Math 244 Contents

Matrices	Inner Product Spaces
	- Definition of Inner Product
- Matrices and Matrix Operations	
- Elementary Row Operations	- Orthogonality
- Inverse of Matrix	- Orthonormal Basis
- Special Matrices	
Determinants	Linear Transformations
- Definition of Determinant	- Basic Properties
- Properties of Determinants	- Kernel and Image of Linear
- The Adjoint Matrix	Transformation
	- Matrix of Linear Transformation
Systems of Linear Equations	Eigenvalues and Eigenvectors &
- Gauss and Gauss–Jordan Methods	Diagonalization
- Homogeneous systems of linear	5
equations	-Eigenvalues and Eigenvectors
- Cramer's Rule	-Diagonalization
Vector Spaces	5
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- Definition of a Vector Space	
- Subspaces	
- Linear Combination and Spanning	
Sets	
- Linear Dependence & Linear	
Independence	
- Basis and Dimension	
- Coordinates and Change of Basis	
- Rank of the Matrix	

Textbook: Elementary Linear Algebra (Anton and Rorres), 11th edition **Evaluation**: 1st Midterm: 25% - 2nd Midterm : 25% - Exercise: 10% - Final Exam:40% First Midterm : TBA Second Midterm : TBA

Calculators are Not Allowed in Exams