

## Module: Freshwater Ecology

<b>Level</b>	Bachelor	<b>Short Name</b>	Gök
<b>Responsible Lecturers</b>	Reintjes		
<b>Department, Facility</b>	Applied Natural Sciences		
<b>Course of Studies</b>	Environmental Engineering and Management, Bachelor		
<b>Compulsory/elective</b>	Compulsory elective	<b>ECTS Credit Points</b>	5
<b>Semester of Studies</b>	6	<b>Semester Hours per Week</b>	4
<b>Length (semesters)</b>	1	<b>Workload (hours)</b>	150
<b>Frequency</b>	SuSe	<b>Presence Hours</b>	60
<b>Teaching Language</b>	German/English	<b>Self-Study Hours</b>	90

The following section is filled only if there is **exactly one** module-concluding exam.

<b>Exam Type</b>	Written Exam	<b>Exam Language</b>	German/English
<b>Exam Length (minutes)</b>	120	<b>Exam Grading System</b>	One-third Grades
<b>Learning Outcomes</b>	<p>The students understand the concepts for describing aquatic systems and their interactions with terrestrial, atmospheric, climatic and geochemical processes.</p> <p>They know the basic frameworks, instruments and methods for monitoring water quality.</p> <p>They are able to summarize interdisciplinary issues related to aquatic ecosystems and challenges of water protection.</p>		
<b>Participation Prerequisites</b>	Ecology		

The previous section is filled only if there is **exactly one** module-concluding exam.

<b>Consideration of Gender and Diversity Issues</b>	<ul style="list-style-type: none"> <li>✓ Use of gender-neutral language (THL standard)</li> <li>✓ Target group specific adjustment of didactic methods</li> <li>✗ Making subject diversity visible (female researchers, cultures etc.)</li> </ul>
<b>Applicability</b>	
<b>Remarks</b>	

## Module Course: Freshwater Ecology (Lecture)

(of Module: Freshwater Ecology)

<b>Course Type</b>	Lecture	<b>Form of Learning</b>	Presence
<b>Mandatory Attendance</b>	no	<b>ECTS Credit Points</b>	3
<b>Participation Limit</b>		<b>Semester Hours per Week</b>	2
<b>Group Size</b>		<b>Workload (hours)</b>	90
<b>Teaching Language</b>	German/English	<b>Presence Hours</b>	30
<b>Study Achievements ("Studienleistung", SL)</b>		<b>Self-Study Hours</b>	60
<b>SL Length (minutes)</b>		<b>SL Grading System</b>	

The following section is filled only if there is a course-specific exam.

<b>Exam Type</b>		<b>Exam Language</b>	
<b>Exam Length (minutes)</b>		<b>Exam Grading System</b>	
<b>Learning Outcomes</b>			
<b>Participation Prerequisites</b>			

The previous section is filled only if there is a course-specific exam.

<b>Contents</b>	<ul style="list-style-type: none"> <li>• Water cycle, classification, age and genesis of inland waters</li> <li>• Physical conditions in the water</li> <li>• Biocoenosis of the waters</li> <li>• Material balance of the waters</li> <li>• Applied water ecology, in particular             <ul style="list-style-type: none"> <li>• Monitoring of water quality (Water Framework Directive, WFD)</li> <li>• Water therapy and water protection measures</li> </ul> </li> </ul>
<b>Literature</b>	<ul style="list-style-type: none"> <li>• Dodds, W. K., &amp; Whiles, M. R. (2020). <i>Freshwater ecology: Concepts and environmental applications of limnology</i> (Third edition). Elsevier, Academic Press.</li> </ul>
<b>Remarks</b>	

## Module Course: Freshwater Ecology (Practical)

(of Module: Freshwater Ecology)

<b>Course Type</b>	Practical Training	<b>Form of Learning</b>	Presence
<b>Mandatory Attendance</b>	yes	<b>ECTS Credit Points</b>	2
<b>Participation Limit</b>		<b>Semester Hours per Week</b>	2
<b>Group Size</b>		<b>Workload (hours)</b>	60
<b>Teaching Language</b>	German/English	<b>Presence Hours</b>	30
<b>Study Achievements ("Studienleistung", SL)</b>	Practical Training	<b>Self-Study Hours</b>	30
<b>SL Length (minutes)</b>		<b>SL Grading System</b>	Pass

The following section is filled only if there is a course-specific exam.

<b>Exam Type</b>		<b>Exam Language</b>	
<b>Exam Length (minutes)</b>		<b>Exam Grading System</b>	
<b>Learning Outcomes</b>	<p>The students recognize the importance of indicators for describing water bodies and their ecological status.</p> <p>The students can classify the methods of monitoring the ecological status of water bodies against the background of aquatic ecology.</p>		
<b>Participation Prerequisites</b>			

The previous section is filled only if there is a course-specific exam.

<b>Contents</b>	<ul style="list-style-type: none"> <li>• Excursion (standing and/or flowing waters) with field analyses and, if necessary, subsequent evaluations in the laboratory.</li> <li>• Monitoring methods in the context of the Water Framework Directive (WFD) serve as a basis, but are applied in a simplified manner to suit the specific target group.</li> <li>• Laboratory experiments on the culture and analysis of microalgae.</li> </ul>
<b>Literature</b>	Literaturquellen on methods based on the WFD, v.a.
<b>Remarks</b>	