

**MAK4482 Industrial Automation Group (2)**  
**SYLLABUS**

**Semester:** Spring (2nd) 2022-2023

**Lecture:** Tuesday, 13.00 – 14:50, Online, Thursday, 19.00 – 20:50, Lab

**Instructor:** Dr. İlkay KURT

**Office:** V-210 Yildiz Campus

**Office hours:** Tuesday, 11:00 – 13:00, Friday, 12:00 – 14:00, or by appointment

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**Textbook:**

- Programmable Logic Controllers, Frank D. Petruzella, 5th Edition, McGraw-Hill Education

**Other Sources:**

- Panasonic Programmable Controller FP Series Programming Manual
- Programmable Controller FPWIN Pro7 Introduction Guidance

**PLC Software:**

- Control FPWIN Pro

**Weekly Subjects**

<b>Week</b>	<b>Subject</b>	<b>Related Preparation</b>
1	Introduction to Industrial Automation and Programmable Logic Controllers (PLC)	Chapter 1
2	PLC Hardware Components	Chapter 2
3	Number Systems and Codes	Chapter 3
4	Fundamentals of Logic	Chapter 4
5	Basics of PLC Programming	Chapter 5
6	Developing Fundamental PLC Wiring Diagrams and Ladder Logic Programs	Chapter 6
7	Developing Fundamental PLC Wiring Diagrams and Ladder Logic Programs	Chapter 6
8	Midterm Exam	-
9	Programming Timers	Chapter 7
10	Programming Counters	Chapter 8
11	Programming Counters	Chapter 8
12	Program Control Instructions	Chapter 9
13	Data Manipulation Instructions	Chapter 10
14	Math Instructions	Chapter 11
15	Final Exam	-

**Evaluation System**

<b>Activities</b>	<b>Percentage of Grade</b>
Laboratory	30
Midterm Exam	30
Final Exam	40
Total	100