2025-2026 Academic Year
List of Courses Offered in Foreign Language
2025-2026 Akademik Yılı
Yabancı Dilde Açılacak Dersler Listesi

Faculty of Engineering
Mühendislik Fakültesi

	Department *Bölüm*	Course Code *Ders Kodu*	ECTS *AKTS*	Course Title *Dersin Adı*	Semester *Dönem*	Course Content *Dersin İçeriği*	Academic Staff *Dersi Veren Öğretim Elemanı*	Online Available *Çevrimiçi*
1	Electrical and Electronics Engineering	MAT151	6	Mathematics 1	Fall	The concept of rate of change, Limit and continuity concepts, Derivative, Derivative applications (especially optimization), Integral, Integral applications, Vector algebra, Matrix algebra, Taylor (and Maclaurin) series as a power series	Asst. Prof. Dr. Ayşe Yılmaz Ceylan	
2	Electrical and Electronics Engineering	FİZ173	4	Physics 1	Fall	Introduction, Measurement, Estimating Motion: Kinematics in one dimension Kinematics in two or three dimensions, vectors Dynamics: Newton's Laws of Motion Using Newton's Laws: Friction, Circular Motion Gravitation and Newton's Synthesis Work and Energy Conservation of Energy Linear Momentum Rotational Motion Angular Momentum: General Rotation Static Equilibrium Fluids Oscillators Wave Motion	Asst. Prof. Dr. Deniz Kaya	
3	Electrical and Electronics Engineering	FİZ175	2	Physics 1 Laboratory	Fall	Experiments that test and apply some of the core topics that are learned in Physics I and Physics II.	Asst. Prof. Dr. Deniz Kaya	
4	Electrical and Electronics Engineering	KİM175	5	Fundamentals Of Chemistry	Fall	Matter and Its Properties, Atom and its structure, periodic table, Chemical Reactions, Liquids, Solids, Gases, Liquid Solutions and Equilibrium, Acids and Bases	Prof. Dr. Numan Hoda	
5	Electrical and Electronics Engineering	EEM209	4	Probability Theory & Statistical Analysis	Fall	Definition, history, development and basic principles of probability and statistics. Statistical methods. To provide students with the necessary information and equipment and some statistical methods so that they can analyze the data obtained as a result of the studies carried out in their own fields, and obtain accurate and meaningful results from them and make comments.	Research Asst. Dr. Atalay Kocakuşak	
6	Electrical and Electronics Engineering	EEM322	4	Electronics 2	Fall	Field-Effect Transistors, Small-Signal Modeling and Linear, Amplification, Single Transistor Amplifiers, Diferential MOS Amplifiers, Amplifier Frequency Response	Assoc. Prof. Dr. H. Feza Carlak	
7	Electrical and Electronics Engineering	EEM325	2	Electronics Laboratory 2	Fall	Power Amplifier Classes, E-VMOSFET Characteristics, JFET Characteristics, Source Grounded JFETs, Frequency Response of Amplifiers, Project, Miscellaneous Electronic Circuits	Prof. Dr. Ömer H. Çolak	
8	Electrical and Electronics Engineering	EEM307	4	Electrical Machines	Fall	Magnetic properties of materials, magnetic circuits, transformers: working principles, characteristic equivalent circuits and steady-state analysis, electromechanical energy conversion principles: linear and non-linear systems DC machines: equivalent circuits, performance analysis, operating characteristics, starting and speed control, induction motors and generators, special purpose motors, linear motors, stepper motors, AC machines: structures, equivalent circuits and steady state analysis.	Prof. Dr. Selim Börekci	
9	Electrical and Electronics Engineering	EEM391	2	Introduction to Economics	Fall	Introduction to engineering economics and basic concepts, Introduction to engineering economics and basic concepts, Market Conditions and demand forecasts, Market conditions and demand forecasts, Cost concepts, Cost concepts, Interest phenomenon and cash flow series, Interest phenomenon and cash flow series, Depreciation and Depreciation methods , Midterm exam, Investment decisions and evaluation of investment options, Investment decisions and evaluation of investment options, Investment decisions in case of uncertainty, Investment decisions in case of uncertainty	Assoc. Prof. Dr. Yeşim Helhel	

