

Hagerstown Community College
OFFICIAL MASTER SYLLABUS DOCUMENT

COURSE: INT-110-N01: Fundamentals of Electricity

4 CREDITS

INSTRUCTOR:

SEMESTER/YEAR: Spring 2016

COURSE DESCRIPTION:

This is a basic electricity course that includes both DC and AC circuits. The course has been designed for those students who need an understanding of electrical principles and applications but do not need the theoretical or mathematical depth required for electronic circuit design. Lab exercises deal with many of the practical applications of electricity along with learning to use test equipment for the purpose of circuit diagnosis and troubleshooting. Total of 60 hours of lecture. Course fee required. *Prerequisite: MAT 099 4 Credits

Additional time outside of class is necessary to complete projects and reading assignments.

TEXTBOOK:

Delmar's Standard Textbook of Electricity, 6th Edition; Stephen L. Herman, 2011 Delmar-Cengage Learning. ISBN 9781285852706

MATERIALS NEEDED:

Scientific calculator.

STUDENT LEARNING OUTCOMES:

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.

After successfully completing this course, students will:

- Identify hazards of electrical circuits and be able to work safely.
- Explain the concepts of current flow, AC/DC circuits and Ohms law.
- Recognize standard schematic symbols for common electrical and electronic components.
- Trouble-shoot basic electrical circuits using schematic diagrams.
- Explain the operation and application of common components such as AC and DC motors, relays, switches, power supplies, overload devices and lighting.
- Recognize and competently use common test equipment to evaluate electronic circuits.
- Perform basic industrial wiring and trouble-shooting.

CREDIT HOUR EXPLANATION

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Assignment/Assessment Clock Hours

In-class Instruction	45
Textbook Chapter Readings	15 hours
Study of Manuals for Hands-on	15 hours
Chapter Review Questions and	15 hours
Research Assignments	15 hours
Exam Preparation	20 hours
	Total hours=125 hours