AYDIN ADNAN MENDERES UNIVERSITY
COURSE INFORMATION FORM

Course Title	Programable Controller								
Course Code	ELE209		Couse Level	Short Cycle (Associate's Degree)					
ECTS Credit	4	Workload	100 *(Hours)*	Theory	3	Practice	1	Laboratory	0
Objectives of the Course	In this course, it is aimed to have the students gain the abilities about programming PLC with ladder diagram and function blocks, programming a touchscreen panel, pneumatics-hydraulics and motor control applications.								
Course Content	Usage of PLC and ladder diagrams and writing a program, design of hydraulic and pneumatic circuits								
Work Placement	N/A								
Planned Learning Activities and Teaching Methods	Explanation (Presentation), Experiment, Demonstration, Individual Study, Problem Solving								
Name of Lecturer(s)	Ins. Zafer KORKMAZ								

Assessment Methods and Criteria		
Method	Quantity	Percentage (%)
Midterm Examination	1	40
Final Examination	1	70

Recommended or Required Reading	
1	Automation Systems PLC Applications(Dr.Muciz Özkan)

Week	Weekly Detailed Course Contents	
1	Theoretical	Basic technology of PLC
2	Theoretical	PLC units
3	Theoretical	PLC interface program
4	Theoretical	Writing a program with ladder diagram
	Practice	Writing a program with ladder diagram
5	Theoretical	Writing a program with ladder diagram
	Practice	Writing a program with ladder diagram
6	Theoretical	Usage of sequential function blocks program
7	Theoretical	Writing of sequential function blocks program
8	Theoretical	Using operator panel / touchscreen panel
	Practice	Using operator panel / touchscreen panel
9	Theoretical	Using operator panel / touchscreen panel
10	Theoretical	Using operator panel / touchscreen panel
11	Theoretical	Operating a pneumatic circuit with PLC
	Laboratory	Operating a pneumatic circuit with PLC
12	Theoretical	Operating a pneumatic circuit with PLC
	Laboratory	Operating a pneumatic circuit with PLC
13	Theoretical	Operating a hydraulic circuit with PLC
	Laboratory	Operating a hydraulic circuit with PLC
14	Theoretical	Operating a hydraulic circuit with PLC
	Laboratory	Operating a hydraulic circuit with PLC

Workload Calculation				
Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Lecture - Practice	14	1	1	28
Assignment	1	8	1	9
Midterm Examination	1	9	1	10

Final Examination	1	10	1	11
			Total Workload (Hours)	100
			[Total Workload (Hours) / 25*] = **ECTS**	4
**25 hour workload is accepted as 1 ECTS*				

Learning Outcomes	
1	Building up of PLC
2	Programming PLC
3	Making a system control with PLC
4	Can establish hydraulic circuit with programmable controllers.
5	Can establish a pneumatic circuit with programmable controllers.

Programme Outcomes *(Mechatronics)*	
1	TECHNICAL FOREIGN LANGUAGE
2	BASICS OF MECHATRONICS
3	TECHNICAL DRAWING
4	DOING BASIC MECHANIC PROSESES
5	CHOOSE THE MATERIALS
6	DOING MECHANICAL SYSTEM DESIGN
7	SET UP A HYDRAULİC OR PNEUMATICSYSTEMS
8	DOING COMPUTER AIDED MECHANICAL DESİGN
9	USINGFLEXIBLE PRODUCING SYSTEMS
10	USINGCOMPUTER AIDEDMACHINE TOOLS
11	DOING ELECTRICAL AND ELECTRONICAL
12	SET UP ELECTRICAL AND ELECTRONICAL CIRCUITS
13	SET UP LOGICAL CIRCIUTS
14	DOING COMPUTER AIDED ELECTRONICAL CIRCUITSDESİGN
15	SET UP ELECTRICAL MOTORS
16	SET UP MICROCONTROLLER CIRCIUTS
17	SET UP CONTROL SYSTEMS
18	COMMUNICATE CONTROL SYSTEMS
19	DOING INDUSTRIAL ROBOTIC PROGRAMMINGAND MAINTENANCE
20	WRITING COMPUTER PROGRAMME
21	Ability to use the methods and techniques of career planning and discussing the effects of character traits on career preferences.
22	Ability to plan a career in their own profession.

Contribution of Learning Outcomes to Programme Outcomes *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

	L1	L2	L3	L4	L5
P7	5	4	3	4	3
P12	5	4	3	4	3
P19	5	4	3	4	3
P20	5	4	3	4	3