

INTRODUCTION

This course deals with some of the standard numerical methods and analysis concerning matrices. These correspond mainly to two aspects namely, techniques to solve linear systems of equations and to find the eigenvalues of a square matrix.

Linear systems of equations are considered in Units 1 and 2. Some of the standard “Direct Methods” used for solving linear systems of equations is given in Unit 1, while Unit 2 contains the “iterative techniques” used for solving linear systems of equations.

Eigenvalue computations are treated in Units 3 and 4. Unit 3 gives a brief introduction to the notions of eigenvalues and eigenvectors of a matrix and their standard properties while the computational methods for eigenvalues are given in Unit 4.