

Subdivided Module Catalogue 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)

Examination regulations version: 2024

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

Studies

Responsible: Institute of Geography and Geology



Learning Outcomes

German contents and learning outcome available but not translated yet.

Wissenschaftliche Befähigung

- Das Master#Studium der Applied Earth Observation and Geoanalysis (EAGLE) vertieft die Lehr# und Forschungsinhalte der geographischen Fernerkundung. Der Studiengang ist in einen Pflicht#, Wahlpflichtbereich untergliedert und bereitet auf eine qualifizierte Erwerbstätigkeit vor. Das Ziel der Ausbildung ist es, den Studierenden fundierte und detaillierte Kenntnisse aus den wichtigsten Teilgebieten der geographischen Fernerkundung zu vermitteln und sie mit modernen Methoden des geographischen und fernerkundlichen Denkens und Arbeitens vertraut zu machen. Deshalb wird auf das Verständnis der fundamentalen geographischen Begriffe und Theorien sowie auf einige grundlegende Methodenkenntnisse und die Entwicklung typischer Denkstrukturen besonderer Wert gelegt. Zentrales Lernziel ist somit der Erwerb der Fähigkeit, räumliche Strukturen und Entwicklungsprozesse zielgerichtet zu analysieren, zu dokumentieren und zu bewerten. Auch die Fähigkeit zum selbständigen wissenschaftlichen Arbeiten soll massiv gefördert werden.
- Der anwendungsbezogene englischsprachige Masterstudiengang bietet Möglichkeiten der Vertiefung und Spezialisierung und bereitet auf eine hoch qualifizierte Berufstätigkeit im akademischen oder im angewandten Bereich vor.
- Vertiefung des im Rahmen des ersten berufsbefähigenden Studiums erworbenen geo# und raumwissenschaftliches Fachwissens und Erweiterung des methodischen und analytischen Ansatzes; Vertiefung der Kenntnisse über die Zusammenhänge innerhalb der eigenen Disziplin und mit benachbarten Disziplinen, Befähigung komplexe, insbesondere interdisziplinäre, Probleme und Aufgabenstellungen im Umweltbereich zu erkennen und zu analysieren, zu formulieren und unter Zuhilfenahme von selbst recherchierter Fachliteratur zu lösen; Vertiefung und Erweiterung der Befähigung, über geographische, geo# und raumwissenschaftliche Inhalte und Probleme sowohl mit Fachkollegen und # kolleginnen als auch mit einer breiteren Öffentlichkeit zu kommunizieren; Vertiefung und Erweiterung der Befähigung, sowohl einzeln als auch als Mitglied internationaler Gruppen zu arbeiten und Projekte effektiv zu organisieren und durchzuführen sowie in eine entsprechende Führungsverantwortung hineinzuwachsen;
- Befähigung, zukünftige Probleme, Technologien und wissenschaftliche Entwicklungen in den Geo# und Raumwissenschaften zu erkennen und entsprechend in die Arbeit einzubeziehen; durch die Vertiefung wissenschaftlicher, technischer und sozialer Kompetenz (u.a. Abstraktionsvermögen, Team# und Kommunikationsfähigkeit) auf die Übernahme von Führungsverantwortung vorbereitet zu sein.

Befähigung zur Aufnahme einer Erwerbstätigkeit

- Definition, Reflexion und Bewertung von Zielen für Lern# und Arbeitsprozesse sowie eigenständige und nachhaltige Gestaltung von Lern# und Arbeitsprozessen: Praxisbezug: Studierende sind in der Lage, theoretisches Wissen in der Praxis anzuwenden
- Problemlösungskompetenz: Absolventen/innen können mit wissenschaftlichen Methoden auch unbekannte Herausforderungen zu analysieren und zielgerichtet zu bearbeiten.
- Teamfähigkeit / Konfliktkompetenz: Absolventen /innen sind in der Lage, konstruktiv und zielorientiert in einem heterogenen, teilweise internationalem, Team zusammenzuarbeiten, unterschiedliche Ansichten produktiv zur Zielerreichung zu nutzen und mögliche Konflikte zu bearbeiten.
- Zeitmanagement: Absolventen/innen können unterschiedliche Aufgaben parallel und unter Zeit# und Erfolgsdruck auch bei widrigen Rahmenbedingungen erfolgreich bearbeiten.

Persönlichkeitsentwicklung



- Diskussionskultur und Teamfähigkeit: Entwicklung der Diskussionsbereitschaft und Befähigung zur Teamarbeit.
- Interkulturelle Kompetenz: Die Absolventen /innen können ihre erworbenen Kompetenzen in unterschiedlichen interkulturellen Kontexten anwenden.
- Die Absolventen /innen können sich sicher in einem heterogenen Umfeld bewegen und andere Meinungen konstruktiv auf ein gemeinsames Ziel einbinden. Sie sind kritikfähig.

Befähigung zum gesellschaftlichen Engagement

• Ethisches Handeln: Die Absolventen /innen können gesellschaftliche, naturwissenschaftliche, kulturelle wie auch wirtschaftliche Entwicklungen vergleichen, kritisch reflektieren und begründet eigene Positionen beziehen. Sie haben die Fähigkeit entwickelt, ihre Kompetenzen in partizipative Prozesse einzubringen.



Abbreviations used

Course types: $\mathbf{E} = \text{field trip}$, $\mathbf{K} = \text{colloquium}$, $\mathbf{O} = \text{conversatorium}$, $\mathbf{P} = \text{placement/lab course}$, $\mathbf{R} = \text{project}$, $\mathbf{S} = \text{seminar}$, $\mathbf{T} = \text{tutorial}$, $\ddot{\mathbf{U}} = \text{exercise}$, $\mathbf{V} = \text{lecture}$

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

Unless otherwise stated, courses and assessments will be held in German, assessments will be offered every semester and modules are not creditable for bonus.

Notes

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 the 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:

ASP02015

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.



The subject is divided into

Abbreviation Module title		ECTS credits	Method of grading	page					
Compulsory Courses (40 E	CTS credits)	•		•					
Theoretical Basics (15 ECTS credits)									
04-GEO-TB1-162-m01	04-GEO-TB1-162-mo1 Introduction to Remote Sensing and Geoanalysis								
04-GEO-TB2-162-m01	Applications of Earth Observation	5	NUM	71					
04-GEO-TB3-242-m01	Scientific Publishing and Writing in Earth Observation	5	B/NB	72					
Metholodological Basics	(15 ECTS credits)	•							
04-GEO-MB1-242-m01	Introduction to Spatial Data Analysis Software	5	NUM	32					
04-GEO-MB2-242-m01	Introduction to Programming in Earth Observation	5	NUM	33					
04-GEO-MB3-162-m01	From Field Measurements to Geoinformation	5	NUM	34					
Practical Application (10	ECTS credits)	1							
	Internship	5	B/NB	28					
	Innovation Laboratory	5	NUM	29					
Compulsory Electives (50 E	<u>.</u>	1 -							
	d Applications (OMA) (10-20 ECTS credits)								
	Spatial modelling and prediction	5	NUM	38					
<u> </u>	Introduction to Active remote sensing systems	5	NUM	49					
	Processing and image analysis of active remote sensing sy-	 		42					
04-GEO-OMA3-242-m01	stems	5	NUM	53					
04-GEO-OMA4-242-m01	Lidar Remote Sensing	5	NUM	54					
04-GEO-OMA5-242-m01	Hyperspectral Earth Observation	5	NUM	55					
04-GEO-OMA6-242-m01	Earth Observation Informatics	5	NUM	56					
04-GEO-OMA7-242-m01	Introduction to Spatial Python	5	NUM	57					
04-GEO-OMA8-242-m01	Advanced Spatial Python	5	NUM	58					
04-GEO-OMA9-242-m01	Advanced Spatial Programming	5	NUM	59					
04-GEO-OMA10-242- m01	Advanced Coding for Earth Observation	5	NUM	35					
04-GEO-OMA11-242- m01	Earth Observation Cloud Computing	5	NUM	36					
04-GEO-OMA12-242- m01	Advanced Cloud Computing	5	NUM	37					
04-GEO-OMA13-242- m01	UAS Application in Earth Observation	5	NUM	39					
04-GEO-OMA14-242- m01	Theory and practice of UAS operation and methods	5	NUM	40					
04-GEO-OMA15-242- m01	UAS based Earth Observation data analysis	5	NUM	41					
04-GEO-OMA16-242- mo1	Advanced Earth Observation Analysis	5	NUM	42					
04-GEO-OMA17-242- mo1	Innovative Earth Observation Applications	5	NUM	43					
04-GFO-OMA18-242-	Advanced Remote Sensing Applications	5	NUM	44					



