152-m01	Practical course in hardware							
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (6)					
	Method of assessment		portfolio: completion of approx. 3 to 10 project assignments (approx. 250 hours total) and presentation of results (approx. 10 minutes per project)					
Referred to in LPO I		§ 22 II Nr. 3b						

10-I-TIV-152-m01	Theoretical Informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate).					
	Referred to in LPO I		§ 49 I Nr. 1a § 69 I Nr. 1a					
10-I-TIT-191-m01	Tutorial Theoretical Informatics							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (2)					
	Method of assessment		a) exercises (consisting in completion of approx. 11 home work exercise sheets, presentation of own solutions in the exercise groups as well as approx. 5 short assessments written in the exercise group) or b) Written examination (approx. 180 to 240 minutes) Die Prüfungsart ist vom Prüfling festzulegen					
10-I-LOG-152-m01	Logic for informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					
10-I-AGT-152-m01	Algorithmic Graph Theory							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					

10-I=ICG-161-m01	Interactive Computer Graphics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Separate written examination for Master's students. Language of assessment: German and/or English creditable for bonus					
	Additional Information		Focuses available for students of the Master's programme Informatik (Computer Science, 120 ECTS credits): HCI.					
10-I-DB-152-m01	Databases							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 49 I Nr. 1b § 69 I Nr. 1b					
10-I-WBS-152-m01	Knowledge-based Systems							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					

10-I-DM-152-mo1	Data Mining							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					
10-I-KT-191-mo1	Computational Complexity							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					
10-I-KD-191-mo1	Cryptography and Data Security							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					
10-I-3D-152-mo1	3D Point Cloud Processing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b					

10-I-BS-191-m01	Operating Systems							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: English					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
10-I-RAK-152-m01	Computer Architecture							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
	Referred to in LPO I		§ 22 II Nr. 3b § 69 I Nr. 1c: Rechnerarchitektur					
10-I-SKS-191-m01	Control Principles of Modern Communication Systems							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
10-I-AR-152-m01	Automation and Control Technology							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					

10-I-MCS-191-m01	Introduction into Human-Computer Interaction							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (1)					
	Method of assessment		written examination (approx. 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
10-I-SEC-191-m01	IT Security							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + Ü (2) Module taught in: German and/or English					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
10-I-GI-152-m01	Selected Basics of Computer Science							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2)					
	Method of assessment		written examination (approx. 60 to 120 minutes). If announced by the lecturer at the beginning of the course, the written examination may be replaced by an oral examination of one candidate each (approx. 20 minutes) or an oral examination in groups of 2 candidates (approx. 15 minutes per candidate). Language of assessment: German and/or English creditable for bonus					
Focus Philosophy (0 or 30 ECTS credits)								
06-Ph-B-P1/1-152-m01	Introduction to Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		written examination (90 minutes)					
06-Ph-B-P1/2-152-m01	Historical epochs, main works, authors							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		oral examination (approx. 25 minutes)					

o6-Ph-B-P2/1-152-mo1	Philosophical principles of sciences I							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2)					
	Method of assessment		written examination (45 minutes)					
	Participants and allocation of places		Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available.					
o6-Ph-B-P2/2-152-mo1	Philosophical principles of sciences II							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written examination (90 minutes)					
o6-Ph-B-P3/1-152-mo1	Theoretical Philosophy I							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2)					
	Method of assessment		written examination (45 minutes)					
	Participants and allocation of places		Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available.					
o6-Ph-B-P4/1-152-mo1	Practical Philosophy I							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2)					
	Method of assessment		written examination (45 minutes)					
	Participants and allocation of places		Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available.					
o6-Ph-B-P5/1-152-mo1	History of Philosophy I							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2)					
	Method of assessment		written examination (45 minutes)					
	Participants and allocation of places		Only as part of pool of general transferable skills (ASQ): max. 20 places. Should the number of applications exceed the number of available places, places will be allocated according to the number of subject semesters. Among applicants with the same number of subject semesters, places will be allocated by lot. A waiting list will be maintained and places re-allocated by lot as they become available.					

