ELECTRIC CIRCUITS LABORATORY I

1	Course Title:	ELECTRIC CIRCUITS LABORATORY I	
2	Course Code:	EEM2103	
3	Type of Course:	Compulsory	
4	Level of Course:	First Cycle	
5	Year of Study:	2	
6	Semester:	3	
7	ECTS Credits Allocated:	3.00	
8	Theoretical (hour/week):	0.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	3	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Doç. Dr. FİGEN ERTAŞ	
15	Course Lecturers:	Dr. Metin HATUN	
16	Contact information of the Course Coordinator:	E-posta:fertas@uludag.edu.tr Tel: (224) 294 2017 Adres: Elektrik-Elektronik Mühendisliği Bölümü, 5.Kat, No:524	
17	Website:	http://home.uludag.edu.tr/~fertas	
18	Objective of the Course:	To gain adequate ability to: use lab equipments such as avometers and oscilloscopes, set-up simple circuits, perform correct measurements, interpret the results, and establish relations between theoretical and experimental circuits of fundamental importance.	
19	Contribution of the Course to Professional Development:	Ability to design, set-up, measure, and interpret the responses of DC circuits.	
20	Learning Outcomes:		
		1	Gain the ability to design partly or fully a complex system, process, device or a product in electric circuits meeting specific requirements under realistic constraints and conditions;
		2	Gain the ability to develop, select, and use modern techniques and tools necessary for electric circuit applications;
		3	Gain the ability to design and conduct complex experiments and to collect, analyze and interpret data for engineering problems in electric circuits;
		4	Gain ability to present the results of the experiments, written and orally.
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21	Course Content:		
	Course Content:		

Week	Theoretical	Practice
1		Registration to the laboratory and formation of the experiment groups
2		Introduction to General Lab. operating procedures and Lab. Reports
3		Operation of electrical instrumentation and measurements including oscilloscope use
4		ıntroducing simulation and circuit design software packages and application examples
5		Exp 1: Circuit Laws and Basic Electric Circuits
6		Exp 2: Wheatstone Bridge
7		Exp 3: Network Theorems
8		Exp 4: Max Power Transfer
9		Exp 5: Operational Amplifiers
10		Exp 6: RC and RL Circuits
11		Exp 7: RLC Circuits
12		Practising for Designing Project
13		Exp 8: Designing Project
14		Make-up experiments – if any

22	Textbooks, References and/or Other Materials:	Laboratory manual prepared by coordinator
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	10.00
Quiz	0	0.00
Home work-project	7	30.00
Final Exam	1	60.00
Total	9	100.00
Contribution of Term (Year) Learning Activities to Success Grade		40.00
Contribution of Final Exam to Success Grade		60.00
Total		100.00
Measurement and Evaluation Techniques Used in the Course		Measurement and evaluation are performed according to the Rules & Regulations of Bursa Uludağ University on Undergraduate Education.

24	**ECTS / WORK LOAD TABLE**

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	0	0.00	0.00
Practicals/Labs	14	3.00	42.00
Self study and preperation	6	2.00	12.00
Homeworks	6	2.00	12.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	10.00	10.00
Others	0	0.00	0.00
Final Exams	1	14.00	14.00
Total Work Load			100.00
Total work load/ 30 hr			3.00
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	5	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	5	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**