	FUNDAMENTALS	OF EI	ECTRICAL ENGINEERING									
1	Course Title:	FUNDAMENTALS OF ELECTRICAL ENGINEERING										
2	Course Code:	ELN2060)									
3	Type of Course:	Compulsory										
4	Level of Course:	First Cycle										
5	Year of Study:	2	2									
6	Semester:	3	3									
7	ECTS Credits Allocated:	3.00										
8	Theoretical (hour/week):	2.00	2.00									
9	Practice (hour/week):	0.00	0.00									
10	Laboratory (hour/week):	0										
11	Prerequisites:	None										
12	Language:	Turkish										
13	Mode of Delivery:	Face to f	ace									
14	Course Coordinator:	Öğr.Gör.	Dr. SEVİM KURTULDU									
15	Course Lecturers:											
16	Contact information of the Course Coordinator:	E-posta:i Tel: (224 Adres: U No:112	itekin@uludag.edu.tr 4) 294 2030 Jludağ Üniversitesi Mühendislik Mimarlık Fakültesi 1. Kat,									
17	Website:											
18	Objective of the Course:	The goal like volta engineer measure basic cor	of the course is to introduce students to the basic concepts ge, current, active and reactive power, energy in electrical ing, to circuit analysis methods, to power and energy ment methods in mono-phase and three-phase systems, to neepts in digital electronics.									
19	Contribution of the Course to Professional Development:											
20	Learning Outcomes:											
		1	Understand the basic concepts like voltage, current, active and reactive power, energy in electrical engineering									
		2	Understand how to use circuit analysis methods to reduce circuits									
		3	Analysis an electrical circuit using circuit analysis methods									
		4	Learn how to measure power and energy in electrical circuits.									
		5	Understand and compare analog and digital signals and systems.									
		6	Design basic logical functions using basic gates									
		7										
		8										
		9										
		10										
21	Course Content:											
		Co	urse Content:									
Week	Theoretical	. ·	Practice									
1	Voltage, current, ac and dc current, C Kirchhoff laws	Jhm law,										

2	Circuit and cu	ana rrei	alysis nt div	iders,	l Kirch paral	nhoff la lel / sei	ws, vo ries ci	oltage rcuits												
3	Delta-Wye nad Wye-Delta conversions, bridge networks, source conversions																			
4	Mesh analysis																			
5	Nodal analysis																			
6	Superposition theorem																			
7	Thevenin's and Nortonn's theorem, maximum power transfer																			
8	Midter	m +	revie	ew see	ssion															
9	Capac	itor	s, ana	alysis	of RC	circuit	S													
10	Inducto	ors,	anal	ysis o	f RL c	ircuits														
11	Active correct measu	and tion ren	d read , ac a nent	ctive p and do	ower, activ	power e powe	r facto er	r												
12	Power phase	me sys	asure tems	ement , reac	in mo tive p	ono ano ower m	d three neasu	e remer	nt											
13	Groun resista	ding nce	g, me	asure	ment	of eartl	h grou	Ind												
14	Analog and digital signals and systems, Binary numbers, digital logic gates																			
22	Textbooks, References and/or Other								1. 5th	1. Allan .Robbins, "Circuit analysis: Theory and practice", 5th edition, Delmar 2006.										
Activites							 	lames Numb	er	lsson S	Usan A Riedel "Fle Duration (hour)			tric Circuits" Total Work Load (hour)						
								1	14				2.00			28.00				
Practicals/Labs								- <u> </u> , , , , , , , , , , , , , , , , , , ,	0				0.00			0.00				
								40	40160				1.50							
Homew	orks		1						(0					0.00					
Roviect	ork-pr	oied	ct		-		0	-	0.0	0,00						0.00				
Field St	tudies	<u>,</u>							(0						0.00				
¶v/jięttern	Aiderm exams								10	100.00						15.00				
Others	Others								(0			0.00			0.00				
Shiftessafisde								1	1			26.00			26.00					
Total Work Load																90.00				
Total work load/ 30 hr								10	0.00					3.00						
ECTS Credit of the Course										3.00										
Course																				
24	ECTS	5/\	WOF	RK L	OAD	TAB	LE													
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME																			
	_	_																		
	PG	21	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16			
ÖK1	0	()	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
ÖK2	0	(C	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			

ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK5	0	0	0	0	0	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
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	rib 1 very low n el:		2 low		3 Medium		4 High		5 Very High							