o6-Ph-B-P6/1-152-m01	Issues of research in philosophy I							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		oral examination (approx. 25 minutes)					
o6-Ph-B-W1-152-m01	Text Analysis: Ancient Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written examination (approx. 90 minutes) or term paper (10 to 12 pages)					
	Referred to in LPO I		§ 68 I Nr. 2 a)					
o6-Ph-B-W2-152-m01	Text Analysis: Medieval Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		written examination (90 minutes) or term paper (10 to 12 pages)					
o6-Ph-B-W3-152-m01	Text Analysis: Modern Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		portfolio: 2 to 3 essays (approx. 10 pages total)					
o6-Ph-B-W4-152-m01	Text Analysis: Contemporary Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		portfolio: 2 to 3 essays (approx. 10 pages total)					
o6-Ph-B-W5-152-m01	Basic disciplines of theoretical philosophy: Metaphysics and Epistemology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		term paper (10 to 12 pages)					
	Referred to in LPO I		§ 32 I Nr. 1 c)					
o6-Ph-B-W6-152-m01	Specific disciplines of theoretical philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		term paper (10 to 12 pages)					
	Referred to in LPO I		§ 32 I Nr. 1 c)					
o6-Ph-B-W7-152-m01	Basic disciplines of practical philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		term paper (10 to 12 pages)					
	Referred to in LPO I		§ 32 I Nr. 1 c)					

o6-Ph-B-W8-152-mo1	Specific disciplines of practical philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	term paper (10 to 12 pages)						
	Referred to in LPO I	§ 32 I Nr. 1 c)						
o6-Ph-B-W10-152-mo1	Problems of Modern Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	oral examination (approx. 25 minutes)						
	Referred to in LPO I	§ 32 I Nr. 1 c)						
o6-Ph-B-W11-152-mo1	Problems of Theoretical Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	portfolio: 2 to 3 essays (approx. 10 pages total)						
o6-Ph-B-W12-152-mo1	Problems of Practical Philosophy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	portfolio: 2 to 3 essays (approx. 10 pages total)						
Focus Physics (0 or 30 ECTS credits)								
Compulsory Courses (14 ECTS credits)								
11-ENNF1-152-mo1	Classical Physics 1 for Students of Physics related Disciplines							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2) Module taught in: Ü: German or English						
	Method of assessment	written examination (approx. 120 minutes) Language of assessment: German and/or English						
	other prerequisites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.						
	Additional Information	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.						

11-ENNF2-152-m01	Classical Physics 2 for Students of Physics related Disciplines							
	ECTS	7	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2) Module taught in: Ü: German or English						
	Method of assessment	written examination (approx. 120 minutes) Language of assessment: German and/or English						
	other prerequisites	Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.						
	Additional Information	Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.						
Compulsory Electives 1 (3-9 ECTS credits)								
Students must take either module 11-PNNF or the two modules 11-P-PA and 11-P-FR1. Other combinations are not permitted.								
11-PNNF-152-m01	Laboratory Course Physics for Students of Physics Related Disciplines							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (4)						
	Method of assessment	a) practical assignment with oral test (approx. 15 minutes, during experiments) and b) written examination (90 minutes). Each experiment comprises preparation, performance and evaluation. Test as well as performance of experiments can each be repeated once.						
11-P-PA-152-m01	Laboratory Course Physics A (Mechanics, Heat, Electromagnetism)							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (2)						
	Method of assessment	practical assignment with talk (approx. 30 minutes) Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.						

11-P-FR1-152-m01	Data and Error Analysis							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (1) + Ü (1) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
	other prerequisites		Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.					
	Additional Information		Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.					
	Referred to in LPO I		§ 53 I Nr. 1 c) § 77 I Nr. 1 d)					
11-P-NFB-152-m01	Laboratory Course Physics B for Students of other Disciplines							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		P (2)					
	Method of assessment		practical assignment with talk (approx. 30 minutes) Preparing, performing and evaluating (record of readings or lab report) the experiments will be considered successfully completed if a Testat (exam) is passed. Exactly one experiment that was not successfully completed can be repeated once. After completion of all experiments, talk (with discussion; approx. 30 minutes) to test the candidate's understanding of the physics-related contents of the module. Talks that were not successfully completed can be repeated once. Both components of the assessment have to be successfully completed.					
	other prerequisites		Students are highly recommended to complete modules 11-P-PA and 11-P-FR1 prior to completing module 11-P-NFB.					
Compulsory Electives 2 (7-13 ECTS credits)								
11-E-O-152-m01	Optics and Waves							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					

