

**MATH 463/563**  
**Linear Algebra (3 units)**

**Course Outline**

Topics	# of Weeks
<b>Chapter 5:</b> (Sections 1, 2 and 4) Diagonalization: Eigenvalues and Eigenvectors Diagonalizability Invariant Subspaces and Cayley-Hamilton Theorem	3.0
<b>Chapter 6:</b> (Sections 1, 2, 3, 4, 5, 6 and 7) Inner Product Spaces: Inner Products The Gram-Schmidt Orthogonalization Process and Orthogonal Components The Adjoint of a Linear Operator Normal, Self-Adjoint, Unitary and Orthogonal Operators Orthogonal Projections and the Spectral Theorem	7.0
<b>Chapter 7:</b> (Sections 1, 2 and 3) Canonical Forms: Jordan Canonical Form The Minimal Polynomial	3.0
<b>Exams</b>	1.0

Textbook: Linear Algebra, 4<sup>th</sup> Edition, by S. Friedberg, A. Insel and L. Spense,  
Brooks/Cole Publishers

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