

Module title		Abbreviation
Introduction to Geographical Remote Sensing		04-Geo-FERNE-152-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	undergraduate	--
Contents		
<p>The lecture gives an overview of the principles of remote sensing, that are: theoretical basics, history of remote sensing / physical principles (energy and radiation, interactions radiation - atmosphere, interactions radiation - surfaces, objects under investigation: soils, vegetation, water) / thermal remote sensing: radiation laws, radiant temperature, emissivity / detectors: characterisation of remote sensing data, platforms and sensors (passive and active systems, e.g. hyperspectral and LiDAR) / radar remote sensing / radar interferometry / basics for remote sensing parameters (land, atmosphere, oceans).</p>		
Intended learning outcomes		
<p>The students describe basics of earth observation. They outline and explain the radiation path through the atmosphere to the object under investigation and back to the sensor. They emphasise essential characteristics of remote sensing data, sensors and platforms.</p>		
Courses (type, number of weekly contact hours, language – if other than German)		
V (2) + T (2) Module taught in: German and/or English		
Method of assessment (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
written examination (approx. 45 minutes) Language of assessment: German and/or English creditable for bonus		
Allocation of places		
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Additional information		
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Workload		
150 h		
Referred to in LPO I (examination regulations for teaching-degree programmes)		
§ 66 I Nr. 2		
Module appears in		
<p>Bachelor' degree (1 major) Geography (2015) Bachelor' degree (1 major) Computer Science (2015) Bachelor' degree (1 major) Mathematics (2015) Bachelor's degree (1 major, 1 minor) Geography (Minor, 2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (Minor, 2015) Bachelor's degree (1 major, 1 minor) Geography (Focus Physical Geography) (2015) Bachelor's degree (1 major, 1 minor) Geography (Focus Human Geography) (2015) Bachelor's degree (2 majors) Pre- and Protohistoric Archaeology (2015) First state examination for the teaching degree Gymnasium Geography (2015) Bachelor's degree (2 majors) Geography (2015)</p>		

Bachelor's degree (1 major, 1 minor) Geography (2017)
Bachelor' degree (1 major) Computer Science (2017)
Bachelor' degree (1 major) Computer Science (2019)
Module studies (Bachelor) Geography (2020)
Bachelor' degree (1 major) Computer Science und Sustainability (2021)
Bachelor' degree (1 major) Artificial Intelligence and Data Science (2022)