



Çanakkale Onsekiz Mart University

Education Information System

DEGREE PROGRAMMES

BOLOGNA

THE INSTITUTION

INFO FOR STUDENTS

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Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Alternative Energy Sources II	FZ5040		3 + 0	3.0	7.5

Prerequisites	None
Language of Instruction	Turkish
Course Level	Second Cycle
Course Type	Elective
Mode of delivery	Face to face
Course Coordinator	Prof. Dr. İsmail TARHAN
Instructors	Prof. Dr. İsmail TARHAN
Assistants	
Course Objectives	Maintenance and quality of alternative energy sources, bor and energy, hydrogen energy, wave and stream energies, wind energy, biomass energy, energy reactors
Course Content	Energy concept and energy necessity, Necessity of alternative energy sources, Wind energy, Hydroelectric energy, Solar energy, Solar energy applications, Geothermal energy, Mid-term exam, Nuclear energy, Hydrogen energy, Wave energy, Biomass energy, The efficiency of the alternatives energy sources, Alternatives energy sources in Turkey, Alternatives energy sources in the world, Applications of alternative energy sources in Turkey and the World, Final exam
Course Learning Outcomes	<ol style="list-style-type: none"> 1) Evaluate the importance of alternatives energy sources. 2) Explain process principle of alternatives energy sources 3) Interpret knowledge about efficiency of the alternatives energy sources 4) Analyze necessity and utility of the alternatives energy sources in Turkey and the world.

WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Energy concept and energy necessity	Oral lectures with interactive discussions, research, homework	
2. Week	Necessity of alternative energy sources	Oral lectures with interactive discussions, research,	

Quick Access

Physics (Master)

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		homework	
3. Week	Wind energy	Oral lectures with interactive discussions, research, homework	
4. Week	Hydroelectric energy	Oral lectures with interactive discussions, research, homework	
5. Week	Solar energy	Oral lectures with interactive discussions, research, homework	
6. Week	Solar energy applications	Oral lectures with interactive discussions, research, homework	
7. Week	Geothermal energy	Oral lectures with interactive discussions, research, homework	
8. Week	Mid-term exam	Oral lectures with interactive discussions, research, homework	
9. Week	Nuclear energy	Oral lectures with interactive discussions, research, homework	
10. Week	Hydrogen energy	Oral lectures with interactive discussions, research, homework	
11. Week	Wave energy, Biomass energy	Oral lectures with interactive discussions, research, homework	
12. Week	The efficiency of the alternatives energy sources	Oral lectures with interactive discussions, research, homework	
13. Week	Alternatives energy sources in Turkey	Oral lectures with interactive discussions, research, homework	
14. Week	Alternatives energy sources in the world	Oral lectures with interactive discussions, research, homework	
15. Week	Applications of alternative energy sources in Turkey and the World	Oral lectures with interactive discussions, research, homework	
16. Week	final sınavı	Oral lectures with interactive	

discussions,
research,
homework

RESOURCES

Recommended Sources
1) Hordeski,M.F., (2002). New Technologies for Energy Efficiency. Fairmont Press.
2) Christopher, H., Armsted, H., and Jefferson, W., (1987). A New Source of Energy. Chapman & Hall.
3) Godfrey Boyle(2004), Renewable Energy: Power for a Sustainable Future, Oxford University Press

ASSESSMENT

Measurement and Evaluation Methods and Techniques		
Mid-term exam + Assignment + Research & Project and Presentation 40%, Final Exam 60%		
In-Term Studies	Quantity	Percentage
Mid Term Exam 1	1	40
Total	1	40
End-Term Studies	Quantity	Percentage
Final Exam	1	60
Total	1	60
Contribution Of In-Term Studies To Overall Grade		40
End-Term Studies		60
Total		100

COURSE CATEGORY

Course Category	Percentage
Support Courses	% 100

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	Contribution Level			
		DK1	DK2	DK3	DK4
<u>PY1</u>	5	4	4	5	5
<u>PY2</u>	5	4	5	5	5
<u>PY3</u>	4	4	4	4	4
<u>PY4</u>	4	4	4	5	5
<u>PY5</u>	4	4	4	5	4
<u>PY6</u>	4	4	5	4	5
<u>PY7</u>	4	4	4	4	4
<u>PY8</u>	4	4	4	4	4
<u>PY9</u>	5	5	5	5	5
<u>PY10</u>	5	5	4	5	5
<u>PY11</u>	5	5	5	4	4
<u>PY12</u>	4	4	4	4	5
<u>PY13</u>	4	5	4	4	4

PY14	4	4	5	4	4
PY15	5	5	5	5	4

*DK = Course's Contribution.

	0	1	2	3	4	5
Level of contribution	None	Very Low	Low	Fair	High	Very High

ECTS CREDITS AND COURSE WORKLOAD

Event	Quantity	Duration (Hour)	Total Workload (Hour)
Class Hours (14 weeks)	14	3	42
Assignment 1	6	3	18
Presentation/Seminar	1	4	4
Application/Practice	3	3	9
Assignment 2	1	14	14
Mid Term Exam Preparation	1	7	7
Final Exam	1	3	3
Further Study	14	4	56
Mid Term Exam 1	1	3	3
Research&Project	3	12	36
Total Workload			192
Total Workload / 25.5 (s)			7.53
ECTS Credit of the Course			8