

## Annex SFB

### Studienfachbeschreibung (subject description, SFB) for the subject Applied Earth Observation and Geoanalysis (EAGLE) as a Master's with 1 major with the degree "Master of Science" (120 ECTS credits)

Responsible: Faculty of Arts, Historical, Philological, Cultural and Geographical Studies

Examination regulations version: 2024

Responsible: Institute of Geography and Geology

Examination regulations version: 2024

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)):

**13-Dec-2023 (2023-108)**

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)								
Theoretical Basics (15 ECTS credits)								
04-GEO-TB1-162-m01	Introduction to Remote Sensing and Geoanalysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) Module taught in: English						
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)						
04-GEO-TB2-162-m01	Applications of Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	V (2) Module taught in: English						
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)						
04-GEO-TB3-242-m01	Scientific Publishing and Writing in Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses	V (2) Module taught in: English						
	Method of assessment	term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)						
Methodological Basics (15 ECTS credits)								
04-GEO-MB1-242-m01	Introduction to Spatial Data Analysis Software							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	Ü (2) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						

o4-GEO-MB2-242-m01	Introduction to Programming in Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	Ü (4) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						
o4-GEO-MB3-162-m01	From Field Measurements to Geoinformation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses	Ü (2) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						
Practical Application (10 ECTS credits)								
o4-GEO-INT1-242-m01	Internship							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses	P (0) Module taught in: English						
	Method of assessment	report in form of a presentation (approx. 15 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)						
	Additional Information	Additional information on module duration: during semester or as block						
o4-GEO-INT2-242-m01	Innovation Laboratory							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	P (2) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)						
	Additional Information	Additional information on module duration: during semester or as block						

Compulsory Electives (50 ECTS credits)								
Overarching Methods and Applications (OMA) (10-20 ECTS credits)								
o4-GEO- OMA1-242-mo1	Spatial modelling and prediction							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA2-242-mo1	Introduction to Active remote sensing systems							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA3-242-mo1	Processing and image analysis of active remote sensing systems							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- OMA4-242-mo1	<b>Lidar Remote Sensing</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	S (1) + Ü (1) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						
o4-GEO- OMA5-242-mo1	<b>Hyperspectral Earth Observation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	S (1) + Ü (1) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						
o4-GEO- OMA6-242-mo1	<b>Earth Observation Informatics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	S (1) + Ü (1) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						
o4-GEO- OMA7-242-mo1	<b>Introduction to Spatial Python</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses	S (1) + Ü (1) Module taught in: English						
	Method of assessment	a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus						

o4-GEO- OMA8-242-mo1	Advanced Spatial Python							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA9-242-mo1	Advanced Spatial Programming							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA10-242-mo1	Advanced Coding for Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA11-242-mo1	Earth Observation Cloud Computing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- OMA12-242-mo1	Advanced Cloud Computing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA13-242-mo1	UAS Application in Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA14-242-mo1	Theory and practice of UAS operation and methods							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA15-242-mo1	UAS based Earth Observation data analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					



o4-GEO- OMA16-242-mo1	Advanced Earth Observation Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA17-242-mo1	Innovative Earth Observation Applications							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA18-242-mo1	Advanced Remote Sensing Applications							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA19-242-mo1	Novel Image Analysis Methods							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- OMA20-242-m01	Spatio-temporal environmental Methods							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA21-242-m01	Earth Observation Research Advances							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA22-242-m01	Science from Wall-to-Wall							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA23-242-m01	Information sciences in Remote Sensing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- OMA24-242-m01	<b>Innovative Earth Observation Methods</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- OMA25-242-m01	<b>AI approaches in Earth Observation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
<b>Environment (ENV) (0-30 ECTS credits)</b>								
o4-GEO-ENV1-242- m01	<b>Land Surface Dynamics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV2-242- m01	<b>Earth Observation of drylands and arid regions</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO-ENV3-242-mo1	Earth Observation Terrain Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV4-242-mo1	Earth Observation of Cold Regions							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV5-242-mo1	Earth Observation of Polar Regions							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV6-242-mo1	Earth Observation of Alpine Regions							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO-ENV7-242-mo1	Earth Observation in Biodiversity Research							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV8-242-mo1	Multi-Scale Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV9-242-mo1	Earth Observation in Biology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV10-242-mo1	Earth Observation Time-Series Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- ENV11-242-m01	Advanced Applications in Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV12-242-m01	Earth Observation in Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV13-242-m01	Remote Sensing in Ecology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV14-242-m01	Environmental Field Work Approaches							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO- ENV15-242-mo1	Multi-Temporal Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV16-242-mo1	Earth Observation and Animal Movement Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV17-242-mo1	Earth Observation in Conservation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO- ENV18-242-mo1	Applied Earth Observation for Ecology							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					

