INDUSTRIAL ROBOTS											
1	Course Title:	INDUST	RIAL ROBOTS								
2	Course Code:	MKRZ20	6								
3	Type of Course:	Compuls	ory								
4	Level of Course:	Short Cy	cle								
5	Year of Study:	2									
6	Semester:	4									
7	ECTS Credits Allocated:	4.00									
8	Theoretical (hour/week):	2.00									
9	Practice (hour/week):	0.00									
10	Laboratory (hour/week):	2									
11	Prerequisites:										
12	Language:	Turkish									
13	Mode of Delivery:	Face to f	ace								
14	Course Coordinator:	Öğr. Gör	. Dr. İSMET GÜCÜYENER								
15	Course Lecturers:	Meslek Y elemanla	/üksekokulları Yönetim Kurullarının görevlendirdiği öğretim arı.								
16	Contact information of the Course Coordinator:	ismetguc@uludag.edu.tr, 02242942349, U.Ü. TBMYO Mekatronik Prg. Bşk. Görükle Bursa									
17	Website:										
18	Objective of the Course:	In this course, aimed to gain competencies of robot programming, robot maintenance.									
19	Contribution of the Course to Professional Development:	Stationary and moving robots have become part of industrial production systems. The use of robots will help students meet the needs of industrial environments and generate new solutions when necessary.									
20	Learning Outcomes:										
		1	Being able to use hardware parts of robot								
		2	Being able to use development software of robot program.								
		3	Being able to determine three dimension movement of robot								
		4	Being able to use input output operations of robot								
		5	Being able to use teach-pad.								
		6	Being able to program of robot movement								
		7	Being able to simulate of robot movements								
		8	Being able to register of robot origin.								
		9									
		10									
21	21 Course Content:										
	Course Content:										
Week	Theoretical		Practice								
1	Robot structure		Introduction of laboratory								
2	Coordinate systems										
3											
4											
5	Input output operations		invovement according to input value								

6	Inpu	out output operations								Movement according to input value										
7	Rob	bot simulation sofware							Ru	Running of simulation										
8	Rep	peating courses First Midterm								Running of simulation										
9	Tead	each-pad							Ма	Manuel movements										
10	Prog repla	ogramming of holding work piece and								Application of work piece and its replacement										
11	Prog repla	ogramming of holding work piece and placement								Application of work piece and its replacement										
12	Funo varia	unction programming and using of robot variables									Application of function programming									
13	Rep	Repeating courses Second Midterm								Application of function programming										
14	Rob	ot ori	gin va	alues					Re	gisteri	ng of r	obot ori	gin valu	les						
22	2 Textbooks, References and/or Other Materials:																			
23	23 Assesment																			
TERM L	EAR	NING	ACTI	VITIES	;		N R	UMBE	WE	WEIGHT										
Midtern	n Exa	am					2		40	40.00										
Quiz							0		0.0	0.00										
Home v	work-	proje	ect				0		0.0	0.00										
Final E	xam						1		60	60.00										
Total 3 Activites								10 	<u>0.00</u> Numb	er		Dura	Duration (hour) Total Work Load (hour)							
Theoretical														28.00						
Practicals/Labs								140	14			2.00	2.00 28.00							
Measurement and Evaluation Techniques Used in the									Measurement and evaluation is carried out accerding to						g to					
Homeworks								1	14				2.00			28.00				
Pr2#ects / WORK LOAD TABLE								(0			0.00			0.00					
Field Studies								(0 0.00					0.00						
Midterm exams								2	2			6.00			12.00					
Others								(0			0.00		0.00						
Final Exams								1	1					10.00						
Total Work Load									132.00											
Total work load/ 30 hr									4.00											
ECTS Credit of the Course									4.00											
25	25 CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS																			
	I	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16			
ÖK1	ŕ	4	3	2	3	5	5	4	4	4	3	3	0	0	0	0	0			
ÖK2	:	5	0	3	4	4	3	4	3	3	2	5	0	0	0	0	0			
ÖK3	;	5	5	4	4	2	4	5	2	4	5	5	0	0	0	0	0			
ÖK4	ŕ	4	4	5	5	4	4	4	3	5	4	4	0	0	0	0	0			

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