HIBBING COMMUNITY COLLEGE COURSE OUTLINE

COURSE TITLE & NUMBER: Residential Wiring and Code 1: ELM 1301
CREDITS: 5 (2 Lec / 3 Lab)
PREREQUISITES: None

CATALOG DESCRIPTION:
Residential Wiring and Code 1 covers some of the skills and knowledge necessary to apply practical residential wiring procedures as they relate to the National Electrical Code (NEC).

OUTLINE OF MAJOR CONTENT AREAS:
1. Safety Procedures in the Work Place
2. History of the NEC
3. Scope of the NEC
4. Wiring Methods and Materials
   A. Wire sizing and conductors
   B. Branch circuits and calculations
   C. Box sizing & location, calculations, and metric conversion
   D. Switching methods and related NEC
5. Grounding Methods Found in Residential Wiring
6. Wiring Protection
   A. Fuses and circuit breakers
   B. Ground faulting
   C. Other types of protectors
7. Equipment in General use for Wiring
8. Basic Lighting Circuitry
9. Electrical Symbols
10. Tools as Needed for Basic Residential Wiring

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will demonstrate proper safety habits.
2. Students will read drawings.
3. Students will state purpose of NEC.
4. Students will state the history of the NEC.
5. Students will define code chapters.
6. Students will identify symbols.
7. Students will make pigtail splices.
8. Students will show proper use of hand tools.
9. Students will identify electrical tools.
10. Students will show proper use of electrical tools.

HCC COMPETENCIES MET:
Students will work productively, cooperatively; communicate clearly and effectively.
STUDENT CONTRIBUTIONS:
The student is expected to devote the time necessary to become adept at analyzing the material and their application to troubleshooting and maintenance procedures.

STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

ADDITIONAL INFORMATION:
ELM 1301 requires students to maintain a minimum of 95% attendance. Attendance below 95%, may be made up by completing 1-3 credits make-up classes. The 1-3 credits make up class will equal 3 days of attendance. This course must be preapproved by the ELM 1301 instructor. Three days that are less than full days (tardy or leave early) will equal one full day absence. Course attendance below 95% will result in retaking this course. National Electrical Code, NFPA (Current Edition)

AASC APPROVAL DATE: November 15, 2017
REVIEW DATE: November 2022