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04-GEO-OMA19-242- m01	Novel Image Analysis Methods	5	NUM	45
04-GEO-OMA20-242- m01	Spatio-temporal environmental Methods	5	NUM	46
04-GEO-OMA21-242- m01	Earth Observation Research Advances	5	NUM	47
04-GEO-OMA22-242- m01	Science from Wall-to-Wall	5	NUM	48
04-GEO-OMA23-242- m01	Information sciences in Remote Sensing	5	NUM	50
04-GEO-OMA24-242- m01	Innovative Earth Observation Methods	5	NUM	51
04-GEO-OMA25-242- m01	Al approaches in Earth Observation	5	NUM	52
Environment (ENV)			L	
04-GEO-ENV1-242-m01	Land Surface Dynamics	5	NUM	11
	Earth Observation of drylands and arid regions	5	NUM	20
04-GEO-ENV3-242-m01	Earth Observation Terrain Analysis	5	NUM	21
04-GEO-ENV4-242-m01	Earth Observation of Cold Regions	5	NUM	22
04-GEO-ENV5-242-m01	Earth Observation of Polar Regions	5	NUM	23
04-GEO-ENV6-242-m01	Earth Observation of Alpine Regions	5	NUM	24
04-GEO-ENV7-242-m01	Earth Observation in Biodiversity Research	5	NUM	25
04-GEO-ENV8-242-m01	Multi-Scale Earth Observation	5	NUM	26
04-GEO-ENV9-242-m01	Earth Observation in Biology	5	NUM	27
04-GEO-ENV10-242-m01	Earth Observation Time-Series Analysis	5	NUM	8
04-GEO-ENV11-242-m01	Advanced Applications in Earth Observation	5	NUM	9
04-GEO-ENV12-242-m01	Earth Observation in Geography	5	NUM	10
04-GEO-ENV13-242-m01	Remote Sensing in Ecology	5	NUM	12
04-GEO-ENV14-242-m01	Environmental Field Work Approaches	5	NUM	13
04-GEO-ENV15-242-m01	Multi-Temporal Earth Observation	5	NUM	14
04-GEO-ENV16-242-m01	Earth Observation and Animal Movement Analysis	5	NUM	15
04-GEO-ENV17-242-m01	Earth Observation in Conservation	5	NUM	16
04-GEO-ENV18-242-m01	Applied Earth Observation for Ecology	5	NUM	17
	Earth Observation of Georisks	5	NUM	18
04-GEO-ENV20-242-				
mo1	Environmental Applications of Radar time-series	5	NUM	19
Urban (URB)				
04-GEO-URB1-242-m01	Global to local Earth Observation of Urbanization	5	NUM	76
04-GEO-URB2-242-m01	Urban Remote Sensing	5	NUM	82
04-GEO-URB3-242-m01	Urban Classification Approaches	5	NUM	83
04-GEO-URB4-242-m01	From Urban Fieldwork to Analysis	5	NUM	84
04-GEO-URB5-242-m01	Global Urbanization	5	NUM	85
04-GEO-URB6-242-m01	Geo-computation in Urban Analysis	5	NUM	86
04-GEO-URB7-242-m01	Urban Geography	5	NUM	87
04-GEO-URB8-242-m01	Geo-Linguistics within Earth Observation	5	NUM	88
04-GEO-URB9-242-m01	Urban Field Data Acquisition	5	NUM	89
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04-GEO-URB10-242-m01	Historical Urban Analysis	5	NUM	73
04-GEO-URB11-242-m01	04-GEO-URB11-242-m01 Applied Programming for Urban Analytics		NUM	74
04-GEO-URB12-242-m01	Remote Sensing of Urban Areas	5	NUM	75
04-GEO-URB13-242-m01	Risk and Disaster Earth Observation	5	NUM	77
04-GEO-URB14-242-m01	OpenSource coding in Urban Earth Observation	5	NUM	78
04-GEO-URB15-242-m01	Earth Observation of urban morphology	5	NUM	79
04-GEO-URB16-242-m01	Urban remote sensing and socio-economy	5	NUM	80
04-GEO-URB17-242-m01	Urban-human interaction analysis	5	NUM	81
Soft Skills (SOS) (5-15 EC	TS credits)			
04-GEO-SOS1-242-m01	Scientific Presentation	5	NUM	62
04-GEO-SOS2-242-m01	Advanced Skills on the Master's Level	5	B/NB	65
04-GEO-SOS4-242-m01	Research Project Management	5	NUM	66
04-GEO-SOS6-242-m01	Scientific Maps	5	NUM	67
04-GEO-SOS7-242-m01	Scientific Graphs	5	NUM	68
04-GEO-SOS9-242-m01	Innovative Research Softskills	5	B/NB	69
04-GEO-SOS11-242-m01	Applied Remote Sensing outside academia	5	B/NB	60
04-GEO-SOS12-242-m01	Science Communication	5	B/NB	61
04-GEO-SOS13-242-m01	Science Visualization	5	B/NB	63
04-GEO-SOS14-242-m01	Advanced Scientific Softskills	5	B/NB	64
Thesis (30 ECTS credits)				
04-GEO-MA1-162-m01	Master-Thesis EAGLE	28	NUM	30
04-GEO-MA2-162-m01	Final Colloquium on Master Thesis	2	NUM	31



Module title					Abbreviation		
Earth Observation Time-Series Analysis				04-GEO-ENV10-242-m01			
Module coordinator				Module offered by			
				Institute of Geograp	hhy and Geology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5		erical grade		.p. 0:010.0(0)			
Duratio	on	Module level	Other prerequisites				
1 seme	ester						
Conten	nts						
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Intend	ed lear	ning outcomes					
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ster, in	format	ion on whether module c	an be chosen to earn	a bonus)	·		
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	tion of	places					
Additio	onal inf	formation					
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Worklo	oad						
150 h							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module	Module title Abbreviation							
Advanc	ed App	olications in Earth Observ	ation		04-GEO-ENV11-242-m01			
Module coordinator				Module offered by				
Module	e coora	mator			ahu and Caalami			
ECTS	Moth	ad of grading	Only after succ. con	Institute of Geograp	ony and Geology			
5		od of grading rical grade		ipi. or module(s)				
Duratio	·	Module level	Other prerequisites					
1 seme								
Conten	ts							
Intende	ed lear	ning outcomes						
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	an)			
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Module	taugh	t in: English						
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-			
b) prep c) term Langua	paring a paper uge of a possibl	e, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,			
Allocat	ion of p	olaces						
Additio	nal inf	ormation						
Worklo	ad							
150 h	150 h							
Teaching cycle								
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	e appea	ars in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)							



Module title					Abbreviation	
Earth Observation in Geography				04-GEO-ENV12-242-m01		
Module coordinator				Module offered by		
				Institute of Geograp	hhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	nts					
Intend	ed lear	ning outcomes				
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Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation		
Land Surface Dynamics					04-GEO-ENV1-242-m01		
Module coordinator				Module offered by	<u> </u>		
		-		Institute of Geograp	ohy and Geology		
ECTS	Metho	od of grading	Only after succ. com	ipl. of module(s)			
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster						
Conten	ts						
Intende	ed learı	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	an)		
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Worklo	ad						
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Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	Module appears in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Modul	Module title Abbreviation						
Remote Sensing in Ecology				•	04-GEO-ENV13-242-m01		
Module coordinator				Module offered by	<u>L</u>		
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ECTS	Moth	od of grading	Only after succ. con	Institute of Geograp	ony and Geology		
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Duration		Module level	Other prerequisites				
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Allocat	tion of	places					
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Worklo	oad						
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Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)							



Module title				Abbreviation			
Environmental Field Work Approaches				04-GEO-ENV14-242-m01			
Module coordinator				Module offered by			
				Institute of Geograp	hhy and Geology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5		erical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster						
Conten	nts						
Intend	ed lear	ning outcomes					
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ster, in	format	ion on whether module c	an be chosen to earn	a bonus)			
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Module	Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title			Abbreviation			
Multi-Temporal Earth Observation			04-GEO-ENV15-242-m01			
Module coordinator Mod			Module offered by			
				Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con		,	
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Duratio	on	Module level	Other prerequisites			
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Conter	nts					
Intend	ed lear	ning outcomes				
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Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e appe	ars in				
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Earth Observation and Animal Movement Analysis			ent Analysis		04-GEO-ENV16-242-m01	
Module coordinator				Module offered by		
				Institute of Geograp	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
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Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conten	nts					
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Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
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Worklo	oad					
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Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation		
Earth Observation in Conservation					04-GEO-ENV17-242-m01		
Module	e coord	inator		Module offered by			
				Institute of Geograp	ohy and Geology		
ECTS	Metho	od of grading	Only after succ. com	ıpl. of module(s)			
5	nume	rical grade					
Duratio	n	Module level	Other prerequisites				
1 seme	ster						
Conten	ts						
Intende	ed learı	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)		
S (1) + I	Ü (1)						
Module	e taugh	t in: English					
					tion offered — if not every seme-		
-		on on whether module ca		a bonus)			
b) prep c) term Langua	paring a paper age of a possibl	e, decide to hold assessi	s total) or erman (assessment w	ill be held in English	n; in addition, the examiner may,		
Allocat	ion of p	olaces					
Additio	nal inf	ormation	,				
Worklo	ad						
150 h							
Teaching cycle							
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title					Abbreviation	
Applie	d Earth	Observation for Ecology			04-GEO-ENV18-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geograp	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade		.pu or mounte(o)		
Duratio		Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ct hours, language —	· if other than Germa	ın)	
S (1) +		, or or wearny conta			,	
		nt in: English				
Metho	d of as	sessment (type, scope, la	nguage — if other the	an German, examina	ition offered — if not every seme-	
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)		
		on (approx. 30 minutes) o a poster (approx. 10 hours				
		(15 pages)	s total) of			
			erman (assessment w	vill be held in English	n; in addition, the examiner may,	
		le, decide to hold assessi	ment in German)			
	able for					
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teaching cycle						
						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	Module appears in					
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module	Module title Abbreviation						
Earth C	Observa	ation of Georisks			04-GEO-ENV19-242-m01		
Module	e coord	linator		Module offered by			
	<u> </u>	- Indicor		Institute of Geograp	ahy and Geology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5		rical grade		ipt. or inodute(s)			
Duratio		Module level	Other prerequisites				
1 seme							
Conten	nts	l .	J.				
Intend	ed lear	ning outcomes					
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		nt in: English					
		_	nguage — if other th	an German, examina	ation offered — if not every seme-		
		ion on whether module c			, 5		
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	tion of	places					
Additio	onal inf	ormation					
Worklo	oad						
150 h							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module	Module title Abbreviation					
Enviror	nmenta	l Applications of Radar ti	me-series		04-GEO-ENV20-242-m01	
Module	e coord	inator		Module offered by		
				Institute of Geogra	nhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		priy and deology	
5		rical grade		ipti oi inoddic(s)		
Duratio		Module level	Other prerequisites			
1 seme	ster					
Conten	its					
Intend	ed lear	ning outcomes				
		-				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
S (1) +		,				
` '		t in: English				
Metho	d of as	sessment (type, scope, la	nguage — if other th	an German, examina	ation offered — if not every seme-	
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)		
		on (approx. 30 minutes) o				
	_	ı poster (approx. 10 hours (15 pages)	s total) or			
			erman (assessment w	vill be held in English	n; in addition, the examiner may,	
where	possib	le, decide to hold assess		3	,	
credita	ble for	bonus				
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	Module appears in					
Mactor	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation					
Earth Observation of drylands and arid regions					04-GEO-ENV2-242-m01
Modul	e coord	linator		Module offered by	
	<u> </u>			Institute of Geograp	ahy and Geology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		ipti oi illoudite(s)	
Duratio		Module level	Other prerequisites		
1 seme					
Conten	ıts	•			
Intend	ed lear	ning outcomes			
		9			
Course	s (type	, number of weekly conta	ect hours, language —	- if other than Germa	nn)
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. ,	` '	it in: English			
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		ion on whether module ca			•
b) prep c) term Langua	paring a paper age of a possib	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat					
Additio	onal inf	ormation			
Worklo	oad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				
wasier's degree (1 inajor) Applied Earth Observation and Geodifictysis (EAGLE) (2024)					



