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.
22	Textbooks, References and/or Other Materials:	1. Practical Electronics for Invertors, Paul Scherz, McGraw Hill, third edition, 2012. 2. Practical Electronics Handbook, Sixth Edition, 2007. 3. Lecture notes.
23	Assesment	

TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	1	30.00
Quiz	0	0.00
Home work-project	3	20.00
Final Exam		50.00
Total	5	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		

24	ECTS / WORK LOAD TABLE

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical			
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

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