Course Information
Course #: ELE 140 Introduction to Robotics
3 Credits
Semester Year Spring 2019

Instructor Information

Course Description
This course will provide instruction in the basic principle and application of robotic and motion control systems. With a focus on industrial robotic applications, this course will include: basic robotic principles, power supplies, motion control, sensors, grippers, control systems and maintenance. Prerequisites: INT-110 and INT-102. Lab Fee: $100

Textbook and Course Materials

Student Learning Outcomes
- Classify and define different robot styles
- Successfully program an ABB robot
- Describe degrees of freedom and identify how many a robot may have
- Identify Pneumatic and Hydraulic components
- Define End Effector and identify the different types
- Troubleshooting malfunctioning code

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>In-class Instruction</th>
<th>45</th>
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<tbody>
<tr>
<td>Textbook Chapter Readings</td>
<td>15 hours</td>
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<tr>
<td>Study of Manuals for Hands-on Activities</td>
<td>15 hours</td>
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<tr>
<td>Chapter Review Questions and Answers</td>
<td>15 hours</td>
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<td>Research Assignments</td>
<td>15 hours</td>
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<tr>
<td>Exam Preparation</td>
<td>20 hours</td>
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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.