Module Name	Module Code
Hydrological Modelling	AEF-EM027
Module Coordinator	
Prof. Dr. Nicola Fohrer	
Organizer	
Institute for Natural Resource Conservation - Hydrology and Water Resources 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

Module Courses			
Course Type	**Course Name**	**Compul-sory/Optional**	**SWS**
Lecture	Hydrological and Hydraulic Modelling	Compulsory	2
Exercise	Hydrological and Hydraulic Modelling	Compulsory	2
Prerequisits for Admission to the Examination(s)			

Examination(s)				
Examination Name	**Type of Examination**	**Evaluation**	**Compulsory / Optional**	**Weighting**
Assignment: Hydrological Modelling	Assignment	Graded	Compulsory	100
Further Information on the Examination(s)				
1.+2. period in wintersemester 1. period in summersemester examiner: Dr. Björn Guse, Dr. Paul Wagner QIS: 73100 with number of Examination 73110				

Course Content
Rainfall-runoff modelling, runoff processes and their implementation into hydrological models, overview of state of the art of hydrological models, model parameterization, data pre- and postprocessing, spatially distrubuted models and GIS interface, model application, compiler functions, debugging, model modifications
Learning Outcome
Students are able to understand theoretical modelling concepts and their transformation in model code and application. They are able to run sensitivity analysis and to calibrate and validate hydrological models and interpret the results. They are capable of defining model scenarios and run comparative model exercises
Reading List
K. Beven, 2000: Rainfall – Runoff Modeling – the primer. John Wiley & Sons Ltd 2000 SWAT user manuals
Additional Information
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Use	Compulsory / Optional	Semester
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2017)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Agricultural Economics, (Version 2013)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Special. Agricultural Economics and Agribusiness # Specific Field of Study: Agricultural Economics, (Version 2008)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Special. Agricultural Economics and Agribusiness # Specific Field of Study: Agribusiness, (Version 2008)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2017)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Agribusiness, (Version 2013)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2017)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2013)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Crop Sciences, (Version 2008)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2017)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2013)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Animal Sciences, (Version 2008)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2017)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2013)	Optional	3.
Master, 1-Subject, Agricultural Sciences, Specialisation Environmental Sciences, (Version 2008)	Optional	3.
Master, 1-Subject, Applied Ecology, (Version 2010)	Optional	3.
Master, 1-Subject, Dairy Science, (Version 2017)	Optional	3.
Master, 1-Subject, Ecohydrology, (Version 2011)	Optional	3.
Master, 1-Subject, Environmental and Resource Economics, (Version 2014)	Optional	3.
Master, 1-Subject, Environmental Management, (Version 2017)	Optional	3.
Master, 1-Subject, Environmental Management, (Version 2013)	Optional	3.
Master, 1-Subject, Environmental Management - Management of Natural Resources, (Version 2010)	Optional	3.
Master, 1-Subject, Nutritional and Food Science, (Version 2013)	Optional	3.
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2017)	Optional	3.
Master, 1-Subject, Nutritional and Consumer Economics, (Version 2013)	Optional	3.