COURSE TITLE & NUMBER: Residential Wiring and Code 2: ELM 1302
CREDITS: 6 (2 Lec / 4 Lab)

CATALOG DESCRIPTION:
Residential wiring and Code 2 covers the skills and knowledge necessary to apply practical residential wiring procedures as they relate to the National Electrical Code.

OUTLINE OF MAJOR CONTENT AREAS:
1. Safety Procedures Found in the Residential Workplace
2. Special Purpose Outlets and Equipment
3. Wiring Methods and Materials
4. Heating and Cooling Systems
5. Residential Services and Related NEC
6. Calculations
7. Symbols used in Residential Floor Plans
8. Tools used in Residential Wiring
9. Residential Automation Systems

COURSE GOALS/OBJECTIVES/OUTCOMES:
1. Students will list safety procedures.
2. Students will apply NEC Chapter 9 & appendices.
3. Students will calculate service sizes.
4. Students will calculate conductor sizes.
5. Students will calculate overcurrent protection devices.
6. Students will identify NEMA standard receptacles and plugs.
7. Students will troubleshoot lighting and receptacle circuits.
8. Students will discuss Minnesota rules for electrical work.
9. Students will apply National Electrical Code to lab applications.

HCC COMPETENCIES MET:
Students will work productively, cooperatively; think creatively and critically.

STUDENT CONTRIBUTIONS:
The student is expected to devote the time necessary to become adept at analyzing the material and their application to troubleshooting, construction, and maintenance procedures.
STUDENT ASSESSMENT SHALL TAKE PLACE USING INSTRUMENTS SELECTED/DEVELOPED BY THE COURSE INSTRUCTOR.

SPECIAL INFORMATION: ELM 1302 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 pre-approved by the ELM 1302 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