INTRODUCTION TO ELECTRICAL-ELECTRONIC ENGINEERING

1	Course Title:	INTRODUCTION TO ELECTRICAL-ELECTRONIC ENGINEERING	
2	Course Code:	EEM1501	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	1	
6	Semester:	1	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	2	
11	Prerequisites:		
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör.Dr. İSMAİL TEKİN	
15	Course Lecturers:	Öğr.Gör.Dr. SEVİM KURTULDU	
16	Contact information of the Course Coordinator:	Öğr. Gör. Dr. İsmail TEKİN Uludağ Üniversitesi Mühendislik Fakültesi Elektrik -Elektronik Mühendisliği Bölümü Görükle Kampüsü Bursa	
17	Website:		
18	Objective of the Course:	The aim of this course is to learn to freshman students basics of electrical engineering and electronic circuits and also, to introduce the soldering, working at the laboratory.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Students should introduce to focus of Electrical Engineering.
		2	Students should learn the voltage, current, power and energy.
		3	Students should learn the Kirchhoff laws.
		4	Students should improve the laboratory skills.
		5	Students should introduce to basic electronic circuit devices such as resistor, capacitor, inductor, transistors etc.
		6	Students should introduce the analog and digital signals.
		7	Students should introduce to laboratory equipment's such as oscilloscope, signal generator, power supply, multimeters.
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice

1	Basic working are of electrical engineering	Introdunction laboratory devices such as oscilloscope, multimeter, power supply, signal generator, breadboard and lobaratory rules.
2	Organization of Electrical and Electronics Engineering Department.	Introdunction laboratory devices such as oscilloscope, multimeter, power supply, signal generator, breadboard and lobaratory rules.
3	Current, voltage, power, energy.	Introdunction laboratory devices such as oscilloscope, multimeter, power supply, signal generator, breadboard and lobaratory rules.
4	Electrical signals.	Introdunction laboratory devices such as oscilloscope, multimeter, power supply, signal generator, breadboard and lobaratory rules.
5	Kirchhoff current and voltage laws.	constructionof a circuit on breadboard.
6	Basics of the laboratory working procedure.	Learning how to soldering and desoldering.
7	Midterm exam.	exam break
8	Resistors, capacitors, inductors.	exam break
9	Diode and transistors.	Implementation of radio control of robot car.
10	Integrated circuits and packaging.	Implementation of radio control of robot car.
11	Electronic circuit development in breadboard.	Implementation of receiver module of robot car.
12	Analog signals and systems.	Implementation of receiver module of robot car.
13	Digital signals and systems.	Implementation of receiver module of robot car.
14	Amplification, filtering and oscillation.	programming of radio transmitter and receiver, testing the robot car.

Activites		Number	Duration (hour)	Total Work Load (hour)
Theoretical				
23	Assesment			
Practicals/Labs				
Self study and preperation				
Homeworks				
Projects				
Field Studies				
Midterm exams				
Others				
Final Exams				
Total Work Load				
Total work load/ 30 hr				
ECTS Credit of the Course				3.00
Measurement and Evaluation Techniques Used in the Course				

24	**ECTS / WORK LOAD TABLE**

25	**CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS**															
	PQ1	**PQ2**	**PQ3**	**PQ4**	**PQ5**	**PQ6**	**PQ7**	**PQ8**	**PQ9**	**PQ10**	**PQ11**	**PQ12**	**PQ13**	**PQ14**	**PQ15**	**PQ16**
ÖK1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

Contribution Level:	**1 very low**	**2 low**	**3 Medium**	**4 High**	**5 Very High**