

ECTS COURSE INFORMATION FORM

Faculty	Faculty of Engineering		
Program	B.Sc. in Civil Engineering	Elective	
	B.Sc. in Computer Engineering	Elective	
	B.Sc. in Electrical-Electronics Engineering	Required	
	B.Sc. in Industrial Engineering	Elective	
	B.Sc. in Mechanical Engineering	Elective	

Course Code	EE 100			
Course Title in English	Introduction to Electrical and Electronics Engineering			
Course Title in Turkish	Elektrik-Elektronik Mühendisliğine Giriş			
Language of Instruction	English			
Type of Course	Lecture			
Level of Course	Undergraduate			
Course Category (by % of Content)	Basic Science 20	Basic Engineering 40	Engineering Design 15	General Education 25
Semester Offered	Fall			
Contact Hours per Week	Lecture: 2 hours	Recitation: -	Lab: -	Other: -
Estimated Student Workload	82 hours per semester			
Number of Credits	3 ECTS			
Grading Mode	Standard Letter Grade			
Pre-requisites	None			
Expected Prior Knowledge	None			
Co-requisites	None			
Registration Restrictions	Only Undergraduate Students			
Overall Educational Objective	To develop an understanding about the field of Electrical and Electronics Engineering.			
Course Description	This course provides a general introduction to the field of Electrical and Electronics Engineering. The course content covers MEF's Electrical and Electronics Engineering program and curriculum, basic research areas of Electrical and Electronics Engineering and basic concepts in these research areas. In addition to the theoretical lectures, there will be seminars from professionals and researchers from the field of Electrical and Electronics Engineering.			
Course Description in Turkish	Bu ders Elektrik-Elektronik Mühendisliği alanına genel bir giriş sağlamaktadır. Bu dersin içeriği MEF Üniversitesinin Elektrik-Elektronik Mühendisliği programını, Elektrik-Elektronik Mühendisliğinin temel araştırma alanlarını ve bu alanlarda kullanılan temel terimleri tanıtmaktadır. Teorik derslere ek olarak, Elektrik-Elektronik mühendislerinden ve araştırmacılarından seminerler olacaktır.			
Course Learning Outcomes and Competences	<p>Upon successful completion of the course, the learner is expected to:</p> <ol style="list-style-type: none"> 1. recognize the EE Engineering program and its continuous improvement; 2. explain the professional and ethical responsibilities of an EE engineer; 3. describe the basic concepts and the formal design process in Electrical and Electronics Engineering; 4. function effectively on a team; 5. prepare a technical report and verbal presentation about a state-of-the art application in the field of Electrical and Electronics Engineering; 6. demonstrate a knowledge in basic mathematics required for solving EE Engineering 			

7. problems;
recognize the contemporary issues and application areas of Electrical and Electronics Engineering, acquire and apply new knowledge as needed.

Relationship of the Course with the Student Outcomes	Level	Learning Outcome(s)	Assessed by
Program Outcomes	N=None S=Supportive H=High		Exam, Project, HW, Experiment, Presentation, etc. Exams
(1) an ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	S	6	Exams
(2) an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	S	3	Exams, HW
(3) an ability to communicate effectively with a range of audiences	S	5	Project
(4) an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	S	1,2	HW
(5) an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	S	4	HW, Project
(6) an ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions			
(7) an ability to acquire and apply new knowledge as needed, using appropriate learning strategies	S	7	HW, Project

Prepared by and Date	Asst. Prof. Dr. Tuba Ayhan / June 2019	
Semester	Fall 2019-2020	
Name of Instructor	Asst. Prof. Dr. Tuba Ayhan	
Course Contents	Week	Topic
	1.	Introduction to Electrical and Electronics Engineering and MEF's Electrical and Electronics Engineering Program and Curriculum
	2.	Introduction to Engineering Profession and Fundamental Units and Dimensions
	3.	Who is a good engineer?
	4.	Technical Report Writing and Presentation
	5.	Introduction to Electrical and Electronics Laboratory
	6.	Introduction to Electrical and Electronics Laboratory
	7.	Introduction to EE Branches (Signal Processing)
	8.	Introduction to EE Branches (Control Systems)
	9.	Introduction to EE Branches (Electronics)
	10.	Introduction to EE Branches (Communication Systems)
	11.	Introduction to EE Branches (Renewable Energy)
	12.	Basic Mathematics for Electrical and Electronics Engineers
	13.	Basic Mathematics for Electrical and Electronics Engineers
	14.	Final Project Presentation
	15.	Final Exam/Project/Presentation Period
	16.	Final Exam/Project/Presentation Period
Required/Recommended	-	

Readings																
Teaching Methods	Lectures in the classroom, invited talks and technical trip.															
Homework and Projects	There will be 5-6 homework and laboratory assignments and a final project.															
Laboratory Work	Two of the lectures will be at the Electrical and Electronics Engineering Laboratory and students will conduct simple experiments in those lectures.															
Computer Use	-															
Other Activities	-															
Assessment Methods	<table><tr><td>Types of assessment</td><td>Number</td><td>Ratio (%)</td></tr><tr><td>Midterm</td><td>1</td><td>25</td></tr><tr><td>Homework/Lab Assignments</td><td>5-6</td><td>40</td></tr><tr><td>Project</td><td>1</td><td>35</td></tr><tr><td>Total</td><td></td><td>100</td></tr></table>	Types of assessment	Number	Ratio (%)	Midterm	1	25	Homework/Lab Assignments	5-6	40	Project	1	35	Total		100
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Total		100														
Course Administration	<p>Instructor's office and phone number: 5th Floor, (0212) 3953730</p> <p>office hours: TBA</p> <p>email address: ayhant@mef.edu.tr</p> <p>Rules for attendance: -</p> <p>Missing a midterm: Provided that proper documents of excuse are presented, a make-up exam will be given for the missed midterm.</p> <p>A reminder of proper classroom behavior, code of student conduct: YÖK Regulations</p> <p>Academic Dishonesty and Plagiarism: YÖK Regulations</p>															

ECTS Student Workload Estimation	Activity	No/Weeks	Hours			Calculation	Explanation
		No/Weeks per Semester (A)	Preparing for the Activity (B)	Spent in the Activity Itself (C)	Completing the Activity Requirements (D)		
	Lecture	14		2		28	$A * (B + C + D)$
	Assignments	6	2	2		24	
	Midterm	1	10	2		12	$A * (B + C + D)$
	Project	1	16	2		18	$A * (B + C + D)$
	Total Workload					82	
	Total Workload/25					3,28	
	ECTS					3	