School of Engineering and Natural Sciences / Electrical and Electronics Engineering (English)

2024 - 2025 Academic Year

INTRODUCTION to ELECTRICAL-ELECTRONICS ENGINEERING

Syllabus

Course Description					
Name	**Code**	**Semester**	**T+A Hour**	**Credit**	**ECTS**
INTRODUCTION to ELECTRICAL-ELECTRONICS ENGINEERING	EEE1110782	Fall Semester	2+2	3	4

Prerequisites Courses	
Recommended Elective Courses	Data Communication and Computer Networks
Language of Instruction	English
Course Level	First Cycle (Bachelor's Degree)
Course Type	Required
Course Coordinator	Prof.Dr. Mehmet Kemal ÖZDEMİR
Name of Lecturer(s)	Prof.Dr. Selim AKYOKUŞ, Prof.Dr. Reda ALHAJJ, Prof.Dr. Mehmet Kemal ÖZDEMİR, Assist.Prof. Mustafa AKTAN, Assist.Prof. İbrahim KARLIAĞA, Assist.Prof. Ahmet KAPLAN
Assistant(s)	http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-01sc-introduction-to-electrical-engineering-and-computer-science-i-spring-2011/
Aim	The aim of this course is to explain electrical and electronics engineering and describe its main fields of study.
Course Content	This course contains; Introduction to Engineering Profession and Career,2. Introduction to Engineering Design,Circuits,Circuits,Signals and Systems,Signals and Systems,Probability and Statistics in Engineering,Midterm,Probability and Statistics in Engineering,An introduction to Computer Science,Data Science,Introduction to Algorithms,Machine Learning and Artificial Intelligence ,Software Engineering, UML, and State Diagrams..

Course Learning Outcomes	**Teaching Methods**	**Assessment Methods**
1. Define electrical and electronics engineering	9	A, E
2. Explain different fields of electrical and electronics engineering	9	A, E
3. Summarize social, professional, and ethical issues	9	A, E
4. Translate innovation and entrepreneurship issues	17, 5, 9	E
5. Understand the steps required to design complex systems.	17, 2, 21	A, E, F

Teaching Methods	17: Experimental Technique, 2: Project Based Learning Model, 21: Simulation Technique, 5: Cooperative Learning, 9: Lecture Method
Assessment Methods	A: Traditional Written Exam, E: Homework, F: Project Task

Lecture Schedule

Sequence	**Topics**	**Preliminary Preparation**
1	Introduction to Engineering Profession and Career	Lecture Slides 1
2	2. Introduction to Engineering Design	Lecture Slides 2
3	Circuits	Lecture Slides 3
4	Circuits	Lecture Slides 3
5	Signals and Systems	Lecture Slides 5
6	Signals and Systems	Lecture Slides 5
7	Probability and Statistics in Engineering	Lecture Slides 7
8	Midterm	Lecture Slides from 1 to 7
9	Probability and Statistics in Engineering	Lecture Slides 9
10	An introduction to Computer Science	Lecture Slides 10
11	Data Science	Lecture Slides 11
12	Introduction to Algorithms	Lecture Slides 12
13	Machine Learning and Artificial Intelligence	Lecture Slides 13
14	Software Engineering, UML, and State Diagrams.	Lecture Slides 14

Evaluation Methods	**Weight(%)**
Midterm Exam	30
General Exam	70

Resources

Powerpoint slides

1. http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-01sc-introduction-to-electrical-engineering-and-computer-science-i-spring-2011/Syllabus/MIT6_01SCS11_notes.pdf

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2. Saeed Moaveni, "Engineering Fundamentals: An Introduction to Engineering" Cengage Learning, 5th edition.