Julius-Maximilians-
UNIVERSITÄT
WÜRZBURG

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

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

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

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

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

Conventions

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:

ASPO2015

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

13-Dec-2023 (2023-108)

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

The subject is divided into

Abbreviation	Module title	ECTS credits	Method of grading	page
Compulsory Courses (40 ECTS credits)				
Theoretical Basics (15 ECTS credits)				
04-GEO-TB1-162-m01	Introduction to Remote Sensing and Geoanalysis	5	NUM	70
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)				
04-GEO-INT1-242-m01	Internship	5	B/NB	28
04-GEO-INT2-242-m01	Innovation Laboratory	5	NUM	29
Compulsory Electives (50 ECTS credits)				
Overarching Methods and Applications (OMA) (10-20 ECTS credits)				
04-GEO-OMA1-242-m01	Spatial modelling and prediction	5	NUM	38
04-GEO-OMA2-242-m01	Introduction to Active remote sensing systems	5	NUM	49
04-GEO-OMA3-242-m01	Processing and image analysis of active remote sensing systems	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-m01	Advanced Earth Observation Analysis	5	NUM	42
04-GEO-OMA17-242-m01	Innovative Earth Observation Applications	5	NUM	43
04-GEO-OMA18-242-m01	Advanced Remote Sensing Applications	5	NUM	44

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	AI approaches in Earth Observation	5	NUM	52
Environment (ENV)				
04-GEO-ENV1-242-m01	Land Surface Dynamics	5	NUM	11
04-GEO-ENV2-242-m01	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
04-GEO-ENV19-242-m01	Earth Observation of Georisks	5	NUM	18
04-GEO-ENV20-242-m01	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

04-GEO-URB10-242-m01	Historical Urban Analysis	5	NUM	73
04-GEO-URB11-242-m01	Applied Programming for Urban Analytics	5	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 ECTS 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 Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Applications in Earth Observation			04-GEO-ENV11-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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)

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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

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation in Geography			04-GEO-ENV12-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Land Surface Dynamics			04-GEO-ENV1-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Remote Sensing in Ecology			04-GEO-ENV13-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
Module taught in: English

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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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Environmental Field Work Approaches			04-GEO-ENV14-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
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Allocation of places

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Additional information

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Workload

150 h

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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) (2024)

Module title			Abbreviation
Multi-Temporal Earth Observation			04-GEO-ENV15-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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

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150 h

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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) (2024)

Module title			Abbreviation
Earth Observation and Animal Movement Analysis			04-GEO-ENV16-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
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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 coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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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) (2024)

Module title			Abbreviation
Applied Earth Observation for Ecology			04-GEO-ENV18-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Module appears in

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

Module title			Abbreviation
Earth Observation of Georisks			04-GEO-ENV19-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Environmental Applications of Radar time-series			04-GEO-ENV20-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation of drylands and arid regions			04-GEO-ENV2-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation Terrain Analysis			04-GEO-ENV3-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation of Cold Regions			04-GEO-ENV4-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation of Polar Regions			04-GEO-ENV5-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation of Alpine Regions			04-GEO-ENV6-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation in Biodiversity Research			04-GEO-ENV7-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Multi-Scale Earth Observation			04-GEO-ENV8-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation in Biology			04-GEO-ENV9-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Internship			04-GEO-INT1-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

P (0)
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)

report in form of a presentation (approx. 15 minutes)
Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)

Allocation of places

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Additional information

Additional information on module duration: during semester or as block

Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Innovation Laboratory			04-GEO-INT2-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

P (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)

Allocation of places

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Additional information

Additional information on module duration: during semester or as block

Workload

150 h

Teaching cycle

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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) (2024)

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

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

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Additional information

Time to complete: 6 months.