10	Electrical and Electronics Engineering	EEM309	5	Electrical Machines Laboratory	Fall	Basic concepts in magnetic circuits: magnetization, energy retention, hysteresis and eddy losses. Transformers: equivalent circuit, open and short circuit tests, rectification, efficiency, polarity. Electromechanical energy conversion: field energy, co-energy, force, torque. Fundamentals of moving machines: armature mmf, induced emf, generated torque. D. C. machines: voltage and torque generation, magnetization properties, excitation methods, generator and motor properties, capacity and efficiency. Single-phase induction motors: equivalent circuit, normal operation, starting. Linear induction motor, split phase, capacitor type, shaded pole. Special machines: stepper motor, series universal motor, permanent-magnet d. c. and a. c. engines.	Prof. Dr. Selim Börekci	
11	Electrical and Electronics Engineering	EEM381	5	Introduction to Microwave Theory	Fall	Voltage and current waves in transmission lines, frequency and time domain analysis, energy and power flow, impedance matching, smith diagram, pulse propagation on line, directed waves: TEM, TE and TM waves, rectangular and circular waveguides, resonator, s - parameters.	Prof. Dr. Selçuk Helhel	
12	Electrical and Electronics Engineering	EEM4001	4	Gradution Project 1	Fall	In this course, students are expected to research and implement the project they propose in the 1st semester. A well-defined engineering problem should be solved in hardware and/or software and the solution should be implemented by using the gains gained during the Electrical and Electronics Engineering education. The results are reported as a thesis presented orally before a 3-person jury.	Prof. Dr. Selçuk Helhel	
13	Electrical and Electronics Engineering	EEE417	5	Deep Learning	Fall	Machine Learning Fundamentals, Deep Learning Tools - Caffe, Torch, TensorFlow, Theano, Feedforward Deep Networks, Regularization of Deep or Distributed Models, Optimization for Training Deep Models, Convolutional Networks, Sequence Modeling: Recurrent and Recursive Nets, Structured Probabilistic Models for Deep Learning , Linear Factor Models and Auto-Encoders, Computer Vision Applications, Big Data Applications, Natural Language Processing Applications, Speech Processing Applications	Prof. Dr. Hüseyin Göksu	
14	Electrical and Electronics Engineering	EEE431	5	Image Processing	Fall	Fundamentals of digital images, sampling and quantization of images, connectivity, distance measures, arithmetic/logical operations, Contrast propagation and histogram processing, Other image enhancement techniques, filtering in spatial environment, Discrete Fourier transform, 2-D Fourier transform and its properties, fast Fourier transform, Filtering, line and edge removal in the frequency domain Edge binding, thresholding, Optimal thresholding, regional image segmentation, Motion segmentation, color image fundamentals, Color image processing, Image representation techniques, Image identification techniques, Image recognition methods	Prof. Dr. Hüseyin Göksu	
15	Electrical and Electronics Engineering	EEE473	5	Cellular Communication	Fall	Architecture of cellular communication systems, functions and working principles of base station, base station control center,mobile service switching center, VLR,HLR, and operations management center. Fundementals of network planning, traffic planning, noise and quality testing and system optimization.	Prof. Dr. Selçuk Helhel	
16	Electrical and Electronics Engineering	EEE487	5	Fundamentals Of Antenna Theory	Fall	Maxwell Equations, Propagation of Electromagnetic Waves in Space, Antenna Definition, Antenna Parameters, Antenna Radiation Pattern and Impedance. Antenna Arrays and General Array Formula, Sequence Analysis and Synthesis Techniques.	Prof. Dr. Selçuk Helhel	
17	Electrical and Electronics Engineering	EEE477	4	Digital Communication Laboratory	Fall	These topics include converting analog signals to digital and transmitting digital signals to baseband and passband channels.	Prof. Dr. Selçuk Helhel	