Faculty is required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT: ELCO        COURSE NUMBER:  1110

NUMBER OF CREDITS:  3  2 Credits of Lecture and 1 Credit of Lab

COURSE TITLE:  AC/DC I

CATALOG DESCRIPTION:  Provides students with theoretical and practical experiences in electric circuits DC using scientific method, analysis and deduction. Topics covered will be safety, resistor color code, meter use, Ohm’s Law, series and parallel circuits, complex circuits, electromagnetic principles, sine wave principles and relationships.

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE:  Math 0092 or placement by exam

LENGTH OF COURSE: 1 Semester

THIS COURSE IS USUALLY OFFERED:
Every other year □  fall X  spring □  summer □  undetermined □

TOPICS TO BE COVERED: Safety, introduction to electricity, training and equipment familiarization, metric notation, voltage and currents, resistors and color coding, switches fuses and circuit breakers, multimeter measurements, magnetism, relays and meters, basic AC/DC circuits, Ohm’s law and power, series, parallel, combination circuits.

LIST OF EXPECTED COURSE OUTCOMES: Students should be able to understand how to use meters, use electrical terms, and how to respect electricity, know the difference between an insulator and a conductor and how each one works, and apply safe tactics to the job with electricity, work on series, parallel, combination circuit troubleshooting, and work on complex circuits.

LEARNING/TEACHING TECHNIQUES used in the course are:

☐ Collaborative Learning  ☑ Problem Solving
☐ Student Presentations  ☑ Interactive Lectures
☐ Creative Projects  ☑ Individual Coaching
☑ Lecture  ☐ Films/Videos/Slides
ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- X Reading
- X Tests
- X Individual Projects
- X Oral Presentations
- X Worksheets
- X Collaborative Projects
- X Textbook Problems
- X Papers
- X Portfolio
- X Group Problems
- Term Paper
- X Other (describe below)

EXPECTED STUDENT LEARNING OUTCOMES:

1) Students will be expected to complete discussions, worksheets, quizzes, and tests over the assigned material.
2) Students will be expected to turn in all assignments on time. Each time an assignment is not turned in, a total of 10% will be taken off per week until the assignment is handed in.
3) Students will be expected to complete all in-class work SAFELY.

The information in this course outline is subject to revision.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

This document is available in alternative formats to individuals with disabilities by contacting the Student Services Advisor or by calling 800-658-2330 or Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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