HYDRAULIC PNEUMATIC

1	Course Title:	HYDRAULIC PNEUMATIC
2	Course Code:	MKNZ206
3	Type of Course:	Compulsory
4	Level of Course:	Short Cycle
5	Year of Study:	2
6	Semester:	4
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 face
14	Course Coordinator:	Öğr.Gör. ESRA ÖZDEMİR
15	Course Lecturers:	Öğr. Gör. ESRA ÖZDEMİR ve Öğr. Gör. KENAN SAKA
16	Contact information of the Course Coordinator:	esraozdemir@uludag.edu.tr / 0506 575 46 93 / Uludağ Üniversitesi Yenişehir İbrahim Orhan MYO
17	Website:	
18	Objective of the Course:	To understand the working principles of hydraulic and pneumatic control systems, these control systems circuit edit and establish a hydraulic circuit in accordance with the criteria.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	

	1	Explains basic hydraulic principles and solve numerical problems.
	2	Explains the elements and functions of hydraulic circuit.
	3	Draws the symbols of hydraulic circuit components and circuits establishes.
	4	Remembers the failures and maintenance methods in hydraulic circuit elements.
	5	Analyses ways to provide hydraulic circuit elements and criteria in order.
	6	Explains basic pneumatic principles and solve numerical problems.
	7	Explains the elements and functions of pneumatic circuit.
	8	Draws the symbols of pneumatic circuit components and circuits establishes.
	9	Remembers the failures and maintenance methods in pneumatic circuit elements.
	10	Analyses ways to provide pneumatic circuit elements and criteria in order.

21	Course Content:	
	Course Content:	
Week	Theoretical	Practice
1	Lessons to inform and identifying hydraulic circuit elements.	
2	Creating hydraulic circuit diagram.	Creating hydraulic circuit diagram.

3	Detecting failures in hydraulic systems.	
4	Troubleshooting hydraulic failure.	To detect and troubleshoot hydraulic failure.
5	Identifying pneumatic circuit elements.	
6	Creating pneumatic circuit diagram.	Creating pneumatic circuit diagram.
7	Creating electro pneumatic systems.	Creating electro pneumatic systems.
8	Creating electro pneumatic systems.	Creating electro pneumatic systems.
9	Repeating courses and midterm exam	
10	Detecting failures in pneumatic systems.	
11	Troubleshooting pneumatic failure.	To detect and troubleshoot pneumatic failure.
12	To make periodic checks of systems.	
13	To make periodic maintenance of systems.	To make periodic checks and maintenance of systems.
14	To make fault detection and repair the defective machine.	To make fault detection and repair the defective machine.
22	Textbooks, References and/or Other Materials:	1- Michael J.P. ve Ashby J.G. Güç Hidroliği, 1994. 2- Küçük M. Hidrolik ve Pnömatik, 2003.
23	Assesment	

TERM LEARNING ACTIVITIES	**NUMBER**	**WEIGHT**
Midterm Exam	1	30.00
Quiz	2	20.00
Success Grade	4	100.00
Total		100.00

Activites	Number	Duration (hour)	Total Work Load (hour)
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	13	1.00	13.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	1	8.00	8.00
Others	2	4.00	8.00
Final Exams	1	10.00	10.00
Total Work Load			95.00
Total work load/ 30 hr			3.17
ECTS Credit of the Course			4.00

24 ECTS / WORK LOAD TABLE

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	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK3	4	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK4	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0

ÖK5	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0
ÖK6	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK7	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK8	4	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK9	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0
ÖK10	0	0	0	0	0	5	0	5	0	0	0	0	0	0	0	0

LO: Learning Objectives PQ: Program Qualifications

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