5th Semester	RCI5D001	Structural Analysis-II	L-T-P 3-0-0	3 Credits

Module – I **(10 Classes)**

Analysis of continuous beams and plane frames by slope deflection method and moment distribution method.

Module – II **(6 Classes)**

Aanalysis of continuous beam and simple portals by Kani's method.

Module – III **(8 Classes)**

Analysis of two hinged and fixed arches for dead and live loads, Suspension cables with two hinged stiffening girders.

Module – IV **(8 Classes)**

Matrix methods of analysis: flexibility and stiffness methods; Application to simple trusses and beams.

Module – V **(8 Classes)**

Plastic Analysis: Plastic modulus, shear factor, plastic moment of resistance, Load factor, Plastic analysis of continuous beam and simple rectangular portals, Application of upper bound and lower bound theorems.

Books:

1. Structural analysis by C.S. Reddy Mc Graw Hill
2. Structural Analysis by T.S. Thandamoorthy, Oxford University Press
3. Structural analysis a matrix approach by Pandit & Gupta, Mc Graw Hill.
4. Limit Analysis of Structures: Monikaselvam, Dhanpat Ray Publication
5.Indeterminate Structures: J.S.Kinney
6. Indeterminate Structural Analysis: C.K.Wang ,Mc Graw Hill
7. Structural Analysis by D.S.Prakash Rao, Universities Press
8. Matrix Analysis of Structures by P.K.Singh, Cengage Learning

Digital Learning Resources:

Course Name	Structural Analysis-II
Course Link	https://nptel.ac.in/courses/105/105/105105109/#
Course Instructor	Dr. P. Banerji Department of Civil EngineeringIIT Bombay