INTRODUCTION TO MICROELECTROMECHANICAL SYSTEMS								
1	Course Title:	INTROD	UCTION TO MICROELECTROMECHANICAL SYSTEMS					
2	Course Code:	EEM450	3					
3	Type of Course:	Optional						
4	Level of Course:	First Cyc	le					
5	Year of Study:	4						
6	Semester:	7						
7	ECTS Credits Allocated:	4.00						
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	face					
14	Course Coordinator:	Dr. Ögr.	Üyesi ESİN KARPAT					
15	Course Lecturers:	Yrd. Doç. Dr. Esin KARPAT						
16	Contact information of the Course Coordinator:	esinoz@uludag.edu.tr						
17	Website:							
18	Objective of the Course:	The aim of the lectures is to give an overview of the Microelectromechanic systems world and the MEMS devices. It has been structured so to introduce the main features and properties of Microelectromechanical systems and their current and potential advantages which mainly derive from miniaturization and the evolution of the standard IC technological approach.						
19	Contribution of the Course to Professional Development:							
20	Learning Outcomes:							
		1	To be able to gain an interdisciplinary overview of the current state of MEMS					
		2	To be able to learn microfabrication methods					
		3	To be able to learn different applications of MEMS					
		4						
		5						
		6						
		7						
		8						
		9						
		10						
21								
\A/- I	Course Content:							
VVEEK			Practice					
2	History of Micro electromechanical s	systems						

3	Appl	icatio	ons of	MEM	S												
4	Materials																
5	Design Principles (Scaling)																
6	Mems products																
7	Microfabrication - Bulk																
8	Microfabrication-Micro surface																
9	Repeating courses																
10	MEMS devices (Digital micromirrors, accelerometers, etc)																
11	Microsensors (chemical, biological, mechanical, etc)						Τ										
12	MEMS Actuators.																
13	Future of MEMS							Τ									
14	Futu	re of	MEM	S													
Activites							Number			Duration (hour)			Total V Load (ł	Vork nour)			
Theogre	23 <sup>re</sup> ik3sesment						ľ	14			3.00			42.00			
Practica	Practicals/Labs						(	0			0.00			0.00			
Self stu	elf study and properation							20.00			0.00	0.00			0.00		
Homeworks					ľ	1			42.00	42.00			42.00				
Projects										0.00			0.00				
Field Studies							(	0 0.00				0.00					
Midtern	Midterm exams							1 26.0			26.00	26.00					
Others	Others						(	0			0.00	0.00			0.00		
Since Example					40	40,00			40.00	40.00			40.00				
Total W	Vork L	oad														150.00	
Total w	ork lo	ad/ :	<del>30 hr</del>						10	0.00						5.00	
ECTS Credit of the Course					iei							4.00					
Course	) 					•											
24	EC	rs /	WO	RKL	OAD	TAB	LE										
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																
	I	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1	PQ11	PQ12	PQ1	PQ14	PQ15	PQ16
ÖK1	(	C	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	(	C	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK3	(	C	0	1	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 Medium	4 High	5 Very High					