

Ders Kodu	Ders Adı	Teorik	Uygulama	Laboratuvar	Yerel Kredi	AKTS
EEE436	ENERJİ İLETİM HATLARI	3,00	0,00	0,00	3,00	0,00
Ders Detayı						
<b>Dersin Dili</b>	: İngilizce					
<b>Dersin Seviyesi</b>	: Lisans					
<b>Dersin Tipi</b>	: Seçmeli					
<b>Ön Koşullar</b>	: Yok					
<b>Dersin Amacı</b>	: Design overhead power transmission lines having 154 kV and 380 kV, using the theoretical knowledge					
<b>Dersin İçeriği</b>	: Determination of the alignment for the power lines having 154 kV and 380 kV/ Environmental Effect Evaluation/ Determination of erection places and types of the towers on the terrain/ Conformity control of tower types/ Calculation of rights of way (ROW) regions/ Calculation of surge impedance and zero sequence impedance of power line/ General design principles of cage towers/ General design principles of concrete foundations of cage towers					
<b>Dersin Kitabı / Malzemesi / Önerilen Kaynaklar</b>	: H.H. Dengiz, "Power Line Engineering (in Turkish)", Kardeş Publ., 1991. A. Yunusoğlu, "High Voltage Power Transmission Line Project 1-2 (in Turkish)", 1995. M. Arı, "Power Transmission Lines having 154/380 kV and Project Applications (in Turkish)", 2011. Electrical Power Research Institute, "Transmission Line Reference Book: 345 kV and Above", EPRI, 1987. F. Kiessling et al., "Overhead Power Lines: Planning, design, construction", Springer, 2003. T. Gönen, "Electrical Power Transmission System Engineering: Analysis and Design", 2nd Edition, CRC Press, 2009. S. Rao, "EHV AC and HVDC Transmission Engineering and Practice", Khanna Publications, 1990. The IEEE, IEC and TS Standards The Technical Specifications of the TEİAŞ and the TEDAŞ (in Turkish)					
<b>Planlanan Öğrenme Etkinlikleri ve Öğretme Yöntemleri</b>	: -					
<b>Ders İçin Önerilen Diğer Hususlar</b>	: -					
<b>Dersi Veren Öğretim Elemanları</b>	: Dr. Öğr. Üyesi Hüseyin Yeşilyurt					
<b>Dersi Veren Öğretim Elemanı Yardımcıları</b>	: -					
<b>Dersin Verilişi</b>	: Sınıf ortamında					
<b>En Son Güncelleme Tarihi:</b>	:					

## Ders Öğrenme Çıktıları

## Bu dersi tamamladığında öğrenci :

1 The Students will be able to have knowledge of cage tower types used in overhead power transmission lines having 154 kV and 380 kV, the standard towers designed by the TEİAŞ and the selection criteria of these towers The Students will be able to prepare the "sag template" with horizontal 1/2000-vertical 1/500 The Students will be able to design the tower distribution on the terrain map scaled horizontal 1/2000-vertical 1/500 The Students will be able to calculate rights of way (ROW) regions along the alignment and know the legal procedure of ROW The Students will be able to evaluate the negative effects of power lines to the environment during both installation and operation

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## Ön Koşullar

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## Haftalık Konular ve Hazırlıklar

	Teorik	Uygulama	Laboratuvar	Hazırlık Bilgileri	Öğretim Metodları	Dersin Öğrenme Çıktıları
1.Hafta	*1 Determination of line route and presentation of the related maps NA 2 Steps of the Environmental Effect Evaluation NA 3 Presentation of standard towers designed by the TEİAŞ NA 4 The main chapters related to power line design in the Regulation of Electrical Heavy Current Installations NA 5 Determination of tower distribution on the project using the alignment and the terrain map NA 6 Preparation of sag template for a sample region NA 7 Conformity control of the selected towers NA 8 Design of string insulators depending on several factors NA 9 Calculation of rights of way (ROW) region; permissions required for the line installation NA 10 Midterm exam NA 11 Calculation of surge impedances of line conductors and towers NA 12 Calculation of zero sequence impedance of line depending on tower's geometry NA 13 Midterm exam NA 14 General design criteria of underground cable projects NA 15 General design criteria of submarine cable projects NA 16 Final exam NA					
2.Hafta	*-					
3.Hafta	*-					
4.Hafta	*-					
5.Hafta	*-					
6.Hafta	*-					
7.Hafta	*-					
8.Hafta	*-					
9.Hafta	*-					
10.Hafta	*-					
11.Hafta	*-					
12.Hafta	*-					
13.Hafta	*-					
14.Hafta	*-					

## Değerlendirme Sistemi %

1 Vize : 25,000

2 Vize 2 : 25,000

3 Ödev : 15,000

4 Final : 35,000

## AKTS İş Yüğü

Aktiviteler	Sayı	Süresi(Saat)	Toplam İş Yüğü
Vize / Midterms	1	2,00	2,00
Ödev / Assignment	1	1,00	1,00
Final / Final	1	3,00	3,00
Toplam :			6,00
Toplam İş Yüğü / 30 ( Saat ) : 0			
AKTS : 0,00			

