PRESTRESSED CONCRETE TECHNOLOGY
(Elective – I)

Course Code: 13CE 2206

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Course Educational Objectives:

1. To impart the knowledge on pre-stressing techniques and materials required for pre-stressing.
2. To familiarize the student with the losses of pre-stress and design of beams for flexure and shear.

Course Outcomes:

1. The students will be able to analyze and design pre-stressed concrete members including end blocks.
2. To impart the students, with the knowledge of Materials, Prestressing Systems, End Anchorages, Losses of Pre-stress.
3. To impart the students, with the knowledge of Analysis and Design of sections for Flexure.

UNIT-I

Materials, Pre-stressing Systems, End Anchorages, Losses of Pre-stress.

UNIT-II

Analysis and Design of Sections for Flexure.

UNIT-III

Design for Shear, Bond and Bearing.

UNIT-IV

Camber, Deflections, Cable Layouts. Continuous Beams. Load-Balancing Method.

UNIT-V

Slabs: Tension Members, Circular Pre-stressing. Compression Members, and Piles.

TEXT BOOKS

1. Krishnam Raju,N., *"Design of Prestressed Concrete Srtuctures",* 4th Edition, TMH, 2004
2. Lin., T.Y., *"Design of Prestressed Concrete Structures",* 2nd Edition, John Wiley & Sons, 1999.

REFERENCES

1. Edward G. Nawy, *"Prestressed Concrete A Fundamental Approach",* 1st Edition, Prentice Hall, 2002.
2. Rajagopalan. N, *"Prestressed Concrete"*, 2nd Edition, Narosa publications, 2006.