

DEPARTMENT OF CIVIL ENGINEERING

Course Details				
Code		Academic Year		Semester
BAU 492		4		2
Title		T	A	L
Final Project				12
Language	German			
Level	Undergraduate	*	Graduate	Postgraduate
Department / Program	Civil Engineering			
Forms of Teaching and Learning	Formal			
Course Type	Compulsory	*	Elective	
Objectives	The course aims to enable students to independently analyze, work on, and develop solutions to a problem at the undergraduate level in civil engineering in accordance with scientific methods.			
Content	The course involves the independent conduct of a study in the field of civil engineering through the application of scientific methods. It includes conducting research on designated problems, analyzing them, and developing solutions. The study is required to be carried out systematically throughout the semester and to be completed within 15 weeks from the determination of the topic. Any necessary extensions are evaluated and decided upon by the examination board.			
Prerequisites	(BAU301), (BAU304), (BAU201), (BAU205), and (BAU303)			
Coordinator	Prof.Dr. Murat Hamderi			
Lecturer(s)	Prof.Dr. Murat Hamderi			
Assistant(s)				
Work Placement				
Recommended or Required Reading				
Books / Lecture Notes				
Other Sources	Marder, M. P. (2011). Research methods for science. Cambridge University Press. Tan, W. (2022). Research methods: A practical guide for students and researchers. World Scientific.			
Additional Course Material				
Documents				
Assignments				
Exams				
Course Composition				
Mathematics und Basic Sciences				%

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Engineering	25	%
Engineering Design	50	%
Social Sciences		%
Educational Sciences		%
Natural Sciences		%
Health Sciences		%
Expert Knowledge	25	%

Assessment

Activity	Count	Percentage (%)
Midterm Exam		
Quiz		
Assignments		
Attendance		
Recitations		
Projects	1	100
Final Exam		
Total		100

ECTS Points and Work Load

Activity	Count	Duration	Work Load (Hours)
Lectures			
Self-Study	14	15	210
Assignments			
Presentation / Seminar Preparation			
Midterm Exam			
Recitations			
Laboratory			
Projects	14	9	126
Final Exam			
Total Work Load			336
ECTS Points (Total Work Load / Hour)			12

Learning Outcomes

1	Students define, analyze, and develop solutions independently for a problem in the field of civil engineering by applying scientific methods.
2	Students acquire the ability to prepare technical reports, engage in academic writing, and effectively present engineering projects.
3	Students develop the ability to plan and implement project processes with an awareness of ethical and professional responsibility.

Weekly Content

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1	Introduction to the Graduation Thesis: Process, Requirements, and Evaluation Criteria
2	Selection of Research Topic and Problem Definition
3	Literature Review and Research Methods for Source Identification
4	Research Methodology: Data Collection and Analysis Techniques
5	Technical Report Writing and Principles of Academic Ethics
6	Project Planning: Time Management and Workflow Development
7	Case Studies and Analysis of Similar Engineering Projects
8	Midterm Report Presentation
9	Engineering Design Processes and Calculation Methods
10	Experimental Studies or Field Applications
11	Data Analysis and Evaluation of Results
12	Preparation of the Technical Report and Project Documentation
13	Presentation Techniques for Results and Preparation of Visual Materials
14	Project Presentation Practice and Feedback
15	Submission of the Final Report and Presentation Rehearsal
16	Final Thesis Presentation and Evaluation

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

	P1	P2	P3	P4	P5	P6	P7
1	5	5	2	3	3	4	4
2	5	5	2	3	3	4	4
3	5	4	3	4	3	3	4

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

<https://obs.tau.edu.tr/oibs/bologna/progCourseDetails.aspx?curCourse=171754&lang=tr>

Compiled by: Prof.Dr. Murat Hamderi

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