

Minnesota State College Southeast

ELEC 2219: Programmable Controllers 2

A. COURSE DESCRIPTION

Credits: 1

Lecture Hours/Week: 1

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers the advanced operation and programming of programmable logic controllers, including greater depth of programming, HMI development, and I/O all through laboratory instruction. Communication between the PLC and Human Machine Interface will be extensively covered. The master control, data manipulation and control instructions will also be explored. (Prerequisite or concurrent enrollment in ELEC2218) (1 Credit: 1 lecture credit/0 lab)

B. COURSE EFFECTIVE DATES: 05/09/2017 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Utilize advance control and interface functions
2. Write programs
3. Edit programs
4. Program word instructions

D. LEARNING OUTCOMES (General)

1. Identify various types PLC communication interfaces
2. Apply addresses to I/O
3. Analyze ladder diagrams
4. Identify programming devices
5. Write programs
6. Edit programs
7. Identify master control relay function
8. Utilize Comparison and Flow control instructions
9. Utilize data handling instructions
10. Program shift register function
11. Interpret data manipulation functions
12. Utilize word instructions functions
13. Utilize troubleshooting procedures
14. Identify industry safety and wiring standards
15. HMI development and implementation
16. Exhibit safe work practices

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted