

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
FZK-3024	New Energy Sources	3.00	0.00	0.00	3.00	6.00
Course Detail						
<b>Course Language</b>	: Turkish					
<b>Qualification Degree</b>	: Bachelor					
<b>Course Type</b>	: Optional					
<b>Preconditions</b>	: Not					
<b>Objectives of the Course</b>	: The main purpose of this course is; the energy resources is to provide information on their fundamental calculations next to their species, properties and importance.					
<b>Course Contents</b>	: Energy types and varieties, energy concepts, anergy and exergy, effective and efficient use of energy sources. The distribution of energy sources in Turkey and the world of energy, the economic and strategic importance of energy sources.					
<b>Recommended or Required Reading</b>	: 1- Enerji Kaynakları, Doğanay, H., Coşkun,Ö., 2017, Pegem Akademi Yayıncılık. 2- Türkiye'nin Yeni ve Temiz Enerji Kaynakları, Türkiye Çevre Sorunları Vakfı, 1984, Nadir Kitapevi. 3- Yeni Enerji Kaynakları, Çetinçelik, M., 1977, Reishan Matbası. 4- Yeşil Enerji, Küsek, G., Gıda Tarım ve Hayvancılık Bakanlığı.					
<b>Planned Learning Activities and Teaching Methods</b>	: Oral presentation, homework, written exam, discussion.					
<b>Recommended Optional Programme Components</b>	: Reading, researching and presenting documents related to the course subject.					
<b>Instructors</b>	: Prof. Dr. İsmail Tarhan					
<b>Instructor's Assistants</b>	: None					
<b>Presentation Of Course</b>	: Face to face					

## Course Outcomes

## Upon the completion of this course a student :

- 1 Have information about energy and energy sources.
- 2 Gives information about energy sources in Turkey and the world.
- 3 Makes basic calculations on energy and energy sources.
- 4 Describe the concepts of anergy and exergy.

## Preconditions

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## Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods
1.Week	*Energy types and its features.				
2.Week	*Energy types and its features.				
3.Week	*Energy types and its features.				
4.Week	*Energy resources, diversity and distribution in Turkey and world.				
5.Week	*Energy resources, diversity and distribution in Turkey and world.				
6.Week	*Energy resources, diversity and distribution in Turkey and world.				
7.Week	*Energy resources, diversity and distribution in Turkey and world.				
8.Week	*Energy calculations.				
9.Week	*Energy calculations.				
10.Week	*Energy calculations.				
11.Week	*Anergy and exergy calculations and importance.				
12.Week	*Anergy and exergy calculations and importance.				
13.Week	*The strategic importance and effects of energy distribution in Turkey and the world.				
14.Week	*The strategic importance and effects of energy distribution in Turkey and the world.				

## Assesment Methods %

- 1 Md Term Exam 1 : 40.000
- 2 Final : 60.000

## ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	2.00	2.00
Final	1	2.00	2.00
Individual study before lecture	14	3.00	42.00
Individual study after lecture	14	3.00	42.00
Preparation for midterm	1	10.00	10.00
Preparation for final	1	20.00	20.00
Research presentation	1	10.00	10.00
Reading	14	3.00	42.00
			Total : 170.00
			Sum of Workload / 30 ( Hour ) : 6
			ECTS : 6.00

Program And OutcomeRelation																								
	P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24
L.O. 1	3	2	2	3	4	4	3	2	4	4	4	3	2	3	3	2	4	4	2	2	3	3	3	3
L.O. 2	3	3	3	4	3	3	4	3	4	3	4	4	3	3	4	3	4	5	2	3	3	3	4	3
L.O. 3	4	3	4	4	4	4	4	3	4	4	5	4	4	3	4	3	5	5	3	3	4	4	4	4
L.O. 4	4	3	4	4	4	4	5	4	5	4	5	5	4	4	4	4	5	5	4	4	4	5	5	4

Ders/Program Çıktıları İlişkisi																								
P.O. 1	P.O. 2	P.O. 3	P.O. 4	P.O. 5	P.O. 6	P.O. 7	P.O. 8	P.O. 9	P.O. 10	P.O. 11	P.O. 12	P.O. 13	P.O. 14	P.O. 15	P.O. 16	P.O. 17	P.O. 18	P.O. 19	P.O. 20	P.O. 21	P.O. 22	P.O. 23	P.O. 24	P.O. 2
4	3	3	4	4	4	4	3	4	4	5	4	3	3	4	3	5	5	3	3	4	4	4	4	4