

MAK4482 Industrial Automation Group (1 and 2)
SYLLABUS

Semester: Spring (2nd) 2021-2022

Lecture: Wednesday, 09.00 – 10:50, Online (G1), Wednesday, 11.00 – 12:50, Online (G2),

Instructor: Dr. İlkey KURT

Office: V-210 Yildiz Campus

Office hours: Monday, 15:00 – 17:00, Wednesday, 13:00 – 15:00, 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

| Week | Subject | Related Preparation |
|-------------|--|----------------------------|
| 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 | Basics of PLC Programming | Chapter 5 |
| 7 | Developing Fundamental PLC Wiring Diagrams and Ladder Logic Programs | Chapter 6 |
| 8 | 1 st Midterm Exam | - |
| 9 | Programming Timers | Chapter 7 |
| 10 | National Holiday | - |
| 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

| Activities | Percentage of Grade |
|------------------------------|----------------------------|
| Laboratory | 30 |
| 1 st Midterm Exam | 30 |
| Final Exam | 40 |
| Total | 100 |