Workload

840 h

Teaching cycle

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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 title			Abbreviation
Final Colloquium on Master Thesis			04-GEO-MA2-162-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
2	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
	graduate	--	

Contents

The final colloquium aims to present the aim and results of the Msc thesis to a scientific audience (EAGLE lecturer and students) who are all allowed to ask questions and discuss the outcome critically. The presentation ought to follow scientific standards and should take 20mins. The presentation is not graded but is needed to finish the Msc.

Intended learning outcomes

Presentation of the final Msc thesis

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

K (0)
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)

talk (approx. 30 minutes) with subsequent discussion (approx. 15 minutes)
Language of assessment: English or German (assessment will be held in English; in addition, the examiner may, where possible, decide to hold assessment in German)

Allocation of places

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Additional information

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Workload

60 h

Teaching cycle

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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 title			Abbreviation
Introduction to Spatial Data Analysis Software			04-GEO-MB1-242-m01
Module coordinator			**Module offered by**
holder of the Professorship of Remote Sensing			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Introduction to Programming in Earth Observation			04-GEO-MB2-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Theoretical basics and practical examples of programming and geostatistics focused on application within Remote Sensing and GIS are provided. Basic functionality such as script structure, implementation, functions, loops as well as programming syntax using the R language are introduced. Moreover, statistical basics related to environmental analysis are covered such as Random Forest or spatial queries.

Intended learning outcomes

Introduction to programming and geostatistics for environmental data analysis.

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

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)
creditable for bonus

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
From Field Measurements to Geoinformation			04-GEO-MB3-162-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

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

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Additional information

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Workload

150 h

Teaching cycle

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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 title			Abbreviation
Advanced Coding for Earth Observation			04-GEO-OMA10-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation Cloud Computing			04-GEO-OMA11-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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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) (2024)

Module title			Abbreviation
Advanced Cloud Computing			04-GEO-OMA12-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Spatial modelling and prediction			04-GEO-OMA1-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
UAS Application in Earth Observation			04-GEO-OMA13-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Theory and practice of UAS operation and methods			04-GEO-OMA14-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
UAS based Earth Observation data analysis			04-GEO-OMA15-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Earth Observation Analysis			04-GEO-OMA16-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Innovative Earth Observation Applications			04-GEO-OMA17-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Remote Sensing Applications			04-GEO-OMA18-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Novel Image Analysis Methods			04-GEO-OMA19-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Spatio-temporal environmental Methods			04-GEO-OMA20-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation Research Advances			04-GEO-OMA21-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Science from Wall-to-Wall			04-GEO-OMA22-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Introduction to Active remote sensing systems			04-GEO-OMA2-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Information sciences in Remote Sensing			04-GEO-OMA23-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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

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Module appears in

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

Module title			Abbreviation
Innovative Earth Observation Methods			04-GEO-OMA24-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
AI approaches in Earth Observation			04-GEO-OMA25-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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

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Module appears in

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

Module title			Abbreviation
Processing and image analysis of active remote sensing systems			04-GEO-OMA3-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Lidar Remote Sensing			04-GEO-OMA4-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Hyperspectral Earth Observation			04-GEO-OMA5-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation Informatics			04-GEO-OMA6-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Introduction to Spatial Python			04-GEO-OMA7-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Spatial Python			04-GEO-OMA8-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Spatial Programming			04-GEO-OMA9-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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 (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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Applied Remote Sensing outside academia			04-GEO-SOS11-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Science Communication			04-GEO-SOS12-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Scientific Presentation			04-GEO-SOS1-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Existing presentations will be discussed and evaluated with regard to visual appearance. Moreover design and appearance of presentations will be discussed and guidelines provided. Individual training of presentations will be part of it as well. Alternative presentation methods will be introduced (e.g knitr, beamer).

Intended learning outcomes

Presentations and articles will be discussed with regard to its scientific content and goal to ensure high quality presentations.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Science Visualization			04-GEO-SOS13-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Scientific Softskills			04-GEO-SOS14-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Advanced Skills on the Master's Level			04-GEO-SOS2-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Moreover scientific articles will be discussed and own articles be written. The structure as well as wording will be covered. Moreover, general writing guidelines, journal guidelines etc. will be introduced.

