



2026-2027 Academic Year
List of Courses Offered in Foreign Language
2026-2027 Akademik Yılı
Yabancı Dilde Açılacak Dersler Listesi

Institute of Natural and Applied Sciences
Fen Bilimleri Enstitüsü

	Department <i>Bölüm</i>	Course Code <i>Ders Kodu</i>	ECTS <i>AKTS</i>	Course Title <i>Dersin Adı</i>	Semester <i>Dönem</i>	Course Content <i>Dersin İçeriği</i>	Academic Staff <i>Dersi Veren Öğretim Elemanı</i>	Online Available <i>Çevrimiçi</i>
1	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM5047	8	Antennas and Antenna Propagation	Fall	This course teaches students to recognize the properties, fundamental parameters, and types of antennas, and to understand the propagation of electromagnetic waves and their interaction within the environment. It covers Maxwell's Equations, Electromagnetic Wave Propagation in Space, Antenna Definition, Antenna Parameters, Antenna Radiation Pattern and Impedance. The course also delves into Antenna Arrays and General Array Formula, Array Analysis and Synthesis Techniques.	Prof. Dr. Selçuk HELHEL	No
2	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM5060	8	Semiconductor Electronics	Fall	This course aims to teach the fundamentals of Semiconductor Electronics. It covers Semiconductors: A General Introduction, Carrier Modeling, Carrier Action, Basics of Device Fabrication, pn Junction Diodes (including I-V Characteristics, Small-Signal Admittance, and Transient Response), Optoelectronic Diodes, BJTs and Other Junction Devices, and BJT Static and Dynamic Response Modeling.	Prof. Dr. Hüseyin Özgür KAZANCI	No
3	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM5056	8	Principles Of Microwave Measurement	Spring	Teaching transmission lines, attenuators, calculation of reflection and transmission losses, matching circuits, Smith chart, and waveguides.	Asst. Prof. Dr. Atalay KOCAKUŞAK	No
4	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM7054	10	Electromagnetic Wave Theory II	Spring	This course covers the derivation of the Green function for one-dimensional mechanical systems, the properties of the Green function, eigenvalue function series, homogeneous differential equation solving, and the derivation of the Green function using the Fourier transform, Huygen's principle and the theory of 'Extinction', Kirchhoff's approximation, Fresnel and Fraunhofer diffraction, vector Green's theory, the Stratton-Chu formula, equivalence theory, the fundamentals of radiation theory, and applications of antenna theory in wire, aperture, and array antennas, the fundamentals of scattering theory, cross-sections and scattering amplitude functions, the radar equation, Rayleigh scattering, Born approximation, Mie scattering, the fundamentals of polar radar, and the derivation of wave scattering from basic sample bodies such as insulating and conducting cylinders, spheres, and wedges.	Prof. Dr. Selçuk HELHEL	No
5	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM7030	10	Microwave Filter Design	Spring	The course content focuses on the design of filters, single and multi-stage amplifiers, parametric amplifiers, and oscillators in advanced high-frequency circuits using microstrip structures.	Asst. Prof. Dr. Atalay KOCAKUŞAK	No
6	Electrical and Electronics Engineering <i>Elektrik-Elektronik Mühendisliği</i>	EEM7034	10	Power Generation Operation And Control	Spring	The course deals with the application of advanced technologies, analysis methods, and tools for efficient system operation, control, and reliability assessment of electric power systems. Many applications of power engineering require power network analysis techniques under steady-state conditions.	Asst. Prof. Dr. Sıtkı GÜNER	No