Western Nevada College

Course Outline
ELM 110 Basic Electricity
Development/Revision Date: 11/3/2022 by Deb Conrad

Number of Credits: 0.5 - 4
Transferability of Course within Nevada: May not transfer towards an NSHE bachelor's degree.
Prerequisites: Must be admitted to an approved apprenticeship program.

Course Description
This course covers basic AC/DC circuit principles and practices. Students will explore areas of electrical and electronic circuits including: circuit theory, components, circuit construction and analysis, proper test equipment usage, troubleshooting methodology, and applications in various technical fields.

Objectives
Upon completion of this course, students will understand the basics of electrical safety, basic electrical schematics, basic theories of AC/DC electricity, the basic uses of Digital Multimeters, Ohm's Law, Series circuits, parallel circuits, Series/Parallel circuits, and the theory of Alternating Current.

Linkage to WNC's Institutional Learning Outcomes
The course objectives relate to Student Learning Outcome 7, Career Preparation: Identify, describe, and apply information in the discipline or career area of their choice sufficient for further study and/ or demonstrate competencies required to succeed in the workplace.

Student Learning Outcomes
Students who complete this class should:

1. Understand electrical theory and practice electrical safety
2. Understand and interpret symbols, schematics and diagrams
3. Understand the Laws of Electricity
4. Be able to demonstrate proper installation of Series and Parallel Circuits
5. Understand Circuit Protection, Control Switches and Relays
6. Be able to demonstrate proper installation of Combination Circuits
7. Understand Alternating Current Theory
8. Be able to demonstrate the ability to troubleshoot Electrical Systems

Instructional Methods and Modes
Methods of instruction for this course may include student reading assignments, face-to-face lecture of material, hands-on lab training, and on-the-job training.

Assessment Methods
Assessment methods will include classroom discussion, assignments, and tests which will challenge the student's understanding of the content and prepare the student to complete the hands-on labs confidently and safely, competency completion through hands-on practice and troubleshooting during lab sessions and on-the-job training, and passing the final exam.

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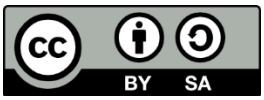

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