Intended learning outcomes

Presentations and articles will be discussed with regard to its scientific content and goal to ensure high quality presentations as well as articles.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Research Project Management			04-GEO-SOS4-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

The course of research projects is discussed. The possibilities and standard processes for acquiring third-party funds are shown. Typical research project structures and contents are introduced and discussed. Teamwork and team structures in typical research projects are practiced.

Intended learning outcomes

The aim is to provide students with basic knowledge in acquiring, processing and completing research projects. The students are then able to plan and organize their own projects.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Scientific Maps			04-GEO-SOS6-242-m01
Module coordinator			**Module offered by**
holder of the Professorship of Remote Sensing			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Existing maps will be discussed and evaluated with regard to visual appearance. Moreover design and appearance of maps will be discussed and guidelines provided. Individual training of map creation will be part of it as well. Relevant programs will be introduced.

Intended learning outcomes

Maps will be discussed with regard to its scientific content and goal to ensure high quality spatial information.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Scientific Graphs			04-GEO-SOS7-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Existing graphs and figures will be discussed and evaluated with regard to visual appearance. Moreover content and message of graphs will be discussed and guidelines provided. Individual training of graph creation will be part of it as well. Relevant software methods will be introduced (e.g ggplot, shiny).

Intended learning outcomes

Figures and graphs will be discussed with regard to its scientific content and goal to ensure high quality graphs.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Innovative Research Softskills			04-GEO-SOS9-242-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

Contents

Challenges and potential of novel scientific approaches will be introduced and discussed. The various steps will the discussed within the group and optimal workflows provided.

Intended learning outcomes

Knowledge of identifying and approaching challenges and potential within novel research approaches.

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

S (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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Introduction to Remote Sensing and Geoanalysis			04-GEO-TB1-162-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

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

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Additional information

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Workload

150 h

Teaching cycle

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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 title			Abbreviation
Applications of Earth Observation			04-GEO-TB2-162-m01
Module coordinator		**Module offered by**	
holder of the Professorship of Remote Sensing		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	graduate	--	

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

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)

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

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Additional information

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Workload

150 h

Teaching cycle

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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 title			Abbreviation
Scientific Publishing and Writing in Earth Observation			04-GEO-TB3-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	(not) successfully completed	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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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)

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)

Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Historical Urban Analysis			04-GEO-URB10-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Applied Programming for Urban Analytics			04-GEO-URB11-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Remote Sensing of Urban Areas			04-GEO-URB12-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Global to local Earth Observation of Urbanization			04-GEO-URB1-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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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)

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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Risk and Disaster Earth Observation			04-GEO-URB13-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
OpenSource coding in Urban Earth Observation			04-GEO-URB14-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

--

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Earth Observation of urban morphology			04-GEO-URB15-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban remote sensing and socio-economy			04-GEO-URB16-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban-human interaction analysis			04-GEO-URB17-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban Remote Sensing			04-GEO-URB2-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban Classification Approaches			04-GEO-URB3-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
From Urban Fieldwork to Analysis			04-GEO-URB4-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Global Urbanization			04-GEO-URB5-242-m01
Module coordinator		**Module offered by**	
--		Institute of Geography and Geology	
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (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	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban Geography			04-GEO-URB7-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (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	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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) 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

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)

Module title			Abbreviation
Urban Field Data Acquisition			04-GEO-URB9-242-m01
Module coordinator			**Module offered by**
--			Institute of Geography and Geology
ECTS	**Method of grading**	**Only after succ. compl. of module(s)**	
5	numerical grade	--	
Duration	**Module level**	**Other prerequisites**	
1 semester	--	--	

Contents

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Intended learning outcomes

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

S (1) + Ü (1)
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
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Allocation of places

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Additional information

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Workload

150 h

Teaching cycle

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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) (2024)