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: This course requires the following prerequisite MATH 261 - Calculus I

Corequisites: None

MnTC Goals: None

Calculus of one variable-transcendental functions, applications of integrals, techniques of integration, infinate 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