

GRADUATE COURSE DETAILS

Course Title: INDUSTRY 4.0 AND DIGITAL TRANSFORMATION				Code :		Name of the Programme: Electrical Electronics Engineering		
Education and Teaching Methods							Credits	
Lecture	Application	Laboratuary	Project/ Field Study	Hw.	Other	Total	Credit	ECTS
28	32	0	30			90	2+0	3
Semester		Fall S.		Language		Turkish		
Course Type		Basic Scientific		Scientific		Technical Elective		Social Elective X
Course Contents		In these courses, general industry 4.0 and the history of the digital turning point, the basics and concepts related to industry 4.0 and digital transformation will be explained. The example of Industry 4.0 and digital transformation in the relevant facilities will be discussed.						
Course Objectives		Today, 4.0 is to explain the principles and conceptual framework of industrial revolution or digital transformation, to provide information about the basic building blocks of Industry 4.0, and to develop analysis skills on the subject by enabling businesses to discuss their applications on Industry 4.0 and digital transformation.						
Learning Outcomes and Competences		Defines the concept of Industry 4.0. Learn the effects of the industrial revolutions until today on businesses. Defines the concept of digital transformation. Gives information about the basic building blocks of Industry 4.0. Gains knowledge about the applications of enterprises in Industry 4.0 and digital transformation process. Gains knowledge about the changing business models with Industry 4.0 and digital transformation						
Textbook and /or References		Digital Transformation-Artificial Intelligence, Harvard Business Review Press						
ASSESSMENT CRITERIA								
Theoretical Courses				Project Course and Graduation Study				
	If any, mark as (X)	Percent (%)			If any, mark as (X)	Percent (%)		
Midterm Exams	X	40		Midterm Exams				
Quizzes				Midterm Controls				
Homeworks				Term Paper				
Term Paper (Projects,reports,)				Oral Examination				
Laboratory Work				Final Exam				
Final Exam	X	60		Other				
Other								
Week	Subjects							
1	Industry 4.0 and Digital Transformation Concepts and Historical Development							
2	Industry 4.0 and Digital Transformation Concepts and Historical Development							
3	Big Data							
4	Internet of Things							
5	Artificial Intelligence and Machine Learning							
6	Cloud computing							
7	Cyber-Physical Systems							
8	Blockchain , NFT							
9	Augmented Reality, Virtual Reality							
10	Cyber security							
11	Smart Businesses							
12	Digital Transformation							
13	Digital Transformation							
14	Digital Sustainability							
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