

Module Name	Module Code
GIS and Population Dynamics in Landscapes	AEF-EM036
Module Coordinator	
Prof. Dr. Tim Diekötter	
Organizer	
Institut für Natur- und Ressourcenschutz - Landschaftsökologie	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Prüfungsamt Agrar- und Ernährungswissenschaftliche Fakultät	

ECTS Credits	6
Evaluation	Graded
Duration	one Semester
Frequency	Only takes place during winter semesters
Workload per ECTS Credit	30 hours
Total Workload	180 hours
Contact Time	60 hours
Independent Study	120 hours
Teaching Language	English

Recommended Requirements			
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.			
Module Courses			
Course Type	Course Name	Compulsory/Optional	SWS
Exercise	GIS and Population Dynamics in Landscapes	Compulsory	3
Lecture	GIS and Population Dynamics in Landscapes	Compulsory	1
Prerequisites for Admission to the Examination(s)			

Examination(s)				
Examination Name	Type of Examination	Evaluation	Compulsory / Optional	Weighting
Project: GIS and Population Dynamics in Landscapes	Projektarbeit	Graded	Compulsory	100
Further Information on the Examination(s)				
1.+2. period in wintersemester 1. period in summersemester Examiner: Prof. Dr. Diekötter/Dr. J.M. Kalwij QIS: 78600 with number of Examination 78610				

Course Content
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.
Learning Outcome
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.
Reading List
Kennedy, M.D.(2013) Introducing Geographic Information Systems with ArcGIS. Wiley, Hoboken: http://proquest.tech.safaribooksonline.de/9781118330340 (campus access only)Additional literature will be provided during the lectures and through the online teaching platform OLAT.
Additional Information
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Use	Compulsory / Optional	Semester
Master, 1-subject, Agricultural Sciences, Agricultural Economics, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Agribusiness, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Crop Sciences, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Animal Sciences, (Version 2013)	Optional	-
Master, 1-subject, Agricultural Sciences, Environmental Sciences, (Version 2013)	Optional	-
Master, 1-subject, Applied Ecology, (Version 2016)	Optional	-
Master, 1-subject, Applied Ecology, (Version 2015)	Optional	-
Master, 1-subject, Environmental Management, (Version 2013)	Optional	-
Master, 1-subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-
Master, 1-subject, Sustainability, Society and the Environment, (Version 2013)	Optional	-