

PRORAMMABLE LOGIC CONTROLLERS

1	Course Title:	PRORAMMABLE LOGIC CONTROLLERS	
2	Course Code:		
3	Type of Course:	Optional	
4	Level of Course:	Short Cycle	
5	Year of Study:	2	
6	Semester:	4	
7	ECTS Credits Allocated:		
8	Theoretical (hour/week):		
9	Practice (hour/week):		
10	Laboratory (hour/week):		
11	Prerequisites:	None	
12	Language:	Turkish	
13	Mode of Delivery:	Face to face	
14	Course Coordinator:	Öğr.Gör. HASAN BAYAZIT	
15	Course Lecturers:	İsmet GÜCÜYENER	
16	Contact information of the Course Coordinator:	İsmet GÜCÜYENER 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 the competence of use in the control circuits by learning the PLC hardware and software.	
19	Contribution of the Course to Professional Development:		
20	Learning Outcomes:		
		1	Being able to use the PLC module in the solution circuits
		2	Being able to use the PLC programing editor
		3	Being able to use the definition of Bit, Byte, Word and Double Word for signal values.
		4	Being able to use LAD, FBD, STL programming languages
		5	Being able to use organization blocks
		6	Being able to use functions
		7	Being able to use data blocks
		8	Being able to use function blocks
		9	
		10	
21	Course Content:		
		Course Content:	
Week	Theoretical	Practice	
1	CPU module	Introduction of laboratory	
2	PLC programming Logic	Digital Input Digital Output Process	
3	Input Output modules	Digital Input Digital Output Process	
4	Timers	Timer circuits	
5	Counters	Counter circuits	
6	Functions	Realization by a function block of the repeated process	
7	Data Blocks	The data block creating, reading and writing	

8	Repeating courses first midterm	The data block creating, reading and writing
9	Function Blocks	Application of the function block with different data blocks
10	Analog Input Output	Analog Input Output process
11	Operator Panel	Data input output via screen
12	PID module	Control circuit application
13	Repeating courses second midterm	Control circuit application
14	PID module	Control circuit application

22	Textbooks, References and/or Other Materials:	Course notes, Siemens web site
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23	Assesment
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TERM LEARNING ACTIVITIES	NUMBER	WEIGHT
Midterm Exam	2	50.00
Quiz	0	0.00
Home work-project	0	0.00
Final Exam	1	50.00
Total	3	100.00
Contribution of Term (Year) Learning Activities to Success Grade		50.00
Contribution of Final Exam to Success Grade		50.00
Total		100.00

Activites	Number	Duration (hour)	Total Work Load (hour)
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24. ECTS / WORK LOAD TABLE			
Theoretical	14	2.00	28.00
Practicals/Labs	14	2.00	28.00
Self study and preperation	14	2.00	28.00
Homeworks	0	0.00	0.00
Projects	0	0.00	0.00
Field Studies	0	0.00	0.00
Midterm exams	2	10.00	20.00
Others	0	0.00	0.00
Final Exams	1	20.00	20.00
Total Work Load			124.00
Total work load/ 30 hr			4.13
ECTS Credit of the Course			

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	1	1	3	5	4	4	2	2	5	5	1	0	0	0	0	0
ÖK2	0	0	3	5	5	3	2	4	5	0	0	0	0	0	0	0
ÖK3	0	0	3	5	5	4	4	4	5	0	0	0	0	0	0	0
ÖK4	0	2	2	5	5	0	5	5	5	0	0	0	0	0	0	0

ÖK5	1	1	1	5	5	5	4	2	3	5	1	0	0	0	0	0
ÖK6	0	0	1	5	5	3	4	2	3	0	0	0	0	0	0	0
ÖK7	1	1	0	0	5	5	4	2	3	2	1	0	0	0	0	0
ÖK8	1	1	1	5	5	2	1	5	5	2	1	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			