

# Dakota County Technical College

## MATS 1500: Beginning Calculus with Trig

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course is designed for students who wish to explore the foundations of calculus in a more mathematically rigorous way than in MATS1480. The course begins with college trigonometry topics, including the six trigonometric functions and their inverses, the law of sines/law of cosines, radian measure and the unit circle, trigonometric identities and solving trigonometric equations. Fundamental concepts of calculus are then developed, including limits and continuity, differentiation of polynomial, trigonometric, exponential, and logarithmic functions with applications, and integration by numerical and exact methods with applications. Mathematical modeling with differential equations is also introduced.

**B. COURSE EFFECTIVE DATES:** 08/22/2005 - 12/16/2016

### C. OUTLINE OF MAJOR CONTENT AREAS

None

### D. LEARNING OUTCOMES (General)

None

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

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted