Module Name	Module Code
Advanced Ecosystem Analysis in Environmental Management	AEF-EM019
Module Coordinator	
Dr. rer. nat. Felix Müller	
Organizer	
Institute for Natural Resource Conservation - Ecosystem Management	
Faculty	
Faculty of Agricultural and Nutritional Sciences	
Examination Office	
Faculty of Agricultural and Nutritional Sciences - Examination Office	

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			
Basic GIS skills are desirable.			
Module Courses			
Course Type	**Course Name**	**Compul-sory/Optional**	**SWS**
Seminar	Advanced Ecosystem Analysis in Environmental Management	Compulsory	2
Lecture	Advanced Ecosystem Analysis in Environmental Management	Compulsory	2
Prerequisits for Admission to the Examination(s)			
Presentation of results from seminar paper			

Examination(s)				
Examination Name	**Type of Examination**	**Evaluation**	**Compulsory / Optional**	**Weighting**
Seminar Paper with Assignment: Advanced Ecosystem Analysis in Environmental Management	Seminar Coursework	Graded	Compulsory	100

Further Information on the Examination(s)

1.+2. period in wintersemester
1. period in summersemester

examiner: Prof. Dr. Müller/Dr. S.Bicking
QIS: 78100 with number of Examination 78110

Course Content

In this module, advanced methods of systems analysis, ecological regionalization and ecological modelling are linked with modern methods of natural ressource management. Based on a multidimensional, hierachical indicator concept,special analyses as well as dynamic scenarios of possible social changes are developed. Students work out and evaluate alternative operation options in smaller projects. The results can be used to create integrated assessments, systems-based descriptions, maps or monitoring systems that are able to meassure the success of protection actions. Finally, the results will be evaluated in the context of local, regional and international environmental monitoring and evaluation systems and environmental politics.

Learning Outcome

Students understand the structual and dynamic interaction of social targets of natural ressources management and the local characteristics of an ecosystem. Partisipants are able to demonstrate different scenarios and to model the potential ecological reactions. They are also able to evaluate the meaning of the analysis in social context *based on the ecosystem service approach.*

Reading List

- Joergensen S.E. & F. Müller (eds., 2000): Handbook of ecosystem theories and management. Boca Raton
- Odum, H.T. (1983): Systems ecology. New York
- Costanza, R. et al. (1997): Ecological economics. Boca Raton
- Millenium Assessment Board (2003): Ecosystems and human well-being.
Washington
- Wiggering, H. & F.Müller (2004): Umweltziele und Indikatoren. Berlin, Heidelberg New York
- Grunewald, K. & O. Bastian (2015): Ecosystem Services - Concept, Methods and Case Studies. Berlin
- Everard, M. (2017): Ecosystem services - key issues. Milton Park

Additional Information

Maximum number of participants: 25
Due to scientific direction of the module, students of Environmental Management, Sustainability, Society and the Environment, Applied Ecology have priority. Vacant places are provided to students of other master programs.
Enrollment by OLAT within workdays Monday through Friday in the 1nd week of the 2. audit period of the preceding semester. Following information is necessary: Matriculation number last name, first name, striven degree study programme.
The allocation of the places takes place in the 2nd week of the 2. audit period of the preceding semester. Acceptance of the place by students only through participation at the first day of the course. Students without a place can get a place at the first day of the course by move-up procedure.
Prof. Dr. rer. nat. Felix Müller
Fon:+49 431 -880-3251
Fax:+49 431 880-4083
E-Mail: fmueller@ecology.uni-kiel.de
http://www.ecosystem-management.uni-kiel.de/mitarbeiter/fmueller

Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	-
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2013)	Optional	-
Master, 1-Subject, Applied Ecology, (Version 2016)	Optional	-
Master, 1-Subject, Applied Ecology, (Version 2015)	Optional	-
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	-
Master, 1-Subject, Ecohydrology, (Version 2011)	Optional	-
Master, 1-Subject, Environmental and Resource Economics, (Version 2014)	Optional	-
Master, 1-Subject, Environmental Management, (Version 2017)	Optional	-
Master, 1-Subject, Environmental Management, (Version 2013)	Optional	-
Master, 1-Subject, Environmental Management - Management of Natural Resources, (Version 2010)	Optional	-
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	-
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2013)	Optional	-
Master, 1-Subject, Sustainability, Society and the Environment, (Version 2013)	Optional	-