

Name of The School / Conservatory / Faculty / Institute

Courses Taught in English for Exchange Students

No.	Department	Lecturer's Title and Name	Code	Course's Name	Compulsory or	Academic Year	ECTS	Term	Course Content	Medium of Instruction	Evaluation Type	Prerequisites and co-requisites	Recommended or Required Reading	Planned Learning Activities and Teaching Methods	Assessment Methods and Criteria
	Computer Engineering	Doç.Dr. YAŞAR KULTEPE	BEAM-5001	Image Processing Techniques And Applications	Compulsory	5	2	<p>Computer engineering students will have theoretical and practical background with using mathematical and algorithmic knowledge in the emerging interdisciplinary area.</p> <p>Students will gain essential background for origin and the nature of signals and images.</p> <p>Students will have fundamental concepts about Discrete-Time Fourier Transform (DTFT) and analyze applications of signal and image processing methods.</p> <p>Students will have pattern recognition and machine learning subjects besides signal and image processing processing subjects to enhance scientific and computational skills necessary to analyze biomedical signals and images with different software.</p> <p>Probabilistic foundations and learning algorithms for deep generative models.</p> <p>Generative modeling of complex, high-dimensional data including images, text, and speech.</p> <p>Recent advances in processing generative models using deep neural networks.</p>		Face to Face					
	Computer Engineering	Doç.Dr. Ceylan AYDIN KARAGÖZ	BEAM-5014	DEEP GENERATIVE MODELS	Compulsory	5	A	<p>Recent advances in processing generative models using deep neural networks.</p> <p>Students can simulate and characterize, deriving the electronic circuits.</p> <p>Students can draw printed circuits of electronic circuits.</p> <p>Students can prepare printed board circuits.</p> <p>Students can apply printed board circuits.</p>		Face to Face					
	Computer Engineering	Doç.Dr. Ceylan AYDIN KARAGÖZ	BEAM-5016	Computer-Aided Electronic Circuit Design	Compulsory	5	A	<p>Students can simulate and characterize, deriving the electronic circuits.</p> <p>Students can draw printed circuits of electronic circuits.</p> <p>Students can prepare printed board circuits.</p> <p>Students can apply printed board circuits.</p>		Face to Face					
	Computer Engineering	Doç.Dr. Ceylan AYDIN KARAGÖZ	BEAM-5017	Advanced Artificial Intelligence And Applications	Compulsory	5	A	<p>Students will have insight into the main methods used in machine learning (ML) and artificial intelligence (AI).</p> <p>Students will have knowledge of the historical development of the field.</p> <p>Students will be able to design and conduct experiments using the methods, with emphasis on evaluation.</p> <p>Students will be able to consider the pros and cons when choosing ML / AI methods for different applications.</p> <p>Students will be able to implement algorithms for selected methods.</p> <p>Students will have knowledge of basic philosophical and ethical issues related to the development and application of ML/AI.</p>		Face to Face					
	Computer Engineering	Doç.Dr. Ceylan AYDIN KARAGÖZ	BEAM-5027	Reinforcement Learning	Compulsory	5	S	<p>Ability to implement Q learning algorithms.</p> <p>Will be able to define a problem as MDP.</p> <p>Will be able to do dynamic programming.</p> <p>Will be able to use the Policy-Gradient Methods.</p>		Face to Face					
	Computer Engineering	Doç.Dr. Ceylan AYDIN KARAGÖZ	BEAM-5010	Advanced Wireless Networks	Compulsory	5	S	<p>analyze various techniques to solve network problems.</p> <p>understand the mobility management in wireless environment</p> <p>analyze the structure of both cellular and wireless network topologies</p> <p>analyze various types of wireless networks.</p>		Face to Face					
	Computer Engineering	Doç.Dr. SERTAN AKKAN	BEAM-5005	Advanced Linear Algebra	Compulsory	2	4	A	<p>Calculate the inverse and nth power of a square matrix by using Cayley-Hamilton theorem.</p> <p>Find the eigenvalues and eigenvectors of square matrix using the characteristic polynomial.</p> <p>On successful completion of this course and students will be capable of: given the ability to perform matrix operations (addition, subtraction, multiplication). Compute the determinant of a given matrix.</p> <p>Solve systems of linear equations by using Gaussian elimination and apply the basic techniques of matrix algebra, including finding the inverse of an invertible matrix using Gauss-Jordan elimination.</p> <p>Understand the basic ideas of vector algebra: linear dependence and independence, orthogonal vectors, spaces and subspaces.</p>		Face to Face				