

Minnesota State College Southeast

MATH 2445: Calculus II

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 4

Lab Hours/Week: *.*

OJT Hours/Week: *.*

Prerequisites:

This course requires the following prerequisite
MATH 2440 - Calculus I

Corequisites: None

MnTC Goals: None

Differential and integral calculus of functions of a single variable. (Prerequisite: MATH 2440 Calculus I)
(4 credits: 4 lecture/0 lab)

B. COURSE EFFECTIVE DATES: 05/17/2017 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Techniques of Integration
2. Applications of Integration
3. Further Applications of Integration
4. Differential Equations (optional)
5. Parametric Equations and Polar Coordinates
6. Infinite Sequences and Series

D. LEARNING OUTCOMES (General)

1. Apply a variety of integration techniques, including u-substitution, integration by parts, trigonometric substitution, and partial fractions
2. Use definite integrals to solve problems such as finding area, work, volume, arc length, fluid forces, and center of mass
3. Determine convergence or divergence of an improper integral
4. Approximate a definite integral using Simpson's Rule and/or the Trapezoid Rule

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted