

Minnesota State University Moorhead

MATH 262: Calculus II

A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: 3

Lab Hours/Week: 2

OJT Hours/Week: *.*

Prerequisites: MATH 261

Corequisites: None

MnTC Goals: None

Calculus of one variable-transcendental functions, applications of integrals, techniques of integration, infinite series.

B. COURSE EFFECTIVE DATES: 11/12/1996 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Finding areas, volumes, and arc lengths.
2. Work and center of mass.
3. Formal definition of logarithms, exponential functions, inverse trigonometric functions, their derivatives and uses as antiderivatives, and applications of all of these in the calculus.
4. Integrations techniques.
5. Sequences and series, and determinations of convergence.
6. Taylor/Maclaurin series, power series representations of functions, proofs of convergence.

D. LEARNING OUTCOMES (General)

1. Use a variety of integral calculus techniques to solve real-world problems.
2. Prove when an infinite sequence or series converges or diverges.
3. Be able to find a series representation of a function and determine its interval of convergence.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted