

# Dakota County Technical College

## ETSA 2547: Mechanical Fundamentals for Process Control

### A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 2

Lab Hours/Week: 1

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is a comprehensive introduction to the workings of a modern manufacturing facility in the process industry. Key topics include valves, vessels, motors and turbines, heat exchangers, cooling towers, reactors and distillation, extraction and separation systems, and process instrumentation.

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

### C. OUTLINE OF MAJOR CONTENT AREAS

### D. LEARNING OUTCOMES (General)

1. describe the internal workings and characteristics of process equipment
2. explain the significance of major process equipment and their interaction within process systems
3. identify motors, pumps, valves, heat exchangers, cooling towers, centrifuges, compressors, thermal oxidizers, scrubbers, distillation towers, evaporators, and molecular sieves

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted