

Matrix Methods of Analysis of Structures

Module 1: Introduction, equilibrium, static and kinematic indeterminacy, kinematics, virtual work, concepts of stiffness and flexibility, analysis by displacement and force methods.

Module 2: Application of flexibility method to beams and plane trusses.

Module 3: Application of stiffness method to beams, plane frames and plane trusses.

Module 4: Application of stiffness method to space truss, space frames and grids, basic concepts associated with computer implementation of stiffness method.

Books:

- (1) H.C.Martin," Introduction to Matrix Methods of Structural Analysis.
- (2) M.B.Kanchi, "Matrix Methods of Structural Analysis", New Age International Publishers, New Delhi Kardestuncer ,
- (3) "Elementary Matrix Analysis of Structures" Gere & Weaver,"Matrix Structural Analysis'