Modul	Module title Abbreviation					
Earth (Observa	ation Terrain Analysis			04-GEO-ENV3-242-m01	
Module coordinator				Module offered by	L	
				Institute of Geograp	ahy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		erical grade		ipt. or inodute(s)		
Duratio		Module level	Other prerequisites			
1 seme						
Conter	nts	I .	J.			
Intend	ed lear	ning outcomes				
	cu icai	ming outcomes				
Course	e (tuno	e, number of weekly conta	ect hours language	if other than Garma	un)	
		, number of weekly conta	ict nours, tanguage –	- II Other than Germa	411)	
S (1) + Module		nt in: English				
		-	nguage — if other th	an German examina	ation offered — if not every seme-	
		ion on whether module c			and the every semie	
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	formation				
Worklo	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Earth Observation of Cold Regions					04-GEO-ENV4-242-m01	
Modul	e coord	linator		Module offered by		
				Institute of Geograp	hhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		erical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
Course	es (tvpe	e, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S (1) +		,				
		nt in: English				
Metho	d of as	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-	
ster, in	format	ion on whether module c	an be chosen to earn	a bonus)		
b) prep c) term Langua where	paring a paper age of a	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
	tion of					
		J				
Additio	onal inf	formation				
Worklo	oad					
150 h						
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Modul	Module title Abbreviation					
Earth (Observa	ation of Polar Regions		•	04-GEO-ENV5-242-m01	
Modul	e coord	linator		Module offered by		
		iniutoi		Institute of Geograp	ahy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade		ipt. or modute(s)		
Durati		Module level	Other prerequisites			
1 seme						
Conter	nts		I.			
Intend	ed lear	ning outcomes				
		5 outcomes				
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		it in: English				
		-	nguage — if other th	an German, examina	ation offered — if not every seme-	
		ion on whether module c				
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Alloca	tion of	places				
			-			
Additio	onal inf	ormation				
Worklo	oad		,			
150 h	150 h					
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation					Abbreviation
Earth Observation of Alpine Regions					04-GEO-ENV6-242-m01
Modul	e coord	linator		Module offered by	
Modul	e coord	illiatoi		Institute of Geograp	phy and Goology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		ipt. or inodute(3)	
Duration		Module level	Other prerequisites		
1 seme					
Conter	nts	I			
Intend	ed lear	ning outcomes			
	- Cu (Cu)	ining outcomes			
Course	e (type	, number of weekly conta	ct hours language	if other than Garma	n)
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` '	` '	nt in: English			
			nguage — if other tha	an German, examina	tion offered — if not every seme-
		ion on whether module ca			,
b) prep c) term Langua where	paring a paper age of a	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	tion of	places			
Additio	onal inf	ormation			
	-1				
Worklo	oad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				
Masier's degree (1 major) Applied Earth Observation and Geodifatysis (EAGLE) (2024)					



Module title					Abbreviation		
Earth Observation in Biodiversity Research				04-GEO-ENV7-242-m01			
Module coordinator				Module offered by			
				Institute of Geograp	phy and Geology		
ECTS	Meth	od of grading	Only after succ. com		on, and codes,		
5		rical grade		1			
Duratio	on	Module level	Other prerequisites				
1 seme	ster		-				
Conten	its						
Intend	ed lear	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)		
S (1) +		· · · · · · · · · · · · · · · · · · ·	, , ,				
		t in: English					
					tion offered — if not every seme-		
ster, in	format	ion on whether module c	an be chosen to earn	a bonus)			
		on (approx. 30 minutes) o					
		ı poster (approx. 10 hours (15 pages)	s total) or				
			erman (assessment w	vill be held in English	n; in addition, the examiner may,		
where	possib	le, decide to hold assess		J	,		
credita	ble for	bonus					
Allocat	ion of	olaces					
Additio	nal inf	ormation					
Worklo	ad						
150 h	150 h						
Teaching cycle							
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module	Module title Abbreviation					
Multi-S	Scale E	arth Observation			04-GEO-ENV8-242-m01	
Module	e coord	linator		Module offered by	<u> </u>	
Moduli	e coord	illiatoi		Institute of Geograp	aby and Coology	
ECTS	Moth	od of grading	Only after succ. con		ony and deology	
5		rical grade		ipt. or inodute(s)		
Duratio		Module level	Other prerequisites			
1 seme	-					
Conten	nts	I	I.			
Intend	ed lear	ning outcomes				
	cu icai	iiiig vateoilles				
Course	c (tuno	number of weekly cente	ect hours language	if other than Carra	nn)	
S (1) +		, number of weekly conta	ici nours, ianguage –	- ii otilei tilali Gefma	111)	
		nt in: English				
		_	nguage — if other th	an German examina	ation offered — if not every seme-	
		ion on whether module c	-		and the every semie	
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation						
Earth O)bserva	tion in Biology			04-GEO-ENV9-242-m01	
Module	e coord	inator		Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. com	ıpl. of module(s)		
5	nume	rical grade	<u></u>			
Duratio		Module level	Other prerequisites			
1 seme	ster					
Conten	ts					
	-					
Intende	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
S (1) + I Module	. ,	t in: English				
					tion offered — if not every seme-	
· ·		on on whether module ca		a bonus)		
b) prep c) term Langua	paring a paper age of a possibl	e, decide to hold assessi	s total) or erman (assessment w	ill be held in English	ı; in addition, the examiner may,	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
	_					
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
						
Module appears in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module	Module title Abbreviation						
Interns	hip				04-GEO-INT1-242-m01		
Module	e coord	inator		Module offered by			
				Institute of Geograp	nhy and Geology		
ECTS	Metho	od of grading	Only after succ. con		ony and deology		
5		successfully completed					
Duratio	on .	Module level	Other prerequisites				
1 seme	ster						
Conten	ts						
	-						
Intend	ed lear	ning outcomes					
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)		
P (o)							
		t in: English					
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-		
Langua	ige of a	of a presentation (approssessment: English or Gee, decide to hold assess	erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Additio	nal inf	ormation on module dura	ation: during semeste	r or as block			
Worklo	ad						
150 h							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Modul	Module title Abbreviation					
Innovation Laboratory 04-GEO-INT2-242-mo1					04-GEO-INT2-242-m01	
Modul	Module coordinator Module offered by					
module cooldinator				Institute of Geograp	phy and Geology	
ECTS	Metho	od of grading	Only after succ. com		ony and deology	
5		rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
		_				
Course	es (type	, number of weekly conta	ct hours. language —	if other than Germa	ın)	
P (2)	- (-)	,				
	e taugh	t in: English				
Metho	d of ass	sessment (type, scope, la	inguage — if other thai	n German, examina	tion offered — if not every seme-	
ster, in	formati	ion on whether module c	an be chosen to earn a	bonus)		
		n (approx. 30 minutes) o				
		poster (approx. 10 hours (approx. 15 pages)	s total) or			
			erman (assessment wi	ll be held in English	n; in addition, the examiner may,	
		e, decide to hold assess		J. I	,,	
Allocat	tion of p	olaces				
Additio	onal inf	ormation				
Additio	onal inf	ormation on module dura	ation: during semester	or as block		
Workload						
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	e annes	ars in				
Module appears in						



Module title					Abbreviation
Master-Thesis EAGLE					04-GEO-MA1-162-m01
Module coordinator				Module offered by	
holder of the Professorship of Remote Sensing			e Sensing	Institute of Geography and Geology	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)	
28	nume	numerical grade			
Duration Module level		Other prerequisites	ites		
1 semester graduate					
Contonts					

Contents

The student should show within the Msc thesis that he/she is capable of working scientifically without major supervision. Defining the aim, the hypothesis and structuring a research topic is the main first content followed by the actual analysis of spatial data (Earth Observation mainly satellite remote sensing but also airborne data or auxiliary data). Defining the methods and describing these including the results and discuss the outcome critically. Moreover an appropriate visual presentation (typesetting and graphics, as well as maps) and writing is expected. The Msc thesis is graded on the difficulty of the topic, on the amount of needed supervision (independent work is expected as well as regular meetings with the supervisors), the writing and especially the discussion of the Msc thesis. The thesis structure can comply to a standard scientific article but should exceed 50 pages.

Intended learning outcomes

Conducting an independent research topic within 6 months

Courses (type, number of weekly contact hours, language — if other than German)

No courses assigned to module

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

Master's thesis (approx. 60 pages) Language of assessment: English

Allocation of places

--

Additional information

Time to complete: 6 months.

