Hagerstown Community College Master Syllabus
Course INT 102: Introduction to PLCs

Course Information
INT 102: Introduction to PLCs
3 Credits
Fall 2019

Instructor Information

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 lecture

Textbook and Course Materials

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.
Definition of Credit Hour: Classroom Courses

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 in 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 complete at least 2 hours of coursework outside of class for each hour of in-class coursework.

<table>
<thead>
<tr>
<th>Classwork type</th>
<th>Clock Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>45</td>
</tr>
<tr>
<td>Textbook Chapter Readings</td>
<td>15</td>
</tr>
<tr>
<td>Homework Assignments</td>
<td>20</td>
</tr>
<tr>
<td>Other Instructor Material</td>
<td>15</td>
</tr>
<tr>
<td>Programming Exercises</td>
<td>15</td>
</tr>
<tr>
<td>Exams and prep</td>
<td>15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>125 hours</strong></td>
</tr>
</tbody>
</table>

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.