

Hagerstown Community College Master Syllabus

ELE 205: Repair and Maintenance for Instrumentation

Course Information

Course #: ELE 205 Repair and Maintenance for Instrumentation

2 Credits

Fall 2018

Instructor Information

Instructor: Juan C Luna

Course Description

Students will learn how to troubleshoot and repair typical instrumentation components using logical thinking, diagrams, and sequential techniques. Students will learn to recognize typical alarm conditions and take the appropriate corrective action. Students will recognize self-diagnostic errors and resolve the issue, which caused the error. Proper use of measurement and testing equipment will be emphasized along with safe trade practices. Total of 30 hours of lecture.

Textbook and Course Materials

Introduction to Process Technology. Charles E. Thomas. 4th Edition. Cengage. ISBN: 9781305251472.

Industrial Electrical Troubleshooting. Lynn Lundquist. 1st Edition. Cengage. ISBN: 9780766806030.

Process Technology Troubleshooting. Charles E. Thomas. 1st Edition. Cengage. ISBN: 9781428311008 (optional).

Student Learning Outcomes

- Understand principles of quality control.
- Describe Process Equipment and Instrumentation.
- Explain every process troubleshooting method.
- Predict and avoid the problems with installing measurement equipment.
- Specify instrument and loop documentation and standards to vendors
- Design and install safe working systems in hazardous areas
- Apply ISO 9000 to maintenance practices

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.

Classwork type	Direct Faculty Instruction In-class 37.5 hours required	Student Work Out of Classroom 75 hours required
In-class lecture and discussion	45 hours	
Reading		48 hours
Quiz/exam studying		12 hours
Reading question completion		8 hours
Paper writing		18 hours
Total	45 hours	86 hours

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.