

DEPARTMENT OF CIVIL ENGINEERING
COURSE SYLLABUS

Course Details				
Code		Academic Year		Semester
BAU205		2		Spring
Title		T	A	L
Fluid Mechanics		2	2	1
				ECTS
				6
Language	German			
Level	Undergraduate	✓	Graduate	Postgraduate
Department / Program	Civil Engineering			
Forms of Teaching and Learning	Formal			
Course Type	Compulsory	✓	Elective	
Objectives	This module in parts the basic fluid mechanics knowledge necessary for civil engineers and the ability to implement this knowledge in simple practical engineering applications. .			
Content	Fluid properties, hydrostatics, kinematics and kinetics of spatial flow, conservation laws (at the control volume, Euler, Navier-Stokes, Reynolds), potential, ground water and boundary layer flows, pipe and channel flows, flow forces, similarity theory			
Prerequisites				
Coordinator				
Lecturer(s)				
Assistant(s)				
Work Placement				
Recommended or Required Reading				
Books / Lecture Notes	Strömungsmechanik: Eine kompakte Einführung für Physiker und Ingenieure (Pearson Studium - Physik)1. Januar 2014 von Hendrik Kuhlmann			
Other Sources				
Additional Course Material				
Documents				
Assignments				
Exams				
Course Composition				
Mathematics und Basic Sciences			20 %	
Engineering			30 %	
Engineering Design			10 %	
Social Sciences			%	
Educational Sciences			%	

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Natural Sciences			10 %
Health Sciences			%
Expert Knowledge			30 %
Assessment			
Activity	Count		Percentage (%)
Midterm Exam			
Quiz			
Assignments			
Attendance			
Recitations			
Projects			
Final Exam			
		Total	100
ECTS Points and Work Load			
Activity	Count	Duration	Work Load (Hours)
Lectures	14	5	70
Self-Study	14	3	42
Assignments			
Presentation / Seminar Preparation			
Midterm Exam	1	2	8
Recitations			
Laboratory			
Projects			
Final Exam	1	2	60
		Total Work Load	180
		ECTS Points(Total Work Load / Hour)	6
Learning Outcomes			
1	Fluid mechanics is the basic subject for the aquatic sciences. Fluid mechanics introduces the regularities of the movements of liquid sand gases, whereby the flows of the fluids water and air as well as the forces acting on structures are of particular importance for civil engineers.		
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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							
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Contribution Level	1: Low 2: Low-intermediate 3: Intermediate 4: High 5: Very High						
Compiled by:	R. Hinkelmann						
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