11-E-A-152-mo1	Atoms and Quanta							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
11-E-F-152-mo1	Introduction to Solid State Physics							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
11-E-T-152-mo1	Nuclear and Elementary Particle Physics							
	ECTS	6	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (3) + Ü (1) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
11-T-M-152-mo1	Theoretical Mechanics							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
	other prerequisites		Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.					
	Additional Information		Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.					

11-T-Q-152-m01	Quantum Mechanics							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
	other prerequisites		Admission prerequisite to assessment: completion of exercises (approx. 13 exercise sheets per semester). Students who successfully completed approx. 50% of exercises will qualify for admission to assessment. The lecturer will inform students about the respective details at the beginning of the semester.					
11-T-S-152-m01	Additional Information		Registration: If a student registers for the exercises and obtains the qualification for admission to assessment, this will be considered a declaration of will to seek admission to assessment pursuant to Section 20 Subsection 3 Sentence 4 ASPO (general academic and examination regulations). If the module coordinators subsequently find that the student has obtained the qualification for admission to assessment, they will put the student's registration for assessment into effect. Only those students that meet the respective prerequisites can successfully register for an assessment. Students who did not register for an assessment or whose registration for an assessment was not put into effect will not be admitted to the respective assessment. If a student takes an assessment to which he/she has not been admitted, the grade achieved in this assessment will not be considered.					
	Statistical Physics							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
11-T-E-152-m01	Electrodynamics							
	ECTS	8	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (4) + Ü (2) Module taught in: Ü: German or English					
	Method of assessment		written examination (approx. 120 minutes) Language of assessment: German and/or English					
Focus Economics (0 or 30 ECTS credits)								
12-EBWL-G-212-m01	Organization							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					

12-ExtUR-G-212-m01	Accounting							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-IntUR-G-212-m01	Managerial Accounting							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-Mik1-G-212-m01	Microeconomics 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-Mik2-G-212-m01	Microeconomics 2							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-Mak1-G-212-m01	Macroeconomics 1							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-Mak2-G-212-m01	Macroeconomics 2							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-BPL-G-212-m01	Supply, Production and Operations Management							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					

12-I&F-G-212-m01	Investment and Finance							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-Mark-G-212-m01	Marketing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English					
12-WiPo-G-212-m01	Public Policy							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2) Module taught in: German and/or English					
	Method of assessment		a) written examination (approx. 60 minutes) or b) portfolio (approx. 20 pages) Language of assessment: German and/or English					
12-EWiinf-G-212-m01	Business Informatics							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		written examination (approx. 60 minutes) Language of assessment: German and/or English creditable for bonus					
12-Ebus-F-212-m01	E-Business							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		V (2) + T (2)					
	Method of assessment		a) written examination (approx. 60 minutes) or b) term paper (approx. 15 pages) or c) term paper (approx. 10 pages) and presentation (approx. 10 minutes), weighted 2:1 or d) oral examination in groups of up to 3 candidates (approx. 10 minutes per candidate) Language of assessment: German and/or English					

Key Skills Area (20 ECTS credits)								
General Key Skills (5 ECTS credits)								
In addition to the modules listed below, students may also take modules offered by JMU as part of the pool of general transferable skills (ASQ).								
General Key Skills (subject-specific)								
10-M-Tu-Ko-152-m01	Exercise tutor or proof-reading in Mathematics							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		T (o)					
	Method of assessment		Assessment of tutoring activities or correcting work by supervising lecturers or exercise supervisors (1 to 2 teaching units or approx. 5 pieces of correcting work)					
	Additional Information		Please direct application to teaching coordinator Mathematics, he/she will select participants.					
	Referred to in LPO I		§ 22 II Nr. 3 f)					
10-M-VHB1-152-m01	E-Learning and Blended Learning Mathematics 1							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (2) Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)					
	Method of assessment		project (web-based, 15 to 20 hours) Assessment offered: Once a year, winter semester					
10-M-VHB2-152-m01	E-Learning and Blended Learning Mathematics 2							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		Ü (2) Course type: eLearning, mostly Virtuelle Hochschule Bayern (vhb)					
	Method of assessment		project (web-based, 15 to 20 hours) Assessment offered: Once a year, summer semester					
Subject-specific Key Skills (15 ECTS credits)								
Subject-specific Key Skills, Compulsory Courses (11 ECTS credits)								
10-M-COM-152-m01	Computational Mathematics							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (1) + Ü (2)					
	Method of assessment		project in the form of programming exercises (approx. 20 to 25 hours) Assessment offered: Once a year, winter semester Language of assessment: German and/or English					
	Referred to in LPO I		§ 22 II Nr. 3 f)					

