

**MARTIN COMMUNITY COLLEGE**  
**COURSE SYLLABUS**  
**Semester/Year: Spring/2011**

<b>COURSE NUMBER:</b> ELC 128 (30)	<b>INSTRUCTOR:</b> Dennis Turner
<b>COURSE TITLE:</b> Introduction To PLC's	<b>OFFICE NO:</b> Building 1 Room 11
<b>CREDIT HOURS:</b> 3	<b>OFFICE/VIRTUAL HOURS:</b> 9:40 to 10:00 Monday through Thursday
<b>CONTACT HRS/WK:</b> 5 (2 Class 3 Lab)	<b>PHONE NO:</b> 252-789-0277
<b>PREREQUISITES:</b> ELC 117 or ELC 125 or approval of instructor	<b>FAX:</b> 252-792-0826
<b>COREQUISITES:</b> None	<b>E-MAIL:</b> dturner@martincc.edu

**COURSE DESCRIPTION:**

This course introduces the programmable logic controller (PLC) and its associated applications. Topics include ladder logic diagrams, input/output modules, power supplies, surge protection, selection/installation of controllers and interfacing of controllers with equipment. Upon completion, students should be able to install PLCs and create simple programs.

**PROGRAM LEARNING OUTCOMES:**

1. Use electrical test equipment including voltmeters, ohm meters, and amp meters to measure voltage, trouble-shoot, analyze and repair electrical apparatus found in residences such as receptacles, light switches, circuit breakers, special purpose outlets.
2. Install and maintain equipment which consists of conduit, service and lighting panels found in commercial related businesses such as schools, malls, stores, theaters, restaurants, and churches.
3. Select, install, and maintain equipment found in industrial settings such as motors, motor starters, transformers, and PLCs. Interpret, write and modify ladder logic diagrams used by control equipment and PLCs in industrial manufacturing processes.

**COURSE LEARNING OUTCOMES:** The student will be given a written scenario with a task to complete which incorporates input, output cards, discrete devices, timers, and motor functions.

1. Using RS Logix 500 software, the student will create a ladder diagram using the input, output, and discrete devices properly addressed to meet the demands of the task.
2. After creating the ladder diagram, the student will then download and run the written project.

**REQUIRED TEXTBOOKS:**

Cox, R. A., (2005). A technicians guide to programmable controllers, (5th ed.). Albany, N. Y. : Delmar.  
ISBN #: 9780766814271

**SUPPLEMENTAL RESOURCES:** Tools, books, pens and scratch paper.

**GRADING POLICY:**

1. Grading Scale: A (90 to 100)  
B (80 to 89)  
C (70 to 79)

D (60 to 69)

F (below 60)

**COURSE OUTLINE:** This is a test out exam and will be administered on January 11, 2011 from 1:00 pm to 3:00 pm with a 2 hour time limit.

**COURSE POLICIES:** Classroom conduct and safety policy:

1. No horseplay
2. Safety glasses will be worn at all times while in project installation area.
3. Safety glasses or approved goggles will be worn at all times when using any power tools such as drills, grinders, porta-band saws, threaders, etc.
4. Safety glasses or approved goggles will be used when using a hammer, chisel or any other device which may cause injury by catapulting flying debris.
5. Always use a ladder when climbing (never use a chair or a stool for higher reach purposes).
6. No sleeping or laying head down on desk. If you are too tired to stay awake in class you will have to leave the classroom and receive an absence for that period.
7. Do not sit on or put your feet desk tops.
8. Students are to remain silent while the instructor is talking or another student is answering a question for the instructor.
9. No tobacco products of any kind will be consumed in the classroom.
10. Do not throw any object or objects in the classroom or while on campus.
11. Keep your work area clean and put objects back in the store room when finished.
12. You are expected to bring your tools, books, paper and calculator to class each day.
13. Cell phones and any sound reproducing devices must be off while in the classroom.
14. Students will not make threatening or intimidating comments or gestures to other students and if threatened by another student notify the instructor and the student making the threat will be dealt with according to MCC student conduct rules.
15. Visitors: The only time a person not registered for the class can be in the classroom is during break time or between classes.
16. **Missed Tests: They must be completed before the last day of class, be it blocked or regular. If a missed test is not completed before the last day of class, a grade of 0 will be entered for that test.**

**If you cannot reach your instructor, you may contact Dr. Phyllis Broughton, Dean of Academic Affairs and Student Services at (252)789-0246 or (252) 789-0247 by phone, [pbroughton@martincc.edu](mailto:pbroughton@martincc.edu) by e-mail, or in person at her office in Building 2, Room 33.**

**To access the Martin Community College Career Catalog for policies and curriculum requirements, please go online to [www.martincc.edu](http://www.martincc.edu)**

***If you have a need for a disability-related accommodation, please notify the Student Services counselor at (252) 789-0293.***