

Self-financed

5-day Short Term Course

On

**Fundamentals of Pre-Stressed
Concrete for Industry
Professionals (FPCIP-2023)**

4th January 2023 – 8th January 2023



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

Coordinator-and-Faculty Instructor:

Dr. Mahendra Gattu,
Assistant Professor, Civil Engineering,
9894275445, gattum@nitrkl.ac.in

ॐ असतो मा सद्गमय।
तमसो मा ज्योतिर्गमय।
मृत्योर्मा मृतं गमय ॥
ॐ शान्ति शान्ति शान्तिः ॥

Course Description:

The course