Tarih: 11 Eylül 2025 13:30

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

Course Code	Course Name	Teorical	Practice	Laboratory	Credits	ECTS
ENR207	ELECTRICAL MACHINES	2.00	1.00	0.00	3.00	4.00

Course Detail

Course Language	:	Turkish
Qualification Degree	:	PreBachelor
Course Type	:	Optional
Preconditions	:	Not
Objectives of the Course	:	This course is aimed at students; Provides the concept of control principles of machines.by learning the working principles of electrical machines.
Course Contents	:	Structure and principles of operation of DC machines, Basic behaviors of DC generators, Control of DC motors, Structure and working principles of single phase and three phase transformers, Different connection groups of three phase transformers, Synchronous machine structures, Synchronous machine characteristics, Synchronous generators.
Recommended or Required Reading	:	Bilgisayar, projeksiyon cihazı, elektrik kumanda ve PLC deney setleri 1 Çolak İ., “Asenkron Makinalar”,Seçkin Yayıncılık,2008,Ankara 2 Chapman S. J., (1987), "Electric machinery fundamentals", McGraw-Hill Company,Singapore. 3 ALTUNSAÇLI, A., “Elektrik Motorları ve Sürücüleri”, 2003, Color ofset. 4 Transformatorlar, Güngör Bal, Seçkin Yayıncılık
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	:	9/8/2025 10:14:59 AM
Dosya İndirilme Tarihi	:	9/11/2025

Course Outcomes

Upon the completion of this course a student :

1 Know DC machines parts.

2 Know the working principles of DC machines

3 Make the control applications of DC machines

4 Know AC machines parts.

5 Know the working principles of AC machines

6 Make the control applications of AC machines

7 Know synchronous machines parts

8 Know the characteristic of synchronous machines.

9 Know the structer and working principles of transformators

Preconditions

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Weekly Contents

	Teorical	Practice	Laboratory	Preparation Info	Teaching Methods	Course Learning Outcomes
1.Week	*Magnetic materials and magnetic circuits				*Narration, Solving Problem	Ö.Ç.5
2.Week	*Energy conversion principles				*Narration, Solving Problem	Ö.Ç.2 Ö.Ç.5 Ö.Ç.9
3.Week	*The Parts of DC machines				*Narration, Solving Problem	Ö.Ç.1
4.Week	*The Working Principles of DC machines				*Narration, Solving Problem	Ö.Ç.1 Ö.Ç.2
5.Week	*The Control Characteristics of DC machines				*Narration, Solving Problem	Ö.Ç.3
6.Week	*The Parts of AC machines				*Narration, Solving Problem	Ö.Ç.4 Ö.Ç.5 Ö.Ç.6
7.Week	*Transformator structures and Working Principles				*Narration, Solving Problem	Ö.Ç.9
8.Week	*Midterm Exam					
9.Week	*Bir fazlı, çok fazlı, oto ve özel trafolar				*Narration, Solving Problem	Ö.Ç.9
10.Week	*Asynchronous Motors Characteristics (1 Phase and 3 phase)				*Narration, Solving Problem	
11.Week	*Control principles of Asynchronous Motors				*Narration, Solving Problem	Ö.Ç.6
12.Week					*Narration, Solving Problem	
13.Week	*Synchronous Machines				*Narration, Solving Problem	Ö.Ç.7
14.Week	*Synchronous Machines Characteristics				*Narration, Solving Problem	Ö.Ç.8
15.Week	*Synchronous Generators				*Narration, Solving Problem	Ö.Ç.4 Ö.Ç.5 Ö.Ç.7
16.Week	*Final exam					

Assesment Methods %

1 Ara Sınav : 40.000

3 Final : 60.000

ECTS Workload

Activities	Count	Time(Hour)	Sum of Workload

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	5	0	0	0	0	0	0
L.O. 2	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 3	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 4	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 5	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 6	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 7	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 8	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
L.O. 9	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0
Avarage	0	0	0	0	0	0	0	0	0	0	0	0	0	5.00	0	0	0	0	0	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.