



Çanakkale Onsekiz Mart University

Education Information System

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Course Information

COURSE INFORMATION

Course Title	Code	Semester	L+U Hour	Credits	ECTS
Alternative Energy Sources I	FZ5043		3 + 0	3.0	7.5

Prerequisites	None
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Language of Instruction	Turkish
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Course Level	Second Cycle
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Course Type	Elective
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Mode of delivery	Face to face
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Course Coordinator	Prof. Dr. İsmail TARHAN
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Instructors	Prof. Dr. İsmail TARHAN Prof. Dr. Osman DEMİRCAN
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Assistants	
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Course Objectives	The main aim of this course is to provide on fundamental informations and definitions, classification of energy, the principle of alternative energy sources, complication of energy sources, the law of thermodynamics, heat conduction, production of energy, conduction and efficiency.
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Course Content	Main topics to be covered in this course include are energy concept ana fundamental informations, energy necessity, classification of energy, the law of thermodynamics, production of energy, the fundamental principle of alternative energy sources, the importance of alternative energy sources, production of alternative energy, transmission of alternative energy, the efficiency of alternative energy sources, alternative energy sources and environmental awareness, energy management and control.
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Course Learning Outcomes	1) Explain principles of alternatives enerji sources 2) Interpret the importance of alternative energy sources 3) Analyze the running out of the extinction of fossil-based fuels and their harmful effect to environment. 4) comprehend the energy term and energy necessity in everyday life. 5) Explain comprehend principle of alternatives enerji sources and their efficiency.
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WEEKLY COURSE CONTENT

Week	Topics	Teaching and Learning Methods and Techniques	Study Materials
1. Week	Energy concept ana fundamental informations		
2. Week	Energy requirement	Oral lectures with interactive discussions, researches and	

Quick Access

Physics (Master)

- Qualification Awarded
- Level of Qualification
- Qualification Requirements and Regulations
- Specific Admission Requirements
- Recognition of Prior Learning
- Profile of the Program
- Program Key Learning Outcomes
- Occupational Profile of Graduates
- Access to Further Studies
- Course Structure & Credits
- Exam Regulations & Assessment & Grading
- Graduation Requirements
- Mode of Study
- Programme Director(or Equivalent)
- Evaluation Questionnaire
- TYYÇ

Course Information

- Course Information
- Weekly Course Content
- Resources
- Assessment
- Course Category
- CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES
- ECTS credits and course workload

		homeworks.	
3. Week	Classification of energy	Oral lectures with interactive discussions, researches and homeworks.	
4. Week	The law of thermodynamics	Oral lectures with interactive discussions, researches and homeworks.	
5. Week	Production of energy	Oral lectures with interactive discussions, researches and homeworks.	
6. Week	Production of energy	Oral lectures with interactive discussions, researches and homeworks.	
7. Week	The Fundamental principle of alternative energy sources	Oral lectures with interactive discussions, researches and homeworks.	
8. Week	Mid-term exam	Oral lectures with interactive discussions, researches and homeworks.	
9. Week	The importance of alternative energy sources	Oral lectures with interactive discussions, researches and homeworks.	
10. Week	Production of alternative energy	Oral lectures with interactive discussions, researches and homeworks.	
11. Week	Transmission of alternative energy	Oral lectures with interactive discussions, researches and homeworks.	
12. Week	The efficiency of alternative energy sources	Oral lectures with interactive discussions, researches and homeworks.	
13. Week	Alternative energy sources and environmental awareness	Oral lectures with interactive discussions, researches and homeworks.	
14. Week	Energy management and control	Oral lectures with interactive discussions, researches and homeworks.	
15. Week	Energy management and control	Oral lectures with interactive discussions, researches and homeworks.	
16. Week	Final exam	Oral lectures with interactive	

discussions, researches and homeworks.
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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
4- Sitwell, O.F.G., (1997). The Search for a New Energy Source. Manhattan, Kansas: Johnson Energy Corp.
5- Chnadler, G., and Graham, K., (1997). Alternative Energy Sources. 21st Century.

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
Core Courses	% 40
Support Courses	% 30
Transferable Skills Courses	% 30

CONTRIBUTION OF COURSE LEARNING OUTCOMES TO PROGRAMME OUTCOMES

Programme Outcomes	Contribution Level	DK1	DK2	DK3	DK4	DK5
<u>PY1</u>	5	4	4	5	5	4
<u>PY2</u>	5	5	5	4	5	4
<u>PY3</u>	5	5	4	4	5	3
<u>PY4</u>	4	4	4	4	3	3
<u>PY5</u>	4	5	4	3	5	4
<u>PY6</u>	4	4	4	4	4	3
<u>PY7</u>	4	4	5	5	4	4
<u>PY8</u>	4	4	4	4	4	3
<u>PY9</u>	4	4	4	4	4	4

<u>PY10</u>	2	2	2	1	3	3
<u>PY11</u>	4	4	4	4	4	3
<u>PY12</u>	5	5	4	5	5	4
<u>PY13</u>	4	4	4	5	5	4
<u>PY14</u>	4	4	5	4	4	3
<u>PY15</u>	4	3	4	4	4	3

*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)
Final Exam	1	3	3
Presentation/Seminar	1	6	6
Class Hours (14 weeks)	14	3	42
Mid Term Exam Preparation	1	12	12
Final Exam Preparation	1	18	18
Further Study	10	5	50
Research&Project	10	3	30
Assignment 1	5	6	30
Total Workload			191
Total Workload / 25.5 (s)			7.49
ECTS Credit of the Course			7