

DEPARTMENT OF CIVIL ENGINEERING  
COURSE SYLLABUS

Course Details				
<b>Code</b>	<b>Academic Year</b>			<b>Semester</b>
BAU302	3			Fall
<b>Title</b>	<b>T</b>	<b>A</b>	<b>L</b>	<b>ECTS</b>
Soil Mechanics and Foundation Engineering I	2	2	1	6
<b>Language</b>	German			
<b>Level</b>	<b>Undergraduate</b>	✓	<b>Graduate</b>	<b>Postgraduate</b>
<b>Department / Program</b>	Civil Engineering			
<b>Forms of Teaching and Learning</b>	Formal			
<b>Course Type</b>	<b>Compulsory</b>	✓	<b>Elective</b>	
<b>Objectives</b>	In this course, basic procedures for the investigation of the subsoil are explained in more detail using various methods.			
<b>Content</b>	Physical and mechanical properties of the soil and its determination in the laboratory, geotechnical soil investigations, tensions in the subsoil, shear and deformation behavior of soils, potential and groundwater flows, structural design, static calculation and proof of stability of shallow foundations and retaining walls, determination of the time settlement behavior.			
<b>Prerequisites</b>				
<b>Coordinator</b>				
<b>Lecturer(s)</b>				
<b>Assistant(s)</b>				
<b>Work Placement</b>				
Recommended or Required Reading				
<b>Books / Lecture Notes</b>	Grundbau-Taschenbuch: Teil 3: Geotechnische Bauwerke 31. Januar 2018 von Karl Josef Witt			
<b>Other Sources</b>				
Additional Course Material				
<b>Documents</b>				
<b>Assignments</b>				
<b>Exams</b>				
Course Composition				
<b>Mathematics und Basic Sciences</b>				%
<b>Engineering</b>				%
<b>Engineering Design</b>				%
<b>Social Sciences</b>				%

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Educational Sciences			%
Natural Sciences			%
Health Sciences			%
Expert Knowledge			%
<b>Assessment</b>			
<b>Activity</b>	<b>Count</b>		<b>Percentage (%)</b>
Midterm Exam			
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam			
		<b>Total</b>	<b>100</b>
<b>ECTS Points and Work Load</b>			
<b>Activity</b>	<b>Count</b>	<b>Duration</b>	<b>Work Load (Hours)</b>
Lectures	14	5	70
Self-Study	14	3	42
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	2	10
Recitations			
Laboratory			
Projects			
Final Exam	1	2	15
		<b>Total Work Load</b>	<b>137</b>
		<b>ECTS Points(Total Work Load / Hour)</b>	<b>6</b>
<b>Learning Outcomes</b>			
1	<p>The students learn to physically describe the soil as a building material in almost all construction projects and to correctly assess its mechanical behavior as a building ground. The understanding of tensions in the subsoil and the determination of subsidence are brought closer to the students. Based on these basics, the relevant foundations and supporting structures for buildings and engineering structures are dealt with in terms of their construction, the load assumptions, and the engineering evidence of stability. In this context, settlement calculation methods will also be presented. The students are then able to plan flat foundations and retaining walls as well as to prove and assess their stability. A voluntary project that accompanies the semester should train these skills in practice.</p>		

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**Weekly Content**

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**Contribution of Learning Outcomes to Program Objectives(1-5)**

	P1	P2	P3	P4	P5	P6	P7
1							
2							
3							
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12							

**Contribution Level** 1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High

**Compiled by:**

**Date of Compilation:**