o4-GEO-ENV19-242-m01	Earth Observation of Georisks							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
o4-GEO-ENV20-242-m01	Environmental Applications of Radar time-series							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German) creditable for bonus					
Urban (URB) (0-30 ECTS credits)								
o4-GEO-URB1-242-m01	Global to local Earth Observation of Urbanization							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		V (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB2-242-m01	Urban Remote Sensing							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					



o4-GEO-URB3-242-m01	Urban Classification Approaches							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB4-242-m01	From Urban Fieldwork to Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB5-242-m01	Global Urbanization							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB6-242-m01	Geo-computation in Urban Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

o4-GEO-URB7-242-mo1	Urban Geography							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB8-242-mo1	Geo-Linguistics within Earth Observation							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB9-242-mo1	Urban Field Data Acquisition							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-URB10-242-mo1	Historical Urban Analysis							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

o4-GEO- URB11-242-mo1	<b>Applied Programming for Urban Analytics</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO- URB12-242-mo1	<b>Remote Sensing of Urban Areas</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO- URB13-242-mo1	<b>Risk and Disaster Earth Observation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO- URB14-242-mo1	<b>OpenSource coding in Urban Earth Observation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

o4-GEO- URB15-242-mo1	<b>Earth Observation of urban morphology</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO- URB16-242-mo1	<b>Urban remote sensing and socio-economy</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO- URB17-242-mo1	<b>Urban-human interaction analysis</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	
	Courses		S (1) + Ü (1) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) written examination (approx. 45 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
<b>Soft Skills (SOS) (5-15 ECTS credits)</b>								
o4-GEO-SOS1-242- mo1	<b>Scientific Presentation</b>							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

o4-GEO-SOS2-242-mo1	Advanced Skills on the Master's Level							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-SOS4-242-mo1	Research Project Management							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-SOS6-242-mo1	Scientific Maps							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
o4-GEO-SOS7-242-mo1	Scientific Graphs							
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

04-GEO-SOS9-242-m01	Innovative Research Softskills							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	graduate
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
04-GEO-SOS11-242-m01	Applied Remote Sensing outside academia							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
04-GEO-SOS12-242-m01	Science Communication							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
04-GEO-SOS13-242-m01	Science Visualization							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					

o4-GEO-SOS14-242-m01	Advanced Scientific Softskills							
	ECTS	5	Duration	1 semester	Method of grading	(not) successfully completed	Modul level	
	Courses		S (2) Module taught in: English					
	Method of assessment		a) presentation (approx. 30 minutes) or b) preparing a poster (approx. 10 hours total) or c) term paper (approx. 15 pages) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					
Thesis (30 ECTS credits)								
o4-GEO-MA1-162-m01	Master-Thesis EAGLE							
	ECTS	28	Duration	1 semester	Method of grading	numerical grade	Modul level	graduate
	Courses		No courses assigned to module					
	Method of assessment		Master's thesis (approx. 60 pages) Language of assessment: English					
	Additional Information		Time to complete: 6 months.					
o4-GEO-MA2-162-m01	Final Colloquium on Master Thesis							
	ECTS	2	Duration		Method of grading	numerical grade	Modul level	graduate
	Courses		K (o) Module taught in: English					
	Method of assessment		talk (approx. 30 minutes) with subsequent discussion (approx. 15 minutes) Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)					