Piedmont Technical College Course Syllabus

COURSE INFORMATION

Course Prefix/Number: EET 235

Title: Programmable Controllers

Responsible Division: Engineering and Industrial Technology

Last Day to Withdraw from this Course: For the last date to withdraw from this course, consult the current *Student Calendar*.

Course Description:

For course, credit hour, pre-requisite(s) and co-requisite(s) information, visit the Detailed Course Information page: <u>www.ptc.edu/courses/eet235</u>.

Textbook and Other Materials:

For textbook information and additional required and/or supplemental materials, visit the <u>college bookstore</u> (www.ptc.edu/bookstore).

Proctored Examinations:

Proctored examinations for distance learning courses taken at non-PTC campuses may require a proctoring fee for each exam taken.

COURSE POLICIES

Course policies are available online through the *Academic Catalog* and *Student Handbook*. Visit the <u>Course Policies page</u> (www.ptc.edu/syllabus/policies) for a detailed list of important policies and more information.

GRADE POLICY

Detailed grading policy information can be found on the <u>Grading Policy</u> <u>webpage</u> (http://www.ptc.edu/grading-policy). Final grade appeal information is available in the <u>Academic Catalog</u> (http://www.ptc.edu/catalog/).

ACCOMMODATIONS

Accommodations for ADA:

Information is available on the <u>Student Disability Services webpage</u> (http://www.ptc.edu/ada).

RATIONALE

Why do I need this course?

For industry to keep pace in world markets, they must keep tighter control on their machine processes. Closer tolerances mean a better and higher quality product, which is accomplished through instrumentation. This course provides the fundamental concepts of six major categories of instrumentation: pressure, temperature, flow, level, analytical, and control modes. These will be studied with low voltage control using PLC's.

PROGRAM INFORMATION

For program information including required courses, program learning outcomes, gainful employment information and advisement information, refer to the Academic Program webpage. Go to <u>Academics</u> (http://www.ptc.edu/academics), select your program, and then select Credentials Offered.

COURSE STUDENT LEARNING OUTCOMES

Upon successful completion of this course and/or clinical, each student will be able to:

- Analyze the main components of programmable controller (PLC) systems and describe their functions.
- Examine the flow of information through a programmable controller system and program in PLC.
- Utilize and assess the TIAv11, RSLogix 5000 or RSLogix 500 software.
- Transfer, monitor, and arrange projects utilizing a Siemens PLC-1200 and Micrologix 500 processor.
- Test and interpret simple ladder logic as it relates to PLC programming.

GENERAL EDUCATION COMPETENCIES

Piedmont Technical College General Education Competencies for All Graduates:

This course may address one or more of the following General Education Competencies (assessment will be stated when applicable):

Communicate effectively.

Assessment:

Laboratory assignments

Apply mathematical skills appropriate to an occupation.

Assessment:

Laboratory and Module Tests

Employ effective processes for resolving problems and making decisions.

Assessment:

Homework and Laboratory assignments

Demonstrate the basic computer skills necessary to function in a technological world.

Assessment:

PLC software programming packages

To validate proficiency in the general education competencies, students in some programs will be tested using Work Keys.