



Course Number Course Name	Math 4464 Applied Matrix Theory
Credit Value (Breakdown of theory and lab credits)	3 Theory
Catalog Course Description	The course will cover the theory of linear equations, matrix analysis of systems of linear differential equations, eigenvalues and eigenvectors, iterative methods for solving linear systems, variational principles, and generalized inverses. Prerequisite: MATH 3314. (3, 3T+0S)
Student Learning Outcomes/Objectives /Competencies of the Course	<p>Student Learning Outcomes: At the end of this course the student will be learn:</p> <ol style="list-style-type: none"> 1. Direct methods of solving linear equations 2. Iterative methods of solving linear equations 3. Condition number of matrices 4. Eigenvalues and eigenvectors and how to compute them numerically 5. Solutions of systems of coupled ordinary differential equations 6. Singular value decomposition 7. Variational principles 8. Generalized inverses
College-Wide Student Learning Outcomes	<p>Math 4464 learning objectives align with the following NNMC College Wide Goal:</p> <p><i>Critical thought: Students are required to analyze and synthesize information and draw reasoned conclusions.</i></p>