Workload

840 h

Teaching cycle

--

Referred to in LPO I (examination regulations for teaching-degree programmes)

--

Module appears in

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2016)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2018)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021)



Modul	Module title Abbreviation					
Final (Final Colloquium on Master Thesis 04-GEO-MA2-162-mo1					
Module coordinator Module offered by						
holder	r of the	Professorship of Remot	e Sensing	Institute of Geogra	phy and Geology	
ECTS	Meth	od of grading	Only after succ. cor	npl. of module(s)		
2	nume	rical grade				
Durati	on	Module level	Other prerequisites	5		
		graduate				
Conte	nts					
er and	studer	its) who are all allowed	to ask questions and	discuss the outcome	scientific audience (EAGLE lectur- critically. The presentation ought graded but is needed to finish the	
Intend	led lear	ning outcomes				
Preser	ntation	of the final Msc thesis				
Course	es (type	, number of weekly con	tact hours, language -	– if other than Germa	an)	
K (o) Modul	le taugh	nt in: English				
		sessment (type, scope, ion on whether module			ation offered — if not every seme-	
Langu	age of a	30 minutes) with subse assessment: English or le, decide to hold asses	German (assessment v		h; in addition, the examiner may,	
Alloca	tion of	places				
Additi	onal inf	ormation				
Workl	oad					
6o h						
Teaching cycle						
Referr	Referred to in LPO I (examination regulations for teaching-degree programmes)					
				<u> </u>		
Modul	le appe	ars in				
			rth Observation and G	eoanalysis (FAGI F) (2016)	
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2016)					

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2018) Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021) Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)



Module title					Abbreviation	
Introduction to Spatial Data Analysis Software					04-GEO-MB1-242-m01	
Module	e coord	inator		Module offered by		
holder	holder of the Professorship of Remote Sensing			Institute of Geography and Geology		
ECTS	Meth	nod of grading Only after succ. cor		npl. of module(s)		
5	nume	umerical grade				
Duration Module level		Other prerequisites	her prerequisites			
1 semester graduate						
Conten	Contents					

The module comprises the following practical topics: Managing and geoprocessing of raster and vector data including digitization and analysis/visualization of geodata / preprocessing of optical remote sensing data (geometric and atmospheric corrections, dimension reduction) / different approaches, algorithms, sampling and validation strategies for validation / change detection, vegetation indices / basics in the derivation of geophysical and biophysical parameters (e.g. LAI, FAPAR, Chlorophyll content of leafs, Land Surface Temperature, Surface Albedo

Intended learning outcomes

The seminar aims at improving the methodological skills of the participants in digital image processing and the use of Geographical Information Systems.

Courses (type, number of weekly contact hours, language — if other than German)

Ü (2)

Module taught in: English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

- 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

Allocation of places

Additional information

Workload

150 h

Teaching cycle

Referred to in LPO I (examination regulations for teaching-degree programmes)

Module appears in



Module title Abbreviation					
Introduction to Programming in Earth Observation 04-GEO-MB2-242-mo1					
coord	inator		Module offered by		
				nhy and Geology	
	· · · · · · · · · · · · · · · · · · ·	·		ony and deology	
			ipt. or inodute(s)		
		Other prerequisites			
ster					
ts		<u> </u>			
ensing s well a menta	and GIS are provided. Ba as programming syntax u l analysis are covered su	asic functionality sucl sing the R language	h as script structure, are introduced. More	implementation, functions,	
		tatistics for environm	ental data analysis		
			•	n)	
Ü (4) Module taught in: English Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus) 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)					
ion of p	olaces				
nal inf	ormation				
Workload					
150 h					
Teaching cycle					
ig cycl	e				
ng cycl	e				
	ELPO I (examination regu	lations for teaching-c	degree programmes)		
	ction to coord of the F Methor nume of the Methor nume of the Methor nume of the Methor nume of the Methor number	ction to Programming in Earth of the Professorship of Remote Method of grading numerical grade Module level	coordinator of the Professorship of Remote Sensing Method of grading numerical grade n Module level oter graduate ical basics and practical examples of programming actions and GIS are provided. Basic functionality such sensing and GIS are provided. Basic functionality such sensing and sensing are covered such as Random Forest and learning outcomes ction to programming and geostatistics for environmental in: English I of assessment (type, scope, language — if other the formation on whether module can be chosen to earn gentation (approx. 30 minutes) or paper (approx. 15 pages) ge of assessment: English or German (assessment woossible, decide to hold assessment in German) ion of places mal information	coordinator of the Professorship of Remote Sensing Method of grading numerical grade of Module level of graduate of gr	

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)

Module appears in



Module	e title		Abbreviation		
From Field Measurements to Geoinformation					04-GEO-MB3-162-m01
Module	e coord	inator		Module offered by	
holder	holder of the Professorship of Remote Sensing			Institute of Geography and Geology	
ECTS	Meth	ethod of grading Only after succ. cor		npl. of module(s)	
5	nume	rical grade			
Duratio	n	Module level	Other prerequisites		
1 semester graduate		graduate			
Contents					
This module sets a strong focus on field methods and data integration for selected types of land mapping. The					

This module sets a strong focus on field methods and data integration for selected types of land mapping. The contents of the course comprises the preparation of field campaigns, i.e. the selection of sampling schemes and methods appropriate for the subsequent analysis. A broad sequence of field devices will be introduced to the students. The field data collection can focus on different fields of environmental mapping, e.g. land use or vegetation, climate soil, geology, and others. Depending of the special focus of course, spatial integration and interpolation methods are presented.

Intended learning outcomes

The students will gain knowledge in how to collect field data for the purposes of training and validation land cover maps and geo-/biophysical parameters.

Courses (type, number of weekly contact hours, language — if other than German)

Ü (2)

Module taught in: English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

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

Allocation of places

--

Additional information

--

Workload

150 h

Teaching cycle

__

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2016)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2018)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021)



Modul	Module title Abbreviation					
Advan	ced Cod	ling for Earth Observatio	n		04-GEO-OMA10-242-m01	
Module coordinator				Module offered by		
				Institute of Geograp	nhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
Intend	led lear	ning outcomes	-			
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
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		t in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) term Langua where	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					
Alloca	tion of	places				
Additi	onal inf	ormation				
			-			
Workle	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Maste	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation					Abbreviation	
Earth Observation Cloud Computing					04-GEO-OMA11-242-m01	
Module coordinator				Module offered by		
	module coordinator			Institute of Geograp	hhy and Geology	
ECTS	Meth	od of grading	Only after succ. con	<u> </u>	ony and deology	
5		rical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	nts					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	n)	
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` '		nt in: English				
Metho	d of as	sessment (type, scope, la	nguage — if other the	an German, examina	tion offered — if not every seme-	
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)		
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places	•			
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation					
Advan	ced Clo	ud Computing			04-GEO-OMA12-242-m01
Madul	e coord	linator		Module offered by	<u> </u>
Modul	e coord	iinator			1 10 1
	AA - 41-		0	Institute of Geograp	ony and Geology
ECTS		od of grading rical grade	Only after succ. con	ipi. or module(s)	
5		Module level			
Duration 1 seme			Other prerequisites		
			<u> </u>		
Conte	nts				
Intend	ed lear	ning outcomes			
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)
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Modul	e taugh	it in: English			
		sessment (type, scope, la ion on whether module c			ition offered — if not every seme-
b) prep c) term Langua where	paring and paring and paring particular part	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Alloca	tion of	places			
	<u> </u>				
Additio	onal inf	ormation			
Worklo	oad				
150 h					
Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title					Abbreviation	
Spatial modelling and prediction					04-GEO-OMA1-242-m01	
Module coordinator				Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. com		ony and deology	
5		rical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ct hours, language —	· if other than Germa	ın)	
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		t in: English				
Metho	d of ass	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-	
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)		
		on (approx. 30 minutes) o				
		ı poster (approx. 10 hours (15 pages)	s total) or			
			erman (assessment w	vill be held in English	n; in addition, the examiner may,	
	•	le, decide to hold assess	ment in German)	_	·	
	ble for					
Allocat	tion of _I	places				
Additio	nal inf	ormation				
Worklo	oad					
150 h						
Teachi	Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation
UAS Application in Earth Observation				•	04-GEO-OMA13-242-m01
Module	e coord	inator		Module offered by	
		-		Institute of Geograp	ohy and Geology
ECTS	Meth	od of grading	Only after succ. con		,
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster				
Conten	its		,		
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
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Metho	d of ass	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)	
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
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Additio	onal inf	ormation			
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Worklo	ad				
150 h					
Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module appears in					
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title					Abbreviation
Theory and practice of UAS operation and methods					04-GEO-OMA14-242-m01
Module	e coord	inator		Module offered by	
				Institute of Geograp	hy and Geology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		,	
Duratio	on	Module level	Other prerequisites		
1 seme	ster				
Conten	its				
Intende	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)
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Method	d of as	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)	
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		ı poster (approx. 10 hours (15 pages)	s total) or		
			erman (assessment w	vill be held in English	n; in addition, the examiner may,
where	possib	le, decide to hold assessi		G	,,
credita	ble for	bonus			
Allocat	ion of	places			
Additio	nal inf	ormation			
Worklo	ad				
150 h					
Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title					Abbreviation	
UAS based Earth Observation data analysis					04-GEO-OMA15-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geograp	hy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade		,		
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
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Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
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Module	e taugh	it in: English				
					tion offered — if not every seme-	
	_	ion on whether module ca		a bonus)		
		on (approx. 30 minutes) o				
		a poster (approx. 10 hours (15 pages)	s total) or			
			erman (assessment w	vill be held in English	n; in addition, the examiner may,	
		le, decide to hold assess	ment in German)			
credita	-					
Allocat	tion of	places				
Additio	onal inf	ormation				
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Worklo	oad					
150 h						
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation
Advanced Earth Observation Analysis					04-GEO-OMA16-242-m01
Module	e coord	inator		Module offered by	
				Institute of Geograp	ohy and Geology
ECTS	Meth	od of grading	Only after succ. com		ony and decitogy
5		rical grade		,	
Duratio	on	Module level	Other prerequisites		
1 seme	ster				
Conten	ıts				
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language —	· if other than Germa	in)
S (1) +		,			
` '	` '	t in: English			
Metho	d of as	sessment (type, scope, la	nguage — if other tha	an German, examina	tion offered — if not every seme-
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)	
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		ı poster (approx. 10 hours (15 pages)	s total) or		
			erman (assessment w	vill be held in English	n; in addition, the examiner may,
		le, decide to hold assess			,,,,,
credita	ble for	bonus			
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	ad				
150 h	_				
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title					Abbreviation	
Innovative Earth Observation Applications			ions		04-GEO-OMA17-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geograp	ohv and Geology	
ECTS	Meth	od of grading	Only after succ. con		, a c c c c c c c c c c c c c c c c c c	
5		erical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
	_					
Intend	ed lear	ning outcomes				
Course	es (type	e, number of weekly conta	ıct hours, language –	- if other than Germa	n)	
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Modul	e taugł	nt in: English				
					tion offered — if not every seme-	
,	_	ion on whether module c		a bonus)		
		on (approx. 30 minutes) o a poster (approx. 10 hours				
		(15 pages)	s total) of			
Langua	age of a	assessment: English or Ge		ill be held in English	n; in addition, the examiner may,	
		le, decide to hold assess	ment in German)			
credita	_					
Allocat	tion or	places				
Additio	onal in	formation				
Worklo	oad					
150 h						
Teaching cycle						
 						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Advanced Remote Sensing Applications					04-GEO-OMA18-242-m01	
Modul	e coord	inator		Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con		,	
5		rical grade		-		
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ict hours, language –	if other than Germa	ın)	
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		t in: English				
					tion offered — if not every seme-	
•		ion on whether module c		a bonus)		
b) prep c) term Langua where	paring and paring and paring particular part	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
	tion of					
Additio	onal inf	ormation				
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Worklo	oad					
150 h						
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in						
Maste	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation						
Novel Image Analysis Methods					04-GEO-OMA19-242-m01	
Modul	le coord	linator		Module offered by		
				Institute of Geograp	nhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and deology	
5		rical grade		.,		
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
		,				
Intend	led lear	ning outcomes	-			
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
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		nt in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) term Langua where	paring and paring and particular particular particular particular particular particular particular particular p particular particular particular particular particular particular particular particular particular particular p particular particular particu	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Alloca	tion of	places				
Additi	onal inf	ormation				
Workle	oad					
150 h	150 h					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title					Abbreviation
Spatio-temporal environmental Methods					04-GEO-OMA20-242-m01
Modul	e coord	linator		Module offered by	<u> </u>
Moduli	e coord	illiatoi		Institute of Geograp	phy and Goology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		ipt. or inodute(3)	
Duratio		Module level	Other prerequisites		
1 seme					
Conter	nts	I.	<u> </u>		
Intend	ed lear	ning outcomes			
	- Cu (Cu)	ining outcomes			
Course	s (type	, number of weekly conta	ect hours Janguago —	if other than Garma	n)
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		nt in: English			
			nguage — if other tha	an German, examina	tion offered — if not every seme-
		ion on whether module ca			
b) prep c) term Langua where	paring a paper age of a	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	oad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation
Earth Observation Research Advances					04-GEO-OMA21-242-m01
Modul	e coord	linator		Module offered by	
				Institute of Geograp	phy and Geology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		ipti oi illoudite(s)	
Duratio		Module level	Other prerequisites		
1 seme					
Conter	nts		<u>. </u>		
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Intend	ed lear	ning outcomes	,		
Course	s (type	, number of weekly conta	ect hours Janguage —	if other than Germa	n)
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		nt in: English			
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		ion on whether module ca			,
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	tion of	places			
Additio	onal inf	ormation			
Worklo	oad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation
Science from Wall-to-Wall					04-GEO-OMA22-242-m01
Module coordinator				Module offered by	
	Coord	Illacol		Institute of Geograp	phy and Geology
ECTS	Meth	od of grading	Only after succ. con		ony and deology
5		rical grade		ipa or module(s)	
Duratio		Module level	Other prerequisites		
1 seme	ster				
Conten	ıts				
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language —	- if other than Germa	ın)
S (1) +		, number of weekly conta	- tribuis, tanguage	ii otiici tiidii ociiiid	9
` '	• •	t in: English			
Metho	d of ass	sessment (type, scope, la	nguage — if other the	an German, examina	tion offered — if not every seme-
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)	
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	ion of	olaces			
Additio	nal inf	ormation	,		
Worklo	ad				
150 h					
Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)				
Module appears in					
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title Abbreviation					Abbreviation	
Introduction to Active remote sensing systems			systems		04-GEO-OMA2-242-m01	
Modul	e coord	linator		Module offered by		
				Institute of Geogra	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con		, 6,	
5		rical grade				
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
			-			
Intend	led lear	ning outcomes				
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
S (1) +	Ü (1)					
Modul	e taugh	t in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) term Langua where	paring and paring and particular particular particular particular particular particular particular particular p particular particular particular particular particular particular particular particular particular particular p particular particular particu	le, decide to hold assess	s total) or erman (assessment v	vill be held in English	n; in addition, the examiner may,	
Alloca	tion of	places				
Additi	onal inf	ormation				
Workle	oad					
150 h	150 h					
Teaching cycle						
Referr	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Inform	ation s	ciences in Remote Sensir	ng		04-GEO-OMA23-242-m01	
Module	e coord	inator		Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. com		, u ,	
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	its					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)	
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Module	e taugh	t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
		n (approx. 30 minutes) o				
	_	poster (approx. 10 hours	s total) or			
		(15 pages) ssessment: English or Ge	erman (assessment w	vill be held in English	n; in addition, the examiner may,	
		le, decide to hold assessi			,,,,,	
credita	ble for	bonus				
Allocat	tion of p	places				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
<u></u>						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
						
Module appears in						
	Master's degree (1 major) Artificial Intelligence (2024)					
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation		
Innovative Earth Observation Methods			3		04-GEO-OMA24-242-m01		
Modul	Module coordinator			Module offered by			
				Institute of Geograp	hy and Geology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5		rical grade		,			
Duratio	on	Module level	Other prerequisites				
1 seme	ester						
Conter	nts						
			•				
Intend	ed lear	ning outcomes					
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)		
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		t in: English					
					ation offered — if not every seme-		
ster, in	format	ion on whether module c	an be chosen to earn	a bonus)			
		on (approx. 30 minutes) o					
	_	a poster (approx. 10 hours (15 pages)	s total) of				
			erman (assessment w	ill be held in English	n; in addition, the examiner may,		
	•	le, decide to hold assess	ment in German)				
	able for						
Alloca	tion of	places					
Additio	onal inf	ormation					
Worklo	oad						
150 h	150 h						
Teaching cycle							
							
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Modul	Module appears in						
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title Abbreviation					Abbreviation
Al app	Al approaches in Earth Observation				04-GEO-OMA25-242-m01
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Modul	e coord	linator		Module offered by	
		1 6 . 19 .	0.1.6	Institute of Geograp	ohy and Geology
ECTS	$\overline{}$	od of grading rical grade	Only after succ. con	ipi. or module(s)	
5 Durati		Module level	Other preventicites		
1 seme			Other prerequisites		
Conter					
Conte	115				
Intend	ed lear	ning outcomes			
		, number of weekly conta	ct hours, language –	· if other than Germa	ın)
S (1) +					
		t in: English			
		sessment (type, scope, la ion on whether module ca	-		tion offered — if not every seme-
	-			a bollus)	
		on (approx. 30 minutes) o a poster (approx. 10 hours			
		(15 pages)	totaly of		
Langua	age of a	issessment: English or Ge		vill be held in English	n; in addition, the examiner may,
		le, decide to hold assess	ment in German)		
	ble for				
Alloca	tion of	places			
Additio	nal inf	ormation			
Worklo	oad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Artificial Intelligence (2024)				
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module	Module title Abbreviation					
Processing and image analysis of active remote sensing sy				stems	04-GEO-OMA3-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geogra	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con		priy and deology	
5		rical grade		ipt. or inodute(3)		
Duratio		Module level	Other prerequisites			
1 seme						
Conten	ıts	I.	I.			
Intende	ad laar	ning outcomes				
	- Cal	ming outcomes				
Cource	s (tupo	number of weekly cents	est hours language	if other than Garma	nn)	
		, number of weekly conta	ici ilouis, idliguage —	- ii otilei tilali Germa	111)	
S (1) + l		nt in: English				
			nguage — if other th	an German examina	ation offered — if not every seme-	
		ion on whether module c			ation offered in flot every seme	
b) prep c) term Langua	paring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Lidar Remote Sensing					04-GEO-OMA4-242-m01	
Module	e coord	inator		Module offered by	<u> </u>	
		-		Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. com	ipl. of module(s)		
5	nume	rical grade	<u></u>			
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	ts					
Intende	ed learı	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	ın)	
S (1) + I	` '					
		t in: English				
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-	
		n (approx. 30 minutes) o		a bolius)		
		poster (approx. 10 hours				
c) term	paper	(15 pages)	•			
				vill be held in English	n; in addition, the examiner may,	
where properties		e, decide to hold assessi	ment in German)			
Allocat						
Additio	nal inf	ormation				
	-					
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation						
Hyperspectral Earth Observation					04-GEO-OMA5-242-m01	
Modul	e coord	linator		Module offered by		
Modul	e coord	illiatoi		Institute of Geograp	phy and Goology	
ECTS	Moth	od of grading	Only after succ. con		priy and deology	
5		rical grade		ipt. or inodute(s)		
Duration		Module level	Other prerequisites			
1 seme						
Conter	nts	I	1			
Intend	ed lear	ning outcomes				
	cu icai	iiiig outcomes				
Course	c (tuno	number of weekly conta	est hours Janauage	if other than Carra	nn)	
		, number of weekly conta	ici nours, ianguage —	· ii otilei tilali Gefma	111)	
S (1) + Module		nt in: English				
		_	nguage — if other th	an German examina	ation offered — if not every seme-	
		ion on whether module ca			and the every semie	
b) prep c) term Langua where	paring a paper age of a	le, decide to hold assess	s total) or erman (assessment w	vill be held in Englisk	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h	150 h					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation						
Earth (Observa	ation Informatics			04-GEO-OMA6-242-m01	
Modul	e coord	linator		Module offered by		
Modul	e coord	iiiiatoi		Institute of Geograp	aby and Goology	
ECTS	Moth	od of grading	Only after succ. con		ony and deology	
5		erical grade		ipt. or inodute(s)		
Duration		Module level	Other prerequisites			
1 seme						
Conter	nts	l	1			
Intend	ed lear	ning outcomes				
	- icai	ming outcomes				
Course	c (tuno	number of weekly cente	est hours Janauaga	if other than Carra	nn)	
		e, number of weekly conta	ici nours, ianguage –	- ii otilei tilali Gefma	111)	
S (1) + Module		nt in: English				
		-	nguage — if other th	an German examina	ation offered — if not every seme-	
		ion on whether module c			and the every semie	
b) prep c) term Langua	oaring a paper age of a possib	le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	formation				
Worklo	oad					
150 h	150 h					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation		
Introduction to Spatial Python					04-GEO-OMA7-242-m01		
Module	coord	inator		Module offered by			
				Institute of Geograp	phy and Geology		
ECTS	Metho	od of grading	Only after succ. com				
5	nume	rical grade					
Duratio	n	Module level	Other prerequisites				
1 seme	ster						
Conten	ts						
Intende	ed learı	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language —	if other than Germa	n)		
S (1) + I Module		t in: English					
					tion offered — if not every seme-		
· ·		on on whether module ca		a bonus)			
b) prep c) term Langua	paring a paper age of a possibl	e, decide to hold assessi	s total) or erman (assessment w	ill be held in English	ı; in addition, the examiner may,		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	ad						
150 h	150 h						
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Master	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Modul	Module title Abbreviation					
Advanced Spatial Python				•	04-GEO-OMA8-242-m01	
Modul	le coord	linator		Module offered by		
				Institute of Geograp	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con		priy and deology	
5		rical grade		.,		
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
	'					
Intend	led lear	ning outcomes				
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)	
S (1) +		•				
		nt in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) term Langua where	paring and paring and particular particular particular particular particular particular particular particular p paring and particular particular particular particular particular particular particular particular particular p particular particular particu	le, decide to hold assess	s total) or erman (assessment v	vill be held in English	h; in addition, the examiner may,	
Alloca	tion of	places				
Additi	onal inf	ormation				
Workle	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Maste	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Advanced Spatial Programming					04-GEO-OMA9-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geograp	hhy and Geology	
ECTS	Meth	od of grading	Only after succ. con		ony and ecology	
5		rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	ıts					
-						
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S (1) +	Ü (1)	·			·	
Module	e taugh	it in: English				
					tion offered — if not every seme-	
ster, in	format	ion on whether module ca	an be chosen to earn	a bonus)		
		on (approx. 30 minutes) o				
		a poster (approx. 10 hours (15 pages)	s total) or			
			erman (assessment w	vill be held in English	; in addition, the examiner may,	
where	possib	le, decide to hold assessi		J	,	
credita	ble for	bonus				
Allocat	tion of	places				
Additio	nal inf	ormation				
Worklo	oad					
150 h	150 h					
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation					Abbreviation	
Applied	d Remo	ote Sensing outside acad	emia		04-GEO-SOS11-242-m01	
Module	e coord	linator		Module offered by		
				Institute of Geograp	hy and Geology	
ECTS	Meth	od of grading	Only after succ. con		only und decitegy	
5		successfully completed		, ,,		
Duratio	n	Module level	Other prerequisites			
1 seme	ster					
Conten	its					
Intende	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)	
S (2)		,	, 5 0			
	e taugh	it in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
b) prep c) term Langua	aring a paper age of a	on (approx. 30 minutes) on (approx. 10 hours (approx. 15 pages) ussessment: English or Gele, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Scienc	e Comr	nunication			04-GEO-SOS12-242-m01	
Modul	e coord	linator		Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS		od of grading	Only after succ. con	npl. of module(s)		
5	(not)	successfully completed				
Durati	on	Module level	Other prerequisites			
1 seme	ester					
Conte	nts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S (2)		· •				
	e taugh	it in: English				
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
b) prep c) term Langua	paring and paring and paring particular part	on (approx. 30 minutes) on a poster (approx. 10 hours (approx. 15 pages) assessment: English or Ge le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Alloca	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teachi	Teaching cycle					
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Modul	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					
	3.	,			17	



Module title Abbreviation						
Scienti	fic Pres	sentation			04-GEO-SOS1-242-m01	
Module	e coord	inator		Module offered by		
holder	of the I	Professorship of Remote	Sensing	Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. con		,	
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
appear	ance o		scussed and guidelin	es provided. Individ	pearance. Moreover design and ual training of presentations will itr, beamer).	
Intende	ed lear	ning outcomes				
Present present			issed with regard to i	ts scientific content	and goal to ensure high quality	
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	ın)	
S (2) Module	e taugh	t in: English				
		sessment (type, scope, la ion on whether module ca			ition offered — if not every seme-	
b) prep c) term Langua	aring a paper age of a	on (approx. 30 minutes) on poster (approx. 10 hours (approx. 15 pages) (assessment: English or Ge le, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
150 h						
Teaching cycle						
Referre	d to in	LPO I (examination regu	lations for teaching-o	degree programmes)		
				<u> </u>		



Module title Abbreviation					Abbreviation	
Science	e Visua	lization			04-GEO-SOS13-242-m01	
Module	e coord	inator		Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con		on, and coolegy	
5		successfully completed		,		
Duratio	n	Module level	Other prerequisites			
1 seme	ster		-			
Conten	ts					
Intende	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S (2)	. , ,	,	. 3			
	e taugh	t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
b) prep c) term Langua	aring a paper age of a	on (approx. 30 minutes) on poster (approx. 10 hours (approx. 15 pages) assessment: English or Gele, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of	places				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title Abbreviation							
Advand	ced Sci	entific Softskills			04-GEO-SOS14-242-m01		
Module	e coord	inator		Module offered by			
	c coord			Institute of Geograp	phy and Geology		
ECTS	Metho	od of grading	Only after succ. con		ony and deology		
5		successfully completed		.pu or mounte(o)			
Duratio	on	Module level	Other prerequisites				
1 seme	ster						
Conten	ıts						
Intend	ed lear	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
S (2)	. , , ,	•	, 5 0		•		
` '	e taugh	t in: English					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
b) prep c) term Langua	oaring a paper age of a	on (approx. 30 minutes) on poster (approx. 10 hours (approx. 15 pages) ssessment: English or Gele, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	tion of p	places					
Additio	onal inf	ormation					
Worklo	ad						
150 h							
	Teaching cycle						
Referre	Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in							
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module	e title				Abbreviation	
Advanc	ed Ski	lls on the Master's Level			04-GEO-SOS2-242-m01	
Module	e coord	inator		Module offered by	l .	
holder	of the I	Professorship of Remote	Sensing	Institute of Geogra	phy and Geology	
ECTS	Meth	od of grading	Only after succ. con	npl. of module(s)	=-	
5	(not)	successfully completed				
Duratio	on	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	its					
		ntific articles will be disc eover, general writing gui			tructure as well as wording will be troduced.	
Intend	ed lear	ning outcomes				
		and articles will be discuas well as articles.	ussed with regard to i	ts scientific content	and goal to ensure high quality	
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)	
S (2) Module	e taugh	t in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) term Langua	aring a paper age of a	n (approx. 30 minutes) o poster (approx. 10 hours (approx. 15 pages) ssessment: English or Go e, decide to hold assess	s total) or erman (assessment w	vill be held in Englisl	h; in addition, the examiner may,	
Allocat	ion of	olaces				
Additio	nal inf	ormation				
Workload						
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
VEIGH	ection at the Communication regulations for teaching degree programmes)					



Module	Module title Abbreviation						
Resear	Research Project Management 04-GEO-SOS4-242-mo1						
Module	coord	inator		Module offered by			
		Professorship of Remote	Concing	Institute of Geograp	aby and Coology		
ECTS		od of grading	Only after succ. con		ony and deology		
5		rical grade		ipt. or inodute(s)			
Duratio		Module level	Other prerequisites				
1 seme		graduate					
Conten	its		Į.				
funds a	are sho		ect structures and co		cesses for acquiring third-party ed and discussed. Teamwork and		
Intende	ed lear	ning outcomes					
1		provide students with bar are then able to plan and		J.,	nd completing research projects.		
Course	s (type	, number of weekly conta	act hours, language –	- if other than Germa	an)		
S (2) Module	e taugh	t in: English					
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-		
b) prep c) term Langua	aring a paper age of a	n (approx. 30 minutes) o poster (approx. 10 hours (approx. 15 pages) ssessment: English or Go e, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	ion of p	olaces					
	_						
Additio	nal inf	ormation					
Worklo	Workload						
150 h	150 h						
Teachi	Teaching cycle						
Referre	ed to in	LPO I (examination regu	llations for teaching-o	degree programmes)			
				-			



Module title Abbreviation							
Scientific Maps					04-GEO-SOS6-242-m01		
Module	e coord	inator		Module offered by			
holder	of the I	Professorship of Remote	Sensing	Institute of Geograp	ohy and Geology		
ECTS	1	od of grading	Only after succ. con		,		
5	nume	rical grade					
Duratio	on	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
rance o	of maps		uidelines provided. Ir		e. Moreover design and appeamap creation will be part of it as		
Intend	ed lear	ning outcomes					
Maps v	vill be o	liscussed with regard to	ts scientific content	and goal to ensure h	igh quality spatial information.		
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	n)		
S (2) Module	e taugh	t in: English					
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-		
b) prep c) term Langua	aring a paper age of a	n (approx. 30 minutes) o poster (approx. 10 hours (approx. 15 pages) ssessment: English or Go e, decide to hold assess	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Worklo	Workload						
150 h							
Teachi	Teaching cycle						
Referre	ed to in	LPO I (examination regu	lations for teaching-o	degree programmes)			
	-						



Module	Module title Abbreviation					
Scientific Graphs					04-GEO-SOS7-242-m01	
Module	coord	inator		Module offered by	<u> </u>	
holder	of the F	Professorship of Remote	Sensing	Institute of Geograp	ohy and Geology	
ECTS		od of grading	Only after succ. con		<u> </u>	
5	nume	rical grade				
Duratio	n	Module level	Other prerequisites			
1 seme	ster	graduate				
Conten	ts					
and me	essage		ed and guidelines pr	ovided. Individual tr	al appearance. Moreover content aining of graph creation will be y).	
Intende	ed lear	ning outcomes				
Figures	and gr	aphs will be discussed w	ith regard to its scier	ntific content and go	al to ensure high quality graphs.	
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	nn)	
S (2) Module	e taugh	t in: English				
		sessment (type, scope, la ion on whether module ca			ition offered — if not every seme-	
b) prep c) term Langua	aring a paper ge of a	n (approx. 30 minutes) o poster (approx. 10 hours (approx. 15 pages) ssessment: English or Ge e, decide to hold assessi	s total) or erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Workload						
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
	-					



Module	Module title Abbreviation						
Innovative Research Softskills 04-GEO-SOS9-242-mo					04-GEO-SOS9-242-m01		
Module	e coord	inator		Module offered by			
holder	of the F	Professorship of Remote	Sensing	Institute of Geogra	phy and Geology		
ECTS		od of grading	Only after succ. con		, , , , , , , , , , , , , , , , , , , ,		
5		successfully completed		•			
Duratio	n	Module level	Other prerequisites				
1 seme	ster	graduate					
Conten	ts						
		d potential of novel scie within the group and op			discussed. The various steps will		
Intende	ed learı	ning outcomes					
Knowle	dge of	identifying and approach	ning challenges and p	otential within nove	el research approaches.		
Course	s (type	, number of weekly conta	ıct hours, language –	· if other than Germa	an)		
S (2) Module	e taugh	t in: English					
		sessment (type, scope, la on on whether module c			ation offered — if not every seme-		
b) prep c) term Langua	aring a paper ige of a	n (approx. 30 minutes) o poster (approx. 10 hours (approx. 15 pages) ssessment: English or Ge e, decide to hold assess	s total) or erman (assessment w	vill be held in Englisl	n; in addition, the examiner may,		
Allocat	ion of p	olaces					
Additio	nal inf	ormation					
Workload							
150 h	150 h						
Teachi	Teaching cycle						
Referre	d to in	LPO I (examination regu	lations for teaching-	degree programmes			
	Referred to in LPO I (examination regulations for teaching-degree programmes)						



Module title					Abbreviation	
Introd	uction t	o Remote Sensing a	nd Geoanalysis		04-GEO-TB1-162-m01	
Modul	e coord	inator		Module offered by		
holder	of the	Professorship of Ren	note Sensing	Institute of Geogra	Institute of Geography and Geology	
ECTS	Meth	od of grading	Only after succ. co	ompl. of module(s)		
5	nume	rical grade				
Duratio	Duration Module level Other prere			25		
1 seme	1 semester graduate					
Contor	Contonts					

Contents

The lecture "Introduction to Remote Sensing" ensures that participants will gain a solid understanding of the following topics: the role of remote sensing in nowadays world / basics of electromagnetic radiation / history of remote sensing and image acquisition platforms / satellite orbits and orbit geometry / current spaceborne sensors / impacts of the atmosphere / geocorrection of digital imagery / radiometric correction of digital images / principles of image classifications / time series and big data / geodata concepts / geodata standards / geodata visualization / the job market for remote sensing and geo IT specialists

Intended learning outcomes

The lecture provides participants with a solid and comprehensive theoretical background of the background and physical principles of remote sensing, gives an introduction into digital image processing, as well as geodata concepts, standards and future developments

Courses (type, number of weekly contact hours, language — if other than German)

V (2)

Module taught in: English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

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)

Allocation of places

--

Additional information

--

Workload

150 h

Teaching cycle

--

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2016)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2018)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)



Module	e title				Abbreviation	
Applica	ations	of Earth Observation	n		04-GEO-TB2-162-m01	
Module	e coord	linator		Module offered by	Module offered by	
holder	holder of the Professorship of Remote Sensing			Institute of Geogra	Institute of Geography and Geology	
ECTS	Meth	od of grading	Only after succ. co	mpl. of module(s)		
5	nume	rical grade				
Duratio	Duration Module level C		Other prerequisite	Other prerequisites		
1 seme	1 semester graduate					
Conten	Contents					

The lecture addresses applications of remote sensing of the atmosphere, the oceans, and particularly the land surface. The presented materials include among others applications in geography, environmental planning, ecology, biology, oceanology, soil science, geology, atmospheric science, but also e.g. pollution control (monitoring) and natural resource management. Which research questions can be answered by the means of Earth Observation and geoanalysis? The lecture comprises commonly used methodological approaches for the derivation of the different parameters. The covers the issue of implementation of the remote sensing technology into practice, e.g. the implementation of information systems. It outlines at selected examples, how remote sensing based results

Intended learning outcomes

The lecture gives a broad overview about the applications of remote sensing. The participants will learn how the different disciplines of environmental sciences and studies utilize the potentials of active and passive sensors for quantification and assessment.

Courses (type, number of weekly contact hours, language — if other than German)

can be transferred to the workplace of professionals also beyond science.

V (2)

Module taught in: English

Method of assessment (type, scope, language — if other than German, examination offered — if not every semester, information on whether module can be chosen to earn a bonus)

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)

Allocation of places

--

Additional information

--

Workload

150 h

Teaching cycle

--

Referred to in LPO I (examination regulations for teaching-degree programmes)

--

Module appears in

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2016)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2018)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021)

Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)



		Abbreviation				
Earth Observation		04-GEO-TB3-242-m01				
	Module offered by					
	<u> </u>	ohy and Geology				
Only after succ. con		,				
Other prerequisites						
tact hours, language –	- if other than Germa	n)				
		tion offered — if not every seme-				
	vill be held in English	n; in addition, the examiner may,				
150 h Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						
	Other prerequisites Itact hours, language — language — if other the can be chosen to earn German (assessment was ment in German) gulations for teaching-organizations	Module offered by Institute of Geograp Only after succ. compl. of module(s) Other prerequisites Itact hours, language — if other than German can be chosen to earn a bonus) German (assessment will be held in English sment in German) gulations for teaching-degree programmes)				



Modul	Module title Abbreviation						
Histor	ical Urb	an Analysis			04-GEO-URB10-242-m01		
Modul	le coord	inator		Module offered by			
Modul	e coord	Illacol		Institute of Geograp	phy and Goology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5	$\overline{}$	rical grade		ipt. or modute(s)			
Durati		Module level	Other prerequisites				
1 seme							
Conte	nts						
Intend	led lear	ning outcomes					
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
S (1) +		,	, , ,				
. ,	` '	t in: English					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
b) prep c) write Langua	paring a ten exa age of a	on (approx. 30 minutes) on poster (approx. 10 hours mination (approx. 45 minusessment: English or Gele, decide to hold assess	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Alloca	tion of	places					
Additio	onal inf	ormation					
Workle	oad						
150 h	150 h						
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)							



Module title Abbreviation					Abbreviation	
Applied Programming for Urban Analytics					04-GEO-URB11-242-m01	
Module coordinator				Module offered by		
				Institute of Geograp	ohy and Geology	
ECTS	Metho	od of grading	Only after succ. con		,	
		rical grade		,		
Duratio	n	Module level	Other prerequisites			
1 semes	ster					
Content	ts					
Intende	ed lear	ning outcomes				
Courses	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)	
S (1) + Ü	Ü (1)					
Module	taugh	t in: English				
		sessment (type, scope, la on on whether module ca			tion offered — if not every seme-	
b) prepa c) writte Languag	aring a en exar ge of a	n (approx. 30 minutes) o poster (approx. 10 hours mination (approx. 45 min ssessment: English or Ge e, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocati	ion of p	olaces				
Additio	nal inf	ormation				
Workloa	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation	
Remot	e Sensi	ing of Urban Areas			04-GEO-URB12-242-m01	
Module coordinator				Module offered by		
	,			Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con		,	
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ict hours, language –	if other than Germa	in)	
S (1) +						
Modul	e taugh	t in: English				
		sessment (type, scope, la ion on whether module c			ition offered — if not every seme-	
b) prep c) writt Langua	oaring a en exa age of a	on (approx. 30 minutes) on poster (approx. 10 hours mination (approx. 45 minussessment: English or Gole, decide to hold assess	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Modul	Module title Abbreviation						
Global	to loca	l Earth Observation of Ur	banization		04-GEO-URB1-242-m01		
Module coordinator				Module offered by			
				Institute of Geograp	phy and Geology		
ECTS	Metho	od of grading	Only after succ. con		ony and ecology		
5		rical grade		,			
Duratio	on	Module level	Other prerequisites				
1 seme	ester						
Conter	ıts		,				
Intend	ed lear	ning outcomes					
Course	es (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)		
V (2)							
Modul	e taugh	t in: English					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
b) prep c) writt Langua	oaring a ten exar age of a	n (approx. 30 minutes) o poster (approx. 10 hours mination (approx. 45 min ssessment: English or Go e, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	tion of p	olaces					
Additio	onal inf	ormation					
Worklo	oad						
150 h	150 h						
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)							



