

Module title					Abbreviation
Earth Observation Time-Series Analysis					04-GEO-MET7-212-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					
Time series of remote sensing data are valuable to reveal short and long term processes occurring on the Earth's surface. Impacts of climate change on land cover, start and end of the growing season, the dynamic behavior of snow covered or glaciated areas, or even extreme events such as forest fires, floods, and droughts are possible applications for time series data. In order to be able to analyze such time series accordingly, the data need to be preprocessed before applying techniques to extract the desired information.					
Intended learning outcomes					
In this seminar, necessary preprocessing measures as well as techniques to analyze time series of remote sen- sing data will be discussed. Water body, snow cover, and vegetation dynamics will be extracted from MODIS and Sentinel data using routines developed and prepared together in Python (or IDL). After learning the basic techni- ques the participants of the seminar will choose a topic of their own choice as their final project.					
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 is creditable for 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) Assessment offered: Once a year, summer semester creditable for bonus 					
Allocation of places					
Additional information					
Workload					
150 h					
Teaching cycle					
Referred to in LPO I (examination regulations for teaching-degree programmes)					
Module appears in					
Master's degree (1 major) Applied Earth Observation and Geoanalysis (EAGLE) (2021)					

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