	MIC	ROCO	NTROLLERS								
1	Course Title:	MICROC	CONTROLLERS								
2	Course Code:	EMEZ20	1								
3	Type of Course:	Compuls	ory								
4	Level of Course:	Short Cy	cle								
5	Year of Study:	2									
6	Semester:	3									
7	ECTS Credits Allocated:	4.00									
8	Theoretical (hour/week):	3.00									
9	Practice (hour/week):	0.00									
10	Laboratory (hour/week):	1									
11	Prerequisites:	None									
12	Language:	Turkish									
13	Mode of Delivery:	Face to f	ace								
14	Course Coordinator:	Öğr.Gör.	Dr. İSMET GÜCÜYENER								
15	Course Lecturers:	İsmet Gü	ĴĊÜYENER								
16	Contact information of the Course Coordinator:	İsmet Gü 2942349 ismetguc TBMYO	ÜCÜYENER) c@uludag.edu.tr Mekatronik Prg. Bsk. Görükle Bursa								
17	Website:										
18	Objective of the Course:	ective of the Course: Choosing a microcontroller establishing, flowchart dra debugging, and downloadi									
19	Contribution of the Course to Professional Development:										
20	Learning Outcomes:										
	•	1	Being able to use microprocessor in the solution circuits								
		2	Being able to program microprocessor								
		3	Being able to use assembly commands								
		4	Being able to do digital input, digital output								
		5	Being able to use 7 segment display via port pins								
		6	Being able to record and read data EEPROM								
		7	Being able to use ADC module								
		8	Being able to use graphic display with microprocessor								
		9									
		10									
21	Course Content:										
	Course Content:										
Week	Theoretical Practice										
1	Microprecessor architecture		Introduction of laboratory								
2	Introduction of Editor for the Assemblanguage command writing and the spoint of program writing	oly starting	crystal connection								
3	Ports direction determination		Application of I/O with button and LED								

4	Using	sing of addition and subtraction in program								Writing and testing the program for addition and subtraction										
5	The U	he Using of test commands								Follow-table program and 7 segment application										
6	Prepa	reparing a follow table for 7 segment display									The delay subprogram application									
7	Writing	/riting of delay subprograms									Timer module usage, programming and its application									
8	Repea	epeating courses, first midterm									Timer module usage, programming and its application									
9	The a	he application of timer and counter module									Counter programming and to run with button of counter program									
10	Writing	Writing and reading to EEPROM									Application of the writing and reading program in EEPROM									
11	ADC s	ADC structure									To run of the ADC module with potentiometer									
12	Readi progra	Reading analog data and to use in programming phase									To run of the ADC module with signal input									
13	Repea	atin	g cou	rses, S	Secon	nd midte	erm		Тс	o run of	the AI	DC mod	dule with	n signa	al input					
14	Applic conne	Application of microprocessor and LCD connection									ig requ	ested c	haracte	er with	LCD					
22	Textbooks, References and/or Other									Course notes, Microchip web site										
23	Asses	me	nt																	
TERM L									w	WEIGHT										
Midtern	n Exar	n					2	2	50	50.00										
Quiz							0		0,	00										
Activites									Numb	ber		Dura	ition (Total Work Load (hour)						
TREdretical 3									10	ф <u>4</u> 00			2.00	2.00 28.00						
Practicals/Labs									14			2.00		28.00	8.00					
Self stu	idy and	<u>i pr</u>	epera	tion		0				14					28.00					
Homew	vorks	*		<u>vom t</u>		<u></u>	rodo			0				0.00			0.00			
Project	Projects									100.00				0.00			0.00			
Field S	Field Studies									0				0.00			0.00			
									2					20.00						
Others										0					0.00					
Final E	Final Exams									1			20.00		20.00					
Total Work Load										124.00										
Total work load/ 30 hr										4.13										
ECTS	S Credit of the Course									4.00										
25		CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																		
	P	Q1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16			
ÖK1	0		1	1	3	5	4	4	2	2	5	5	0	0	0	0	0			
ÖK2	2		2	2	3	5	5	3	2	4	5	5	0	0	0	0	0			
ÖK3	0		1	1	3	5	5	4	4	4	5	5	0	0	0	0	0			
ÖK4	0		0	2	2	5	5	3	5	5	5	5	0	0	0	0	0			

ÖK5	0	0	0	1	5	5	5	4	2	3	2	0	0	0	0	0
ÖK6	0	0	5	1	5	5	5	4	2	3	2	0	0	0	0	0
ÖK7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK8	0	1	4	1	5	5	5	4	2	3	2	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low ution Level:			2 low		3	3 Medium		4 High			5 Very High					