

Hagerstown Community College
OFFICIAL MASTER SYLLABUS DOCUMENT

COURSE: Introduction to PLCs INT 102

Credits 3

INSTRUCTOR:

SEMESTER: Fall 2017

COURSE DESCRIPTION:

This is a beginning, hands-on, course in programmable logic controllers (PLCs). The course teaches students the hardware configurations of a typical PLC application, as well introduces students to Rockwell Automation RSLogix and Siemens S7 Programming Software. Topics include discrete ladder logic relay-type instructions, timers, counters, sequencers, sub-routines, move instructions, and math functions. It is excellent for development of multi-skilled technicians as well as electricians and engineers who wish to update their skills. Course fee required. Total of 45 hours of lecture3 Credits

TEXTBOOK:

Programmable Logic Controllers, 5th Edition, ISBN-13 9780073373843

STUDENT LEARNING OUTCOMES:

- Students will be able to explain the basic concepts and components of a Programmable Logic Controller.
- Students will understand basic PLC terminology and their meanings.
- Students will learn the concepts of electrical ladder logic and its relationship to programmed PLC instruction.
- Students will understand timers, counter, and other intermediate programming concepts and functions.
- Students will demonstrate a basic programming knowledge for entry-level PLC applications.
- Students will be able to explain the basic concepts of Industrial Automation.

CREDIT HOUR EXPLANATION

Total Hours of Coursework:

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit.

For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

Assignment/Assessment	Clock Hours
In-class Instruction	45
Textbook Chapter Readings	15 hours
Study of Manuals for Hands-on Activities	15 hours
Chapter Review Questions and Answers	15 hours
Research Assignments	15 hours
Exam Preparation	20 hours
	Total hours=125 hours

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Services for Students with Disabilities: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.