| Module Name | Module Code |
|---|---|
| Hydrology and Climatology | AEF-EM002 |
| **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** | ein Semester |
| **Frequency** | Only takes place during winter semesters |
| **Workload per ECTS Credit** | 30 hours |
| **Total Workload** | 180 hours |
| **Contact Time** | 52,5 hours |
| **Independent Study** | 127,5 hours |
| **Teaching Language** | English |

| **Entry Requirements as Stated in the Examination Regulations** | | | |
|---|---|---|---|
| **Excluded from participation:**<br>Students Bachelor of Science Agricultural Sciences - University Kiel<br>Students Master of Science Geography - University Kiel | | | |
| **Module Courses** | | | |
| **Course Type** | **Course Name** | **Compul-sory/Optional** | **SWS** |
| Lecture | Hydrology | Compulsory | 2 |
| Lecture | Climatology | Compulsory | 2 |
| **Prerequisits for Admission to the Examination(s)** | | | |
| | | | |

| Examination(s) | | | | |
|---|---|---|---|---|
| **Examination Name** | **Type of Examination** | **Evaluation** | **Compulsory / Optional** | **Weighting** |
| Oral Examination: Hydrology and Climatology | Oral Examination | Graded | Compulsory | 100 |

**Further Information on the Examination(s)**

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

**Excluded from participation:**
Students Bachelor of Science Agricultural Sciences - University Kiel
Students Master of Science Geography - University Kiel

examiner: Tibebe Tigabu/Dr. Wagner
QIS: 71200 with number of Examination 71210

**Course Content**

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
Principles of Climatology: heat balance, radiation balance, evaporation, transpiration, formation of local and regional microclimate.

**Learning Outcome**

Hydrology: Students understand the basics of the hydrologic cycle and are able to interpret the effectivity of different measures and proceses as well as the impact of anthropogenic interferences.

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.

**Reading List**

Online lecture notes: OLAT
RC Ward & M. Robinson, 2000: Principles of hydrology. Mc Graw Hill, 4th edition.450p.
T. Davie, 2002: Fundamentals of hydrology. Routledge Fundamentals of physical geography.169p.

**Additional Information**

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| Use | Compulsory / Optional | Semester |
|---|---|---|
| Bachelor, 1-Subject, Geography, (Version 2013) | Optional | - |
| Bachelor, 1-Subject, Geography, (Version 2007) | Optional | - |
| 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, 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, Urban and Regional Development, (Version 2013) | Optional | - |
| Master, 1-Subject, Sustainability, Society and the Environment, (Version 2013) | Optional | - |
| Master, 1-Subject, Environmental Geography and Management, (Version 2015) | Optional | - |
| Master, 1-Subject, Environmental Geography and Management, (Version 2013) | Optional | - |