

Module title		Abbreviation
Geographical Information Systems (GIS)		04-Geo-GIS-152-m01
Module coordinator		Module offered by
holder of the Professorship of Physical Geography		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		
Introduction to GIS; application examples from Geography, earth and environmental sciences; introduction to GIS ArcGIS; data models to GIS: factual and geometrical data (vector and grid data); geometrical, topological and topical data modelling; data administration with ArcGIS (ArcCatalog); conception and structure of a GIS project (ArcGIS); plain principle, meta data, data format, attribute data; relational data model; software components of ArcGIS (ArcMap, ArcToolbox, ArcInfo Workstation); data acquisition and preparation of geometrical and factual data (digitisation, measurement; administration of geometrical and factual data (introduction to structure of a geodata base); geographical analysis of geodata (linkage, intersection, topical and geographical queries, geographical interpolation, terrain analysis from digital elevation data); interpretation, visualisation and result presentation of geodata (signatures, diagrams and map design, topical maps)		
Intended learning outcomes		
Students achieve knowledge of the type and development, management, processing and presenting of geographical data. They acquire skills in dealing with GIS and in the organisation of GIS projects as well as in the processing and interpretation of spatial analysis of GIS (GIS software).		
Courses (type, number of weekly contact hours, language – if other than German)		
S (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)		
portfolio (approx. 20 pages, including 3 maps, 2 logs) Language of assessment: German and/or English		
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)		
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Module appears in		
Bachelor' degree (1 major) Geography (2015) Bachelor's degree (1 major, 1 minor) Pre- and Protohistoric Archaeology (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) Bachelor's degree (1 major, 1 minor) Geography (2017) Bachelor' degree (1 major) Computer Science und Sustainability (2021)		