

# Dakota County Technical College

## ETSA 2546: Powerplant Technology

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 2

Lab Hours/Week: 2

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course teaches basic powerplant technology, powerplant engineering, and energy conversion offered in departments of mechanical engineering and nuclear engineering. Its main focus is on fossil and nuclear power plants.

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

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. basic understanding of alternative power generation
2. basic understanding of thermal fission reactors
3. develop an understanding of thermodynamics
4. introduction to nuclear power generation
5. principles of powerplant operation
6. troubleshoot, repair, and analyze powerplant equipment
7. understanding of condensate-feederwater systems and circulating-water systems
8. understanding of the environmental aspects of powerplant generation

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted