Tarih: 11 Eylül 2025 13:26

Department of Electricity and Energy / Department of Electricity and Energy /

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
ENR109	ENERGY GENERATION, TRANSMISSION AND DISTRIBUTION	4.00	0.00	0.00	4.00	4.00

Course Detail

Course Language	:	Turkish
Qualification Degree	:	PreBachelor
Course Type	:	Compulsory
Preconditions	:	Not
Objectives of the Course	:	The aim of this course is to provide knowledge on the stages of electrical energy generation, transmission components and systems, their analysis, selection of appropriate equipment, analysis of distribution components, determination of their suitability, and development of practical application skills.
Course Contents	:	This course covers how the components of the energy generation, transmission, and distribution stages work, system installation, commissioning operations, and general fault repair steps.
Recommended or Required Reading	:	1. İlyas TOSUN, “Enerji İletimi ve Dağıtımı”, Birsen Yayınevi, 2007. 2. Öğretim Elemanı Kendi Ders Notları 3. M.A. Peşint, “Elektrik Santralleri, Enerji İletimi ve Dağıtımı”, MEB, (1998) 4. Elektrik Enerjisi İletimi ve Dağıtımı, Anadolu Üniversitesi 5. Prof.Dr. İsmail KAŞIKÇI, Elektrik Enerjisinin Üretimi İletimi ve Dağıtımı, BİRSEN YAYINEVİ 2013
Planned Learning Activities and Teaching Methods	:	Lecture, Question-Answer, Group work, Skill development work.
Course Instructors	:	Öğr. Gör. Ensar Koşatepe
Instructor's Assistants	:	Öğr.Gör. Ensar KOŞATEPE
Presentation Of Course	:	Formal
Update Date	:	9/7/2025 5:57:03 PM
Dosya İndirilme Tarihi	:	9/11/2025

Course Outcomes

Upon the completion of this course a student :

1 Understand the operating principles of energy generation systems.

2 Install cross-arms and brackets on poles.

3 Install insulators and other components

4 Connect overhead line conductors.

5 Maintain poles, equipment, and lines.

6 Troubleshoot faults in transmission lines.

7 Install power transformers.

8 Install measurement transformers.

9 Assemble busbar systems.

10 Install disconnectors.

11 Install circuit breakers.

12 Troubleshoot switchgear system faults

13 Maintain panels and measurement systems.

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes
1.Week	*Electricity generation and systems				*Lecture, Q&A, Discussion	Ö.Ç.1
2.Week	*Electricity generation and systems				*Lecture, Q&A, Discussion	Ö.Ç.1
3.Week	*Transmission and distribution networks				*Lecture, Q&A, Discussion	Ö.Ç.2 Ö.Ç.3
4.Week	*Transmission and distribution networks				*Lecture, Q&A, Discussion	Ö.Ç.2 Ö.Ç.3
5.Week	*Transformer substations and equipment				*Lecture, Q&A, Discussion	Ö.Ç.7 Ö.Ç.8
6.Week	*Transformer substations and equipment				*Lecture, Q&A, Discussion	Ö.Ç.7 Ö.Ç.8
7.Week	*Overhead line conductors and underground cables				*Lecture, Q&A, Discussion	Ö.Ç.5 Ö.Ç.6 Ö.Ç.5 Ö.Ç.6
8.Week	*Midterm Exam					
9.Week	*Overhead line conductors and underground cables				*Lecture, Q&A, Discussion	Ö.Ç.5 Ö.Ç.6
10.Week	*Poles and equipment				*Lecture, Q&A, Discussion	Ö.Ç.4 Ö.Ç.5 Ö.Ç.4 Ö.Ç.5
11.Week	*Poles and equipment				*Lecture, Q&A, Discussion	Ö.Ç.4 Ö.Ç.5 Ö.Ç.4 Ö.Ç.5
12.Week	*Energy distribution and transformer selection				*Lecture, Q&A, Discussion	Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12 Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12
13.Week	*Energy distribution and transformer selection				*Lecture, Q&A, Discussion	Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12 Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12
14.Week	*Combined power generation and autoproducer applications				*Lecture, Q&A, Discussion	Ö.Ç.10 Ö.Ç.11 Ö.Ç.12 Ö.Ç.13 Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12
15.Week	*Hybrid systems				*Lecture, Q&A, Discussion	Ö.Ç.8 Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12 Ö.Ç.9 Ö.Ç.10 Ö.Ç.11 Ö.Ç.12

Assesment Methods %

1 Ara Sınav : 40.000

3 Final : 60.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload
Vize	1	1.00	1.00
Final	1	1.00	1.00
Derse Katılım	14	2.00	28.00
Ara Sınav Hazırlık	1	5.00	5.00

Activities	Count	Time(Hour)	Sum of Workload
Final Sınavı Hazırlık	1	8.00	8.00
Teorik Ders Anlatım	14	4.00	56.00
Ders Öncesi Bireysel Çalışma	10	1.00	10.00
Ders Sonrası Bireysel Çalışma	11	1.00	11.00
		Total :	120.00
		Sum of Workload / 30 (Hour) :	4
		ECTS :	4.00

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
L.O. 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
L.O. 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0
Avarage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.00	0

Engel Durumu/Uyarlama Talebi : Engel durumuna ilişkin herhangi bir uyarlama talebinde bulunmak isteyen öğrenciler, dersin öğretim elemanı ya da Nevsehir Engelli Öğrenci Birimi ile en kısa sürede iletişime geçmelidir.