Bemidji State University

MATH 3310: Linear Algebra

A. COURSE DESCRIPTION

Credits: 4
Lecture Hours/Week: 0
Lab Hours/Week: 0
OJT Hours/Week: *.*
Prerequisites: None
Corequisites: None
MnTC Goals: None

Systems of linear equations, linear transformations, matrix operations, vector spaces, eigenvalues and eigenvectors, orthogonality, and applications. Prerequisites: MATH 2210 and MATH 2472 or consent of instructor.

B. COURSE EFFECTIVE DATES: 08/22/1997 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Systems of linear equations; linear transformations
2. Matrices: Operations on and determinants of matrices
3. Vector Spaces and the Fundamental Theorem of Linear Algebra
4. Eigenvalues and eigenvectors and matrix diagonalization
5. Applications

D. LEARNING OUTCOMES (General)

1. appreciate the wide-ranging utility of matrices and of vector spaces.
2. identify situations where matrix techniques apply; discern vector space structures.
3. perform mathematical operations involving matrices; use of technology with matrices.
4. continue to develop skills both in analytical thinking and in the writing of proofs.
5. effectively communicate mathematical ideas and understanding.

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

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted