

Module Name	Module Code
Hydrological Modelling	EMAEF027-01a
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	German

Module Courses			
Course Type	Course Name	Compul- sory/Optional	SWS
Practical exercise	Hydrological and Hydraulic Modelling	Compulsory	2
Lecture	Hydrological and Hydraulic Modelling	Compulsory	2

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 winter semester 1. period in summer semester examiner: Dr. Björn Guse, Dr. Paul Wagner QIS: 73101 with number of 73110				

Short Summary
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 distributed models and GIS interface, model application, compiler functions, debugging, model modifications
Course Content
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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

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	-