

# Dakota County Technical College

## MATS 1320: College Trigonometry

### A. COURSE DESCRIPTION

Credits: 2

Lecture Hours/Week: 2

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites:

This course requires the following prerequisite

MATS 1300 - College Algebra

Corequisites: MATS 1300

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

A college-level foundation in trigonometry: unit circle, trigonometric functions and their graphs, equations of waves, laws of sines and cosines, trigonometric identities, inverse trig functions, trigonometric equations, polar coordinates, polar equations, De Moivre's theorem, and vectors.

MnTC Goals: Goal 04 - Mathematical/Logical Reasoning

**B. COURSE EFFECTIVE DATES:** 08/21/2006 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Trigonometric functions of angles
2. Trigonometric functions of real numbers
3. Analytic trigonometry
4. Polar coordinates

### D. LEARNING OUTCOMES (General)

1. Solve triangles
2. Adjust calculator results when necessary (e.g. calculator says  $40^\circ$  but really it's  $180^\circ-40^\circ$ ).
3. Count in radians
4. Manipulate complex mathematical expressions
5. Resolve vector systems

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

Goal 04 - Mathematical/Logical Reasoning

1. Clearly express mathematical/logical ideas in writing.
2. Explain what constitutes a valid mathematical/logical argument(proof).
3. Apply higher-order problem-solving and/or modeling strategies.

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted