

## Annex SFB

### Studienfachbeschreibung (subject description, SFB) for the subject

### Geographic Science Approaches to Environmental Challenges (GEOSPHERES) as a Master's with 1 major with the degree "" (120 ECTS credits)

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

Responsible: Institute of Geography and Geology

Examination regulations version: 2025

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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)):

**??-??-2025 (2025-??)**

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	<b>Module title</b>						
	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)				

<b>Compulsory Courses (50 ECTS credits)</b>							
<b>Scientific Discipline (25 ECTS credits)</b>							
04-Geo-GS-RV1-252-m01	<b>Environmental challenges I</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English					
04-Geo-GS-RV2-252-m01	<b>Environmental challenges II</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English					
04-Geo-GS-RS-252-m01	<b>Discussing current topics in environmental research</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	Presentation (approx. 20 minutes) with related term paper (approx. 15 pages) about a session as group work Language of assessment: English					
04-Geo-GS-AP-252-m01	<b>Applied project (with block course at the end of the semester)</b>						
	ECTS	10	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	R (8) Module taught in: English					
	Method of assessment	project work (approx. 90 hours total) Language of assessment: English					
<b>Methology (15 ECTS credits)</b>							
04-Geo-GS-AS-252-m01	<b>Applied statistics in geosciences</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	a) written exercises (approx. 15 pages) or b) oral examination of one candidate each or oral examination in groups of up to 3 candidates (approx. 15 minutes per candidate) Language of assessment: English					

04-Geo-GS- GIS-252-m01	<b>Advanced GIS &amp; geoinformatics</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	project work (approx. 15 pages) Language of assessment: English					
04-Geo-GS- SWP-252-m01	<b>Scientific writing and presenting</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	presentation (approx. 10 minutes) with related term paper (approx. 15 pages) Language of assessment: English					
<b>Work Placement (10 ECTS credits)</b>							
04-Geo-GS- WP-252-m01	<b>Work placement / Professional practical training for Students of GEOSPHERES</b>						
	ECTS	10	Duration	1 semester	Method of grading	(not) successfully completed	Modul level
	Courses	P (0) Module taught in: English					
	Method of assessment	report on work placement (approx. 10 pages) Language of assessment: English					
	Additional Information	Additional information on module duration: approx. 8 weeks. Students must submit a letter issued by the institution at which they completed their placement. This letter must confirm the start and end dates as well as the contents of the placement.					
<b>Compulsory Electives (40 ECTS credits)</b>							
<b>Courses Specialisation in the Scientific Discipline (40 ECTS credits)</b>							
<b>Physical Geography</b>							
04-Geo-GS- PG1-252-m01	<b>Earth surface processes and landforms in a changing world</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
	Participants and allocation of places	20 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.					

o4-Geo-GS- PG2-252-m01	<b>Human-environmental interactions</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
Participants and allocation of places	20 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.						
o4-Geo-GS- PG3-252-m01	<b>Natural risks and hazards</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	20 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.						
o4-Geo-GS- PG4-252-m01	<b>Landscape dynamics in the Anthropocene</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	20 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.						

Climatology							
04-Geo-GS- Clim1-252-m01	<b>Man-made climate change, implications and mitigation</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
	Participants and allocation of places	20 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.					
04-Geo-GS- Clim2-252-m01	<b>Weather phenomena in the mid-latitudes</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester creditable for bonus					
	Participants and allocation of places	20 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.					
04-Geo-GS- Clim3-252-m01	<b>Meteorological and climate hazards and their management</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	term paper (approx. 20 pages) Language of assessment: English Assessment offered: once a year, summer semester					
	Participants and allocation of places	20 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.					

04-Geo-GS- Clim4-252-m01	<b>Measuring and forecasting of weather in the mid-latitudes</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	project work (approx. 20 pages) Language of assessment: English Assessment offered: once a year, summer semester creditable for bonus					
	Participants and allocation of places	20 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.					
Additional Information	Successfully completed module 04-Geo-GS-Clim2 is recommended						
<b>Soil Geography</b>							
04-Geo-GS- SG1-252-m01	<b>Soils in a changing environment</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
	Participants and allocation of places	20 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.					
04-Geo-GS- SG2-252-m01	<b>Soil dynamics and natural hazards</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
	Participants and allocation of places	20 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.					

04-Geo-GS- SG3-252-m01	<b>Analytical methods in soil and environmental studies</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	project work (e.g. documentation and analysis of laboratory and field data, approx. 20 pages) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	16 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.						
04-Geo-GS- SG4-252-m01	<b>Challenges and solutions in soil and landscape dynamics</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) presentation (approx. 30 minutes) with related term paper (approx. 20 pages) or b) written examination (approx. 45 minutes) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	20 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.						
<b>Georesources</b>							
04-Geo-GS- GR1-252-m01	<b>Geology of mineral deposits</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
Participants and allocation of places	20 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.						



o4-Geo-GS-GR2-252-m01	<b>Climate change through Earth's history</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	V (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: English Assessment offered: once a year, winter semester					
Participants and allocation of places	20 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.						
o4-Geo-GS-GR3-252-m01	<b>Applied environmental geochemistry and mineralogy</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	20 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.						
o4-Geo-GS-GR4-252-m01	<b>GIS applications in geology</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	Ü (2) Module taught in: English					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 minutes) Language of assessment: English Assessment offered: once a year, summer semester					
Participants and allocation of places	20 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.						

Courses Extension in the Scientific Discipline							
04-Geo-GS- FE1-252-m01	<b>Subsidiary subject-specific development for Students of GEOSPHERES 1</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English or German (module will be held in English; in addition, the lecturer may, where possible, decide to hold module in German)					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 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-GS- FE2-252-m01	<b>Subsidiary subject-specific development for Students of GEOSPHERES 2</b>						
	ECTS	5	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	S (2) Module taught in: English or German (module will be held in English; in addition, the lecturer may, where possible, decide to hold module in German)					
	Method of assessment	a) written examination (approx. 45 minutes) or b) oral examination of one candidate each (approx. 30 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)					
Thesis (30 ECTS credits)							
04-Geo-GS- MA1-252-m01	<b>Progress report on Master thesis</b>						
	ECTS	2	Duration	1 semester	Method of grading	(not) successfully completed	Modul level
	Courses	K (o) Module taught in: English					
	Method of assessment	work-in-progress report (approx. 20 minutes) with subsequent discussion (approx. 25 minutes) Language of assessment: English					
04-Geo-GS- MA2-252-m01	<b>Master thesis GEOSPHERES</b>						
	ECTS	25	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	No courses assigned to module Module taught in: English					
	Method of assessment	Master's thesis (approx. 80 pages) Language of assessment: English					
	Additional Information	Time to complete: 6 months.					
04-Geo-GS- MA3-252-m01	<b>Final colloquium of Master thesis GEOSPHERES</b>						
	ECTS	3	Duration	1 semester	Method of grading	numerical grade	Modul level
	Courses	K (o) Module taught in: English					
	Method of assessment	talk (approx. 30 minutes) with subsequent discussion (approx. 15 minutes) Language of assessment: English					