DEPARTMENT OF ENERGY SCIENCE AND TECHNOLOGIES
COURSE SYLLABUS

Course Details				
Code	**Academic Year**			**Semester**
EBT402	4			8
Title	**T**	**A**	**L**	**ECTS**
Project II (Thesis)	0	6	0	10

Language	German					
Level	**Undergraduate**	**X**	**Graduate**		**Postgraduate**	
Department / Program	Energy Science and Technology					
Forms of Teaching and Learning	Face-to-face					
Course Type	**Compulsory**	**X**	**Elective**			
Objectives	It aims to equip students with the ability to analyze the problem/system they are working on and develop solution proposals. The course is designed to enable students to undertake an individual project that will provide them with experience for their future careers after graduation. Additionally, it seeks to help students effectively express their work both orally and in writing, improving their ability to communicate their ideas more clearly.					
Content	The course focuses on enhancing students' ability to analyze the problem/system they are dealing with in the light of theoretical knowledge and implement their findings. It also includes the development of skills to design practical and applicable solution proposals.					
Prerequisites	(EBT401)					
Coordinator	Assist. Prof. Dr. Meltem Karaismailoğlu Elibol					
Lecturer(s)	Assist. Prof. Dr. Meltem Karaismailoğlu Elibol					
Assistant(s)	-					
Work Placement	No					

Recommended or Required Reading	
Books / Lecture Notes	All scientific articles and books related to the field Course Notes
Other Sources	

Additional Course Material	
Documents	
Assignments	1 Project
Exams	

Course Composition		
Mathematics und Basic Sciences		%

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Engineering	30	%
Engineering Design		%
Social Sciences		%
Educational Sciences	20	%
Natural Sciences	30	%
Health Sciences		%
Expert Knowledge	20	%

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	9	126
Assignments			
Presentation / Seminar Preparation			
Midterm Exam			
Recitations	14	6	84
Laboratory			
Projects	7	10	70
Final Exam			
		Total Work Load	**200**
		ECTS Points (Total Work Load / Hours)	**10**

Learning Outcomes

1	Identifying and analyzing a problem by examining the current situation
2	Developing applicable proposals and/or solution methods for the identified problem in the light of theoretical knowledge
3	Gaining the ability to apply the developed solution method to the existing problem and evaluate the results
4	Learning to express oneself by reporting and presenting the developed method

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5	Learning to defend the proposed ideas while presenting the results of the developed work
Weekly Content	
1	Examination of selected topics from application areas of energy science and selection of a project topic (Product Development/R&D, Material and Manufacturing Process Development, Automation, Manufacturing/Manufacturing Planning, Assembly, Maintenance and Repair, Project Planning, Design and Analysis, Testing and Validation, Quality Control, and Quality Management)
2	Selected topics from application areas of materials science: Product Development/R&D, Material and Manufacturing Process Development, Automation, Manufacturing/Manufacturing Planning, Assembly, Maintenance and Repair, Project Planning, Design and Analysis, Testing and Validation, Quality Control, and Quality Management
3	Identification of tools necessary to achieve the objective and formulation of solution alternatives
4	Identification of tools necessary to achieve the objective and formulation of solution alternatives
5	Identification of tools necessary to achieve the objective and formulation of solution alternatives
6	Evaluation of alternatives and finding solutions using relevant data
7	Evaluation of alternatives and finding solutions using relevant data
8	Midterm Week
9	Implementation of the solution (optional)
10	Implementation of the solution (optional)
11	Implementation of the solution (optional)
12	Discussion of the global, economic, social, and environmental impacts of the results and solution
13	Discussion of the global, economic, social, and environmental impacts of the results and solution
14	Reporting the work and findings
15	Presentation of the work and findings
16	Project

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

	P1	P2	P3	P4	P5	P6	P7	P8	P9
1	5	5	5	5	5	5	5	5	5
2	5	5	5	5	5	5	5	5	5
3	5	5	5	5	5	5	5	5	5
4	5	5	5	5	5	5	5	5	5
5	5	5	5	5	5	5	5	5	5

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

https://obs.tau.edu.tr/oibs/bologna/progLearnOutcomes.aspx?lang=EN&curSunit=5706

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