

# Dakota County Technical College

## ETSA 2543: Programmable Logic Controls (PLC) Fundamentals

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 1

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course covers the knowledge and skills required to install and maintain programmable logic controllers (PLC) in automated control systems. Students will learn to write programs to solve basic control problems, connect sensors and actuators, and configure PLCs.

**B. COURSE EFFECTIVE DATES:** 09/08/2010 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. connect analog input/output devices to the PLC
2. connect discrete input/output devices to the PLC
3. interpret PLC module specifications
4. monitor and modify PLC hardware configurations and programs
5. read and draw basic ladder logic diagrams and programs
6. read and draw electrical input output wiring diagrams
7. troubleshoot and repair a PLC control system

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted