

<b>Module Name</b>	<b>Module Code</b>
GIS in Ecology	EMAEF036-01a
<b>Module Coordinator</b>	
Prof. Dr. Tim Diekötter	
<b>Organizer</b>	
Institute for Natural Resource Conservation - Landscape Ecology	
<b>Faculty</b>	
Faculty of Agricultural and Nutritional Sciences	
<b>Examination Office</b>	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

<b>ECTS Credits</b>	6
<b>Evaluation</b>	Graded
<b>Duration</b>	one semester
<b>Frequency</b>	Only takes place during winter semesters
<b>Workload per ECTS Credit</b>	30 hours
<b>Total Workload</b>	180 hours
<b>Contact Time</b>	60 hours
<b>Independent Study</b>	120 hours
<b>Teaching Language</b>	German

<b>Recommended Requirements</b>			
Students are required to have prior knowledge of GIS software. Furthermore, some proficiency in using spreadsheets and databases would be beneficial. Basic knowledge of population dynamics of species in landscapes is recommended.			
<b>Module Courses</b>			
<b>Course Type</b>	<b>Course Name</b>	<b>Compulsory/Optional</b>	<b>SWS</b>
Practical exercise	GIS in Ecology	Compulsory	3
Lecture	GIS in Ecology Veranstaltung	Compulsory	1
<b>Prerequisites for Admission to the Examination(s)</b>			
passed assignment			

<b>Examination(s)</b>				
<b>Examination Name</b>	<b>Type of Examination</b>	<b>Evaluation</b>	<b>Compulsory / Optional</b>	<b>Weighting</b>
Seminar Paper with Assignment: GIS in Ecology	Seminar Course-work	Graded	Compulsory	100
<b>Further Information on the Examination(s)</b>				
1.+ 2. period in winter semester 1.period in summer semester Examiner: Prof. Dr. Diekötter/Dr. J.M. Kalwij QIS: 78601 with number of Examination 78610				

<b>Course Content</b>
Spatial data will be provided, either in raw form or as processed geometric objects. Geometric objects will be organised in geodatabases and linked with non-spatial data. These geodatabases will be used for the spatial analysis of population data. For the final assignment students can use their own data, if preferred.
<b>Learning Outcome</b>
Students understand the fundamental difference between geometric objects such as polygons, lines, points and grids, understand geographic coordinate systems, can process and organise raw spatial data to generate geometric objects, have learnt how to find and work with Open Access datasets such as base maps and climate data, can analyse spatial data to study population dynamics, and have gained extensive experience presenting thematic maps to a range of users.
<b>Reading List</b>
Kennedy, M.D.(2013) Introducing Geographic Information Systems with ArcGIS. Wiley, Hoboken: <a href="http://proquest.tech.safaribooksonline.de/9781118330340">http://proquest.tech.safaribooksonline.de/9781118330340</a> (campus access only)Additional literature will be provided during the lectures and through the online teaching platform OLAT.

Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Environmental Management, Double-Degree-Agreement with Adam-Mickiewicz-University, Polen (UAM), (Version 2020)	Optional	-
Master, 1-Subject, Environmental Management, Double-Degree-Agreement with Irkutsk State University, Russland (ISU), (Version 2020)	Optional	-
Master, 1-Subject, Environmental Management, (Version 2020)	Optional	-
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-
Master, 1-Subject, International Master in Applied Ecology, (Version 2020)	Optional	-