

<b>Module Name</b>	<b>Module Code</b>
Hydrology and Climatology	EMAEF002-01a
<b>Module Coordinator</b>	
Prof. Dr. Nicola Fohrer	
<b>Organizer</b>	
Institute for Natural Resource Conservation - Hydrology and Water Resources Management	
<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>Module Courses</b>			
<b>Course Type</b>	<b>Course Name</b>	<b>Compul- sory/Optional</b>	<b>SWS</b>
Lecture	Climatology	Compulsory	2
Lecture	Hydrology	Compulsory	2

<b>Examination(s)</b>				
<b>Examination Name</b>	<b>Type of Examination</b>	<b>Evaluation</b>	<b>Compulsory / Optional</b>	<b>Weighting</b>
Oral Examination: Hydrology and Climatology	Oral Examination	Graded	Compulsory	100
<b>Further Information on the Examination(s)</b>				
<p>1.+2. period in wintersemester                      1. period in summersemester</p> <p>Excluded from participation:                      Students Master of Science Geography - University Kiel</p> <p>examiner: Tibebe Tigabu/Dr. Wagner                      QIS: 71201 with number of Examination 71210</p>				

<b>Course Content</b>
<p>Principles of Hydrology: History of hydrology, water as a substance, water cycle, water balance equation, climatic input parameters, energy budget, evapotranspiration, soil water budget, rivers, groundwater, examples, calculations to quantify water budget, water quality, drinking water, waste water, treatment, irrigation</p> <p>Principles of Climatology: heat balance, radiation balance, evaporation, transpiration, formation of local and regional microclimate.</p>
<b>Learning Outcome</b>
<p>Hydrology: Students understand the basics of the hydrologic cycle and are able to interpret the effectivity of different measures and processes as well as the impact of anthropogenic interferences.</p> <p>Climatology: Students understand the basics of climatologic processes and their influence on the local microclimate. Students are able to calculate radiation – and thermal balances for different locations                      The practical part of this module teaches students to use publicly available data sources.</p>
<b>Reading List</b>
<p>Online lecture notes: OLAT                      RC Ward &amp; M. Robinson, 2000: Principles of hydrology. Mc Graw Hill, 4th edition.450p.                      T. Davie, 2002: Fundamentals of hydrology. Routledge Fundamentals of physical geography.169p.</p>
<b>Additional Information</b>
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<b>Use</b>	<b>Compulsory / Optional</b>	<b>Semester</b>
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	-