

# Dakota County Technical College

## ETSA 1507: Digital Electronics

### 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 first course in Digital Electronics. The primary goals of this course are to help individuals acquire a fundamental knowledge of digital electronics. Boolean algebra, digital devices, analog to digital conversion and digital to analog conversion, and how 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. convert between binary, octal, hexadecimal, and decimal number systems
2. design and build basic digital logic decision and interface circuits
3. design and build basic digital to analog and analog to digital circuits
4. design and build basic timing, counter circuits
5. draw and read digital logic and schematic diagrams
6. read and interpret truth tables
7. use a programmable logic device to implement a Boolean logic statement
8. write Boolean logic statements

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted