ANALYSIS AND DESIGN OF RF CIRCUITS AND SYSTEMS										
1	Course Title:	ANALYS	IS AND DESIGN OF RF CIRCUITS AND SYSTEMS							
2	Course Code:	EEM520	3							
3	Type of Course:	Optional								
4	Level of Course:	Second	Cycle							
5	Year of Study:	1								
6	Semester:	1								
7	ECTS Credits Allocated:	6.00								
8	Theoretical (hour/week):	3.00								
9	Practice (hour/week):	0.00								
10	Laboratory (hour/week):	0								
11	Prerequisites:	None								
12	Language:	Turkish								
13	Mode of Delivery:	Face to f	face							
14	Course Coordinator:	Doç. Dr.	SİBEL YENİKAYA							
15	Course Lecturers:	-								
16	Contact information of the Course Coordinator:	sguler@uludag.edu.tr Tel: (224) 294 2031 Adres: Elektronik Mühendisliği Bölümü 3. Kat, No:309								
17	Website:									
18	Objective of the Course:	Giving the design and application of circuits and systems used in RF and wireless technologies. Introduction of RF and wireless technologies. Analysis methods of RF and wireless technologies. Examination of transceiver structures and demonstration of design ways. Examination of different RF elements, circuits and systems.								
19	Contribution of the Course to Professional Development:	Provides the ability to reach and interpret information about the field of study.								
20	Learning Outcomes:									
		1	Advanced use of mathematics, science and engineering knowledge in the design of circuits and systems used in RF and wireless technologies.							
		2	Ability to analyze RF and wireless technologies.							
		3	Ability to design receiver and transmitter structures.							
		4	Ability to access information about different RF elements, circuits and systems and applications.							
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		6								
		7								
		8								
		9								
		10								
21	Course Content:									
	Course Content:									
Week	Theoretical		Practice							
1	High frequency circuits, transmissior parameters, Smith Chart	n line								

2	Microstrips, Static TEM parameters, for analysis and synthesis of microstr frequency dependence of eff.	Formulas rips,							
3	Scattering parameters, measuremen parameters, s parameters and signal diagram.	t of s I flow							
4	Two element L circuit, three element Smith chart design, transmission line circuit.	fitting, fitting							
5	Transistor equivalent circuit, input im output impedance, gain, feedback, si signal two port parameters.	pedance, mall							
6	Understanding the definition of high frequency transistors, polarization of frequency transistors.	high							
7	Description of high frequency amplific Power gain, Unidirectional amplifier of Non-unidirectional amplifier design.	ers, design,							
8	Stability criterion, load and source sta circles, constant power gain circles, I amplifier design.	ability ow-noise							
9	Stability criterion, load and source sta circles, constant power gain circles, l amplifier design.	ability ow-noise							
10	Power amplifiers, polarization of pow transistors, power amplifier design.	er							
11	General view of oscillator design, s n	natrix							
Activit	tes		Number	Duration (hour)	Total Work Load (hour)				
Theore	Sources of noise.		14	3.00	42.00				
Practic	als/Labs		0	0.00	0.00				
Selfastu	desand areperativences and/or Other		1 Microwaye Transisto	or & Polifiers · Analys	Z200 Design				
Homev	vorks		0	0.00	0.00				
Project	\$		3.RF/Microwave Circui	t Design for Wireless	Application.				
Field S	tudies		0	0.00	0.00				
Midterr	Assesment n exams		1	36.00	36.00				
Others		<u> </u>	0	0.00	0.00				
FinateFr	ሻቒጰቒm	1	40100	36.00	36.00				
Total V	Vork Load				222.00				
Hotalen	worklandlegg hr	0	0.00		6.20				
ECTS	Credit of the Course	_			6.00				
Total		2	100.00						
Contrib Succes	oution of Term (Year) Learning Activitie ss Grade	es to	40.00						
Contrib	oution of Final Exam to Success Grade	Э	60.00						
Total			100.00						
				Measurement and evaluation are carried out according to the principles of Bursa Uludağ University Postgraduate Education Regulation.					
Measu Course	rement and Evaluation Techniques Us	sed in the	Measurement and eva the principles of Bursa Education Regulation.	luation are carried ou Uludağ University P	ut according to ostgraduate				

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	5	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
LO: Learning Objectives PQ: Program Qualifications																
Contrib ution Level:	1 very low			2 low 3			3 Medium		4 High		5 Very High					