Spring Term 2023

course no: **ELT 125**   *course title:* **Basic Programmable Controllers**
CRN No: **25071**   *days:* **Monday through Friday, 5-22-23, to 6-2-23**
time: **8:00 am-12:00 pm**   *location:*   **OMIC room 111**

Instructor: **Donald Erickson**   *e-mail:donald.erickson@pcc.edu*

SYLLABUS

COURSE DESCRIPTION:
Develops the student's understanding of the operation of a variety of programmable controllers. The applications, operations, and programming of PLC's are the areas of study with the main emphasis on programming.

COURSE OBJECTIVES:
At the conclusion of the class, the student will be able to utilize most of the basic features, both hardware and software, that are common to most programmable controllers.

PREREQUISITE:
The student should have a basic knowledge of industrial relay control techniques, electrical schematic reading and basic computer literacy. FMT 111 or equivalent; BA 131 or equivalent

TEXTBOOK:
Required Text: *Technician's Guide to Programmable Controllers, 7th Edition* by Terry Borden and Richard Cox

LAB EQUIPMENT:
All provided

GRADING AND MAKE-UP POLICY:
The completion of challenges, 50 available, will account for 75% of your grade. The Final will account for the remaining 25%. Grades will be A, B, C, D, F.

ACADEMIC POLICY / Your Financial Responsibilities: For 10-12 week classes, students have until Saturday, October 2, 2021 of the first week to drop and receive a full refund. Students will be able to withdraw (W) from their classes (for full term classes) after the second week of the term through the Friday of the eighth week of the term. A "W" will be placed on the transcript. Also, there are no refunds for withdrawing. Students who stop attending or have excessive absences and who fail to drop or withdraw from a class by the published deadlines (8th week for full term classes) may earn a grade of F or NP according to the grade option selected by the student (or assigned via default). **Faculty CANNOT WITHDRAW students from a class nor can they award W's. If a student wants to AUDIT the class they have to return a signed registration form (signed by the instructor) to the registration office by the 1st Friday of the term September 30, 2022.**

Title IX/Non-Discrimination statement: Portland Community College is committed to creating and fostering a learning and working environment based on open communication and mutual respect. If you believe you have encountered sexual harassment, sexual misconduct, sexual assault, or discrimination based on race, color, religion, age, national origin, veteran status, sex, sexual orientation, gender identity, or disability please contact the Office of Equity and Inclusion at (971) 722-5840 or equity.inclusion@pcc.edu.

SYLLABUS
CLASS OUTLINE----------------------------Spring Term 2023

Details of assignments will be available on *Desire 2 Learn* (D2L). We will be following the Students Manual for Automation Direct PLCs, by IT3, and apply the challenges to Allen-Bradley PLCs as well. More information will be added as we go.

Monday
22 May
Intro and review of basic motor control and PLC principles, both hardware & software. Wire the Inputs and the Outputs to the PLC. Intro to the Automation Direct software.

Tuesday
23 May
Possible Tour of a Manufacturing plant

Wednesday
24 May
Navigation of Automation Direct software, addressing, enter simple logic and download.

Thursday
25 May
Additional logic Instructions and modify ladder logic

Friday
26 May
Timers Instructions and Counters Instructions

Monday
29 May
Memorial Day   (School is closed)

Tuesday
30 May
Comparison & Math Instructions, plus additional practical applications

Wednesday
31 May
Review previous material, catch-up on Challenges

Thursday
1 June
Final

Friday
2 June
Finish Final

Letter Grades: **A** = 100-93>   **B** = <93-85>   **C** = <85-75>   **D** = <75-68>   **F** = <68

Syllabi is subject to change without notice
DON'T FORGET A PARKING PERMIT (none needed at OMIC)

If you have a disability and need accommodations, please make arrangements to meet with me outside of class. PCC students requesting accommodations must provide documentation of disability and work with The Office of Students With Disabilities (OSD) by calling 971-722-4341.   *www.pcc.edu*