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