Linear Algebra	Systems of Linear Equations	Row Reduction and Echelon Forms, Vector equations, The Matrix equation Ax = b, Solution Sets of Linear Systems, Applications of Linear Systems, Linear Independence, Linear Transformations	**Quiz-1 (Tentative)**	**Mid Term (Tentative)**
	Matrix Algebra	Matrix Operations, The Inverse of a Matrix, Characterizations of Invertible Matrices, Applications to Computer Graphics, Determinants	**Quiz-2 (Tentative)**	
	Vector Spaces	Vector Spaces and Subspaces, Null, Column, and Row Spaces, Basis D. Coordinate Transformations, Dimension; Rank of a Matrix		
	Eigenvalues and Eigenvectors	Eigenvalues and Eigenvectors, The Characteristic Equation, Diagonalization, Applications	**Quiz-3 (Tentative)**	
	Orthogonality	Inner Product, Length, and Orthogonality, Orthogonal Sets, Orthogonal Projections, The Gram-Schmidt Process, Least-Squares Approximations		**Final**
Fourier Analysis	Boundary Value Problems	Methods of Solving Boundary Value Problems, Application to Boundary Value Problems		
	Fourier Series and Application	Periodic Functions, Half Range Fourier Sine and Cosine Series, Convergence, Parseval's Identity, Uniform Convergence, Integration and Differentiation of Fourier Series, Complex Notation for Fourier Series, Double Fourier Series, Applications of Fourier Series	**Quiz-4 (Tentative)**	
	Orthogonal Functions	Definitions, Orthogonality with respect to a Function		
	Fourier Integrals and Applications	Fourier Transformations, Fourier Sine, and Cosine Transformations		

Marks Distribution:

Attendance	5
Assignments	20
Quiz	20
Midterm	25
Final	30