10-M-PRG-152-m01	Programming course for students of Mathematics and other subjects							
	ECTS	3	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	P (2)						
	Method of assessment	project in the form of programming exercises (approx. 20 to 25 hours) Assessment offered: Once a year, summer semester Language of assessment: German and/or English						
	Referred to in LPO I	§ 22 II Nr. 3 f)						
10-M-GBM-152-m01	Basic Notions and Methods of Mathematical Reasoning							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	V (1) + Ü (1)						
	Method of assessment	project (10 to 15 pages) Language of assessment: German and/or English						
	Additional Information	Additional information on module duration: block taught prior to the beginning of the lecture period.						
10-M-ASM-152-m01	Referred to in LPO I	§ 22 II Nr. 1 h) § 22 II Nr. 2 f)						
	Reasoning and Writing in Mathematics							
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	V (1) + Ü (1)						
	Method of assessment	project (10 to 20 pages) Language of assessment: German and/or English						
Subject-specific Key Skills, Compulsory Electives (4 ECTS credits)								
10-M-SEM2-152-m01	Supplementary Seminar Mathematics							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses	S (2)						
	Method of assessment	talk (60 to 120 minutes) Language of assessment: German and/or English						
10-M-EFM-152-m01	Introduction to Stochastic Financial Mathematics							
	ECTS	9	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses	V (4) + Ü (2)						
	Method of assessment	a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English creditable for bonus						

10-M-TOP-152-mo1	Introduction to Topology							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		a) written examination (approx. 90 to 180 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English creditable for bonus					
10-M-GES-152-mo1	Selected Topics in History of Mathematics							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		a) talk (45 to 90 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English					
10-M-MSC-152-mo1	Mathematical Writing							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		a) talk (45 to 90 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English					
10-M-SCH-152-mo1	School Mathematics from a Higher Perspective							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (2) + Ü (2)					
	Method of assessment		a) talk (approx. 45 minutes) or b) term paper (10 to 15 pages) or c) project (15 to 25 hours) Assessment offered: In the semester in which the course is offered and in the subsequent semester Language of assessment: German and/or English					
10-M-PRO-152-mo1	Proseminar Mathematics							
	ECTS	4	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		S (2)					
	Method of assessment		talk (60 to 120 minutes) Assessment offered: In the semester in which the course is offered Language of assessment: German and/or English					

10-M-KRY-232-m01	Mathematical Aspects of Modern Cryptography							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	undergraduate
	Courses		V (3) + Ü (1)					
	Method of assessment		a) written examination (approx. 60 to 120 minutes, usually chosen) or b) oral examination of one candidate each (15 to 30 minutes) or c) oral examination in groups (groups of 2, 10 to 15 minutes per candidate) Language of assessment: German and/or English Assessment offered: Only when announced in the semester in which the courses are offered and in the subsequent semester creditable for bonus					
Thesis (11 ECTS credits)								
10-M-BAM-152-m01	Bachelor Thesis Mathematics							
	ECTS	11	Duration	1 semester	Method of grading	numerical grade	Modul level	undergraduate
	Courses		No courses assigned to module					
	Method of assessment		Bachelor's thesis (approx. 275 to 330 hours)					
	other prerequisites		The supervisor may make the successful completion of certain modules that are relevant for the respective topic a prerequisite for the assignment of the topic.					
	Additional Information		Time to complete: 10 weeks.					