

DEPARTMENT OF CIVIL ENGINEERING
COURSE SYLLABUS

Course Details				
Code	Academic Year			Semester
BAU301	3			Fall
Title	T	A	L	ECTS
Structural Engineering II	4	2	0	6
Language	German			
Level	Undergraduate	✓	Graduate	Postgraduate
Department / Program	Civil Engineering			
Forms of Teaching and Learning	Formal			
Course Type	Compulsory	✓	Elective	
Objectives	The main goal is to enable students to design components and connections made of the classic materials steel and reinforced concrete.			
Content	<ul style="list-style-type: none"> - Stability problems of components under compression (buckling, flexural buckling, torsional flexural buckling and model support methods) - Principles of pre-stress - Ultimate load capacity of composite steel girders - Design of typical steel construction connections (welded and bolted connections) - Theory of plate structures, solid cover plates - Plates, theory of beam models and their application to complex situations (D areas) such as frame corners, brackets and recesses 			
Prerequisites				
Coordinator				
Lecturer(s)				
Assistant(s)				
Work Placement				
Recommended or Required Reading				
Books / Lecture Notes	Grundlagen der Tragwerklehre, Band 226. September 2011 von Franz Krauss und Wilfried Führer			
Other Sources				
Additional Course Material				
Documents				
Assignments				
Exams				
Course Composition				

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Mathematics und Basic Sciences			%
Engineering			%
Engineering Design			%
Social Sciences			%
Educational Sciences			%
Natural Sciences			%
Health Sciences			%
Expert Knowledge			%
Assessment			
Activity	Count		Percentage (%)
Midterm Exam			
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam			
		Total	100
ECTS Points and Work Load			
Activity	Count	Duration	WorkLoad (Hours)
Lectures	14	6	84
Self-Study	14	2	28
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	2	10
Recitations			
Laboratory			
Projects			
Final Exam	1	2	15
		Total Work Load	137
		ECTS Points (Total Work Load / Hour)	6
Learning Outcomes			
1	Embedded in the approach of the cross-material teaching and based on the module Structural Engineering I, this module continues the basic knowledge of dimensioning and structural design of components. The students are introduced to more complex design tasks on rod-shaped and flat structural elements and are then able to determine the required cross-sectional dimensions,		

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	perform the essential ultimate limit state design checks, also considering stability problems, and constructively implement connection points. The structural design is intensified in steel and reinforced concrete construction. In addition, an overview of the principle of pre-stressing and the design of composite girders is given.
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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
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Contribution Level		1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High					
Compiled by:							
Date of Compilation:							