

Self-financed

5-day Short Term Course

On

**Fundamentals of Pre-Stressed
Concrete for Industry
Professionals (online mode)**

(FPCIP-2023)

12th June 2023 – 16th June 2023



**Organized by
Department of Civil Engineering,
National Institute of Technology-
Rourkela.**

Coordinator-cum-Faculty Instructor:
Dr. Mahendra Gattu,
Assistant Professor, Civil Engineering,
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ॐ असतो मा सद्गमय।

तमसो मा ज्योतिर्गमय।

मृत्योर्मा मृतं गमय ॥

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Course Description:

The course aims to provide a deep understanding of the prestressing systems used in the civil engineering industry. The course will cover the basics of pre-tensioning and post-tensioning systems, load balancing, prestress losses, deflection of prestressed members, analysis for flexure, Magnel's approach to design for flexure, statically indeterminate analysis, design for shear, bond, and anchorage.

Course Modules:

Module	Topics
1.	Pre-tensioning systems
2.	Pressure line diagram
3.	Load Balancing and laying out of cable
4.	Loss of Prestress due to Elastic shortening of concrete in Pre-tensioned members and Post-Tensioned members
5.	Loss of Prestress due to Friction(Curvature), Wobbling Coefficient, Anchorage slip for straight tendons, Anchorage slip for curved tendons, Shrinkage of concrete, creep of concrete
6.	Deflections in uncracked members, cracked members
7.	Analysis of flexure in prestressed beam: strain compatibility method and IS 1342-2012 codal provisions
8.	Design for flexure using Magnel's approach
9.	Statically indeterminate analysis in continuous prestressed beams
10	Design for shear and anchorage

Course Timings:

12th Jun 2023 – 16th Jun 2023: 6pm – 8pm

Program Fees:

Industry Professionals: Rs. 1000/- (includes 18% GST)

Students and Research Scholars : Rs. 500/- (includes 18% GST)

Payment Details:

A/C Name: CONTINUING EDUCATION
NIT ROURKELA

A/C No.: 10138951784

IFS Code: SBIN0002109

Bank Name: State Bank of India

Branch Name: NIT Campus, Rourkela

Registration: Google Form Link:

<https://forms.gle/sqRnnn3E99JwNSrM8>

Last Date of Registration: 07-06-2023

Terms and Conditions:

1. Fees once paid cannot not be refunded.
2. The participants should have good internet through mobile/Desktop for participating in this online course.
3. Participation certificate will be provided for participants with 80% attendance and above.