AC CIRCUIT ANALYSIS

1	Course Title:	AC CIRCUIT ANALYSIS	
2	Course Code:	EMEZ102	
3	Type of Course:	Compulsory	
4	Level of Course:	Short Cycle	
5	Year of Study:	1	
6	Semester:	2	
7	ECTS Credits Allocated:	5.00	
8	Theoretical (hour/week):	2.00	
9	Practice (hour/week):	0.00	
10	Laboratory (hour/week):	2	
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. NÜKET ACARSOY	
15	Course Lecturers:		
16	Contact information of the Course Coordinator:	NÜKET ACARSOY,acarsoy@uludag.edu.tr,2942379	
17	Website:		
18	Objective of the Course:	to be able to evaluate alternating current and to evaluate circuit reactions in alternating current	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	To be able to comprehend the acquisition of alternating current, to perform basic measurement and reading in alternating current
		2	To be able to show alternating current magnitudes as vector and solve problems
		3	to examine the serial RLC circuits, to calculate the power spent
		4	To understand the parallel RLC circuits, to calculate the power spent
		5	Examining series resonance circuits and examining the results
		6	Examining parallel resonance circuits and examining process results
		7	To be able to calculate current, voltage and power values in three phase systems
		8	
		9	
		10	
21	Course Content:		

Course Content:

Week	Theoretical	Practice
1	Alternating current definition	Alternating current signal reading with an oscilloscope
2	Definition of sinusoidal signal, representation as vector	Alternating current signal reading with an oscilloscope

3	relationship between current, voltage, power and phase angle for circuit elements	finding the inductance of the capacitor and the coil in experimental
4	Serial RC circuits	Serial RC application
5	Serial RL circuits	Serial RL application
6	Power in series and parallel circuits	Power measurement application
7	Parallel RC circuits	Parallel RC application
8	Repeating courses and midterm exam	
9	Parallel RL circuits	Parallel RL application
10	series resonant circuits	power measurement applications in the series resonant circuit
11	Parallel resonance circuits	Series resonant circuit application
12	Power and energy in single-phase alternating current	Parallel resonance circuit application
13	Power and energy in single-phase alternating current	Power and energy applications
14	Power and energy in three-phase alternating current	Power and energy application

22	Textbooks, References and/or Other Materials:	correct and Alternating Current Circuits Problem Solutions, A. H. Saçkan Circuit Analysis Laboratory Experiments, ITU Alternating Current Circuit Analysis, H. S. Selek
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBE**	**WEIGHT**
Theoretical	1	14
Practicals/Labs		14
Self study and preperation	3	14
Homeworks		1
Projects		0
Field Studies		0
Midterm exams	1	1
Others		0
Final Exams		1
Total		100
Success Grade		100.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Home work-project	10.00	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	3.00	42.00
Homeworks	1	18.00	18.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	17.00	17.00
Others	0	0.00	0.00
Final Exams	1	17.00	17.00
Total Work Load			167.00
Total work load/ 30 hr			5.00
ECTS Credit of the Course			5.00

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	3	2	3	3	2	0	2	0	3	0	3	0	0	0	0	0
ÖK2	0	1	4	0	4	0	4	0	0	0	3	0	0	0	0	0
ÖK3	0	1	4	0	4	0	4	4	0	0	3	0	0	0	0	0
ÖK4	0	1	4	0	4	0	4	0	0	0	3	0	0	0	0	0

ÖK5	0	1	4	4	4	0	4	4	0	0	3	0	0	0	0	0
ÖK6	0	1	4	4	4	0	4	4	0	0	3	0	0	0	0	0
ÖK7	0	1	4	4	4	0	4	4	0	0	3	3	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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