Module title Abbreviation						
Risk and Disaster Earth Observation					04-GEO-URB13-242-m01	
Module coordinator				Module offered by		
	c coord	- Indicor		Institute of Geograp	phy and Geology	
ECTS	Metho	od of grading	Only after succ. con		ony and deology	
5		rical grade		.pu or mounte(o)		
Duratio	on	Module level	Other prerequisites			
1 seme	ster					
Conten	its					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S (1) +		,				
		t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
b) prep c) writt Langua	aring a en exar age of a	n (approx. 30 minutes) o poster (approx. 10 hours mination (approx. 45 min ssessment: English or Ge e, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of p	olaces				
Additio	onal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title Abbreviation						
OpenSource coding in Urban Earth Observation					04-GEO-URB14-242-m01	
Module coordinator				Module offered by		
	COOIG	- Indicor		Institute of Geograp	phy and Geology	
ECTS	Metho	od of grading	Only after succ. con		ony and deology	
5		rical grade		.pu or mounte(o)		
Duratio	on .	Module level	Other prerequisites			
1 seme	ster					
Conten	its					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S (1) +		,	, 5 5			
		t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
b) prep c) writt Langua	aring a en exai age of a	n (approx. 30 minutes) o poster (approx. 10 hours mination (approx. 45 min ssessment: English or Ge e, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	ion of p	olaces				
Additio	nal inf	ormation				
Worklo	ad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module	Module title Abbreviation						
Earth Observation of urban morphology					04-GEO-URB15-242-m01		
Module	e coord	inator		Module offered by			
				Institute of Geograp	nhy and Geology		
ECTS	Meth	od of grading	Only after succ. con		ony and deology		
5		rical grade		.p.u 0:01010(0)			
Duratio	n	Module level	Other prerequisites				
1 seme	ster						
Conten	ts						
Intende	ed lear	ning outcomes					
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	an)		
S (1) +		•	, 5 6		•		
Module	e taugh	t in: English					
		sessment (type, scope, la ion on whether module ca			ation offered — if not every seme-		
b) prep c) writt Langua	aring a en exa ige of a	on (approx. 30 minutes) on (approx. 10 hours in poster (approx. 10 hours mination (approx. 45 minusessment: English or Gele, decide to hold assess	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,		
Allocat	ion of	places					
Additio	nal inf	ormation					
Worklo	ad						
150 h							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module	Module title Abbreviation						
Urban remote sensing and socio-economy o4-GEO-URB1					04-GEO-URB16-242-m01		
Module	e coord	inator		Module offered by			
				Institute of Geogra	phy and Geology		
ECTS	Meth	od of grading	Only after succ. con		priy und deology		
5		rical grade		, , , ,			
Duratio	on	Module level	Other prerequisites				
1 seme	ster						
Conten	its						
Intend	ed lear	ning outcomes					
Course	s (type	, number of weekly conta	ict hours, language –	- if other than Germa	an)		
S (1) +		•					
Module	e taugh	t in: English					
		sessment (type, scope, la ion on whether module c	-		ation offered — if not every seme-		
b) prep c) writt Langua	aring a en exa age of a	on (approx. 30 minutes) on (approx. 10 hours in poster (approx. 10 hours in mination (approx. 45 minussessment: English or Gole, decide to hold assess	s total) or utes) erman (assessment v	vill be held in Englisl	h; in addition, the examiner may,		
Allocat	ion of	places					
Additio	nal inf	ormation					
Worklo	ad						
150 h							
Teaching cycle							
-							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module appears in							
			h Observation and Ge	eoanalysis (EAGLE) (2024)		
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)							



Module title					Abbreviation	
Urban-human interaction analysis					04-GEO-URB17-242-m01	
Modul	e coord	inator		Module offered by		
	,			Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con		,	
5	nume	rical grade				
Duratio	on	Module level	Other prerequisites			
1 seme	ester					
Conter	ıts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	ict hours, language –	- if other than Germa	ın)	
S (1) +		· •	, , ,			
		t in: English				
		sessment (type, scope, la ion on whether module c			tion offered — if not every seme-	
b) prep c) writt Langua	oaring a en exa age of a	on (approx. 30 minutes) on poster (approx. 10 hours mination (approx. 45 minussessment: English or Gole, decide to hold assess	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title					Abbreviation	
Urban Remote Sensing					04-GEO-URB2-242-m01	
Module coordinator				Module offered by	<u> </u>	
				Institute of Geograp	ohy and Geology	
ECTS	Meth	od of grading	Only after succ. con			
5	nume	rical grade				
Duration	on	Module level	Other prerequisites			
1 seme	ester					
Conter	nts					
Intend	ed lear	ning outcomes				
Course	es (type	, number of weekly conta	act hours, language –	- if other than Germa	an)	
S (1) +	Ü (1)					
Modul	e taugh	t in: English				
		sessment (type, scope, la ion on whether module c			ation offered — if not every seme-	
b) prep c) writt Langua	oaring a en exa age of a	on (approx. 30 minutes) on (approx. 10 hours in poster (approx. 10 hours in mination (approx. 45 minusessment: English or Gole, decide to hold assess	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,	
Allocat	tion of	places				
Additio	onal inf	ormation				
Worklo	oad					
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module appears in						
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)						



Module title Abbreviation					
Urban Classification Approaches					04-GEO-URB3-242-m01
Module coordinator				Module offered by	
	c coord	- Indicor		Institute of Geograp	phy and Geology
ECTS	Metho	od of grading	Only after succ. con		ony and deology
5		rical grade		.pu or mounto(o)	
Duratio	on	Module level	Other prerequisites		
1 seme	ster				
Conten	its				
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)
S (1) +		,	, 5		,
		t in: English			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
b) prep c) writt Langua	aring a en exa age of a	n (approx. 30 minutes) o poster (approx. 10 hours mination (approx. 45 min ssessment: English or Ge e, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	ion of	olaces			
Additio	onal inf	ormation			
Worklo	ad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title				Abbreviation	
From U	rban Fi	eldwork to Analysis		04-GEO-URB4-242-m01	
Module coordinator				Module offered by	
				Institute of Geograp	ohy and Geology
ECTS	Meth	od of grading	Only after succ. com	pl. of module(s)	
5	nume	rical grade			
Duratio	on	Module level	Other prerequisites		
1 seme	ster				
Conter	its		,		
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	ın)
S (1) +					
Module	e taugh	t in: English			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
b) prep c) writt Langua	oaring a en exa age of a	on (approx. 30 minutes) on poster (approx. 10 hours mination (approx. 45 minussessment: English or Gele, decide to hold assessi	s total) or utes) erman (assessment w	vill be held in English	n; in addition, the examiner may,
Allocat	ion of	places			
Additio	nal inf	ormation			
Worklo	ad				
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				



Module title					Abbreviation	
Global Urbanization					04-GEO-URB5-242-m01	
Module coordinator				Module offered by		
Module Cooluliator				<u> </u>		
ECTS	S Method of grading Only after succ. cor		Only after succ. con	Institute of Geography and Geology		
5		rical grade		.,		
Duratio			Other prerequisites			
1 seme	1 semester					
Conten	its					
Intend	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	· if other than Germa	ın)	
S (1) +		,	, 3 0		•	
		t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
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)						
Allocation of places						
Additio	onal inf	ormation				
Workload						
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	e appea	ars in				
		ee (1 major) Applied Earth	n Observation and Ge	eoanalysis (EAGLE) (2	2024)	



Module title					Abbreviation	
Geo-computation in Urban Analysis					04-GEO-URB6-242-m01	
Module coordinator				Module offered by		
				Institute of Geography and Geology		
ECTS	Meth	od of grading	Only after succ. com		, 0,	
5	numerical grade					
Duratio	Duration Module level Other prerequisites					
1 seme	1 semester					
Conten	ts					
	-					
Intende	ed lear	ning outcomes				
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	ın)	
S (1) + I	Ü (1)					
Module	e taugh	t in: English				
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-	
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)						
Allocation of places						
	-					
Additional information						
Workload						
150 h						
Teaching cycle						
Referred to in LPO I (examination regulations for teaching-degree programmes)						
Module	Module appears in					
	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)					



Module title					Abbreviation
Urban Geography					04-GEO-URB7-242-m01
Module coordinator				Module offered by	
module cooluliator				Institute of Geography and Geology	
ECTS	Metho	od of grading	Only after succ. con		ony and deology
5		rical grade		.pu or mounte(o)	
Duratio	Duration Module level Other prerequisites				
1 seme	1 semester				
Conten	ıts				
Intend	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	- if other than Germa	in)
S (1) +		, , , , , , , , , , , , , , , , , , , ,	, 00		,
		t in: English			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
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)					
Allocation of places					
Additio	onal inf	ormation			
Workload					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	ars in			
		ee (1 major) Applied Earth	n Observation and Ge	eoanalysis (EAGLE) (2	2024)



Module title				Abbreviation	
Geo-Linguistics within Earth Observation					04-GEO-URB8-242-m01
Module coordinator				Module offered by	
				Institute of Geography and Geology	
ECTS				,	
5	nume	rical grade			
Duratio	on	Module level Other prerequisites			
1 seme	1 semester				
Conten	ts				
Intende	ed lear	ning outcomes			
Course	s (type	, number of weekly conta	ct hours, language –	if other than Germa	n)
S (1) + I	Ü (1)				
Module	e taugh	t in: English			
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-
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)					
Allocation of places					
	-				
Additional information					
Workload					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module	e appea	ars in			
		ee (1 major) Applied Earth	n Observation and Ge	eoanalysis (EAGLE) (2	2024)



Module title				Abbreviation			
Urban Field Data Acquisition					04-GEO-URB9-242-m01		
Module coordinator				Module offered by			
				Institute of Geograp	ohy and Geology		
ECTS		od of grading	Only after succ. com	ompl. of module(s)			
5	numerical grade						
Duration Module level C		Other prerequisites					
1 semester							
Conten	nts	,					
Intend	ed lear	ning outcomes					
Course	es (type	, number of weekly conta	ct hours, language —	· if other than Germa	n)		
S (1) +		,	. 3 0				
` '		t in: English					
		sessment (type, scope, la ion on whether module ca			tion offered — if not every seme-		
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)							
Allocation of places							
Additional information							
Workload							
150 h							
Teaching cycle							
Referred to in LPO I (examination regulations for teaching-degree programmes)							
Module	e appe	ars in					
Master	r's degr	ee (1 major) Applied Eartl	Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2024)				