

# Dakota County Technical College

## ETSA 1511: Fundamentals of AC/DC Electricity I

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This is a foundational course in direct current electricity. This course is designed for students who have no previous experience with electricity. The primary goals of this course are to help individuals acquire a solid foundation in the theories and laws of direct current (DC) electricity, and to apply their knowledge and skills through problem solving, simulation and practical projects.

**B. COURSE EFFECTIVE DATES:** 09/08/2010 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. analyze series and parallel DC circuits using OHM's law
2. calculate power consumption and losses in basic electrical systems
3. draw and read basic electrical schematic diagrams
4. identify and apply appropriate safety procedures
5. measure DC voltage, current, and resistance
6. select the appropriate size of wire for specific applications
7. test DC power sources

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted