



<b>Module number</b>	<b>Module name</b>	<b>Lecturer</b>
BIWE-12	Safety Concepts	Prof. Kaliske
<b>Content and qualification aim</b>	<p>Contents of this module are:</p> <ul style="list-style-type: none"><li>• Safety of structures, forecast and assessment of risk, limit states and failure of structures</li><li>• Concepts for description of uncertainty and safety</li><li>• Level 3-Analysis (stochastic concepts for assessing the safety of structures, integral formulas for failure probability)</li><li>• Level 2-Analysis (approximation methods for the computation of failure probability, safety index, reliability theory first and second order)</li><li>• Level 1-Analysis (semi-probabilistic safety concepts, partial safety factors, application of standards)</li><li>• Time series and load processes</li><li>• Model based and model free calculation methods</li></ul> <p>After completion of the module, students will be able to assess the safety of structures by applying advanced numerical methods.</p>	
<b>Type of course</b>	2 hours of lecture, 1 hour of exercise per week, and self-study	
<b>Requirements for study</b>	Good knowledge from the module BIWO-04 as well study competence from the module BIWO-05	
<b>Practical use of the module</b>	The module is one of the elective modules in the Master's programme: Advanced Computational and Civil Engineering Structural Studies, of which seven have to be chosen.	
<b>Requirements for the award of credits</b>	<p>The credits are awarded if the module examination is passed successfully.</p> <p>The module examination consist of an examination of 90 minutes. Prerequisite for the examination is an assignment of 40 hours.</p>	
<b>Credits and grades</b>	<p>4 credits can be acquired for this module.</p> <p>The grade results from the examination.</p>	
<b>Frequency of the module</b>	The module is offered every academic year (summer semester).	
<b>Workload</b>	The workload is 120 working hours.	
<b>Duration of the module</b>	1 semester	
<b>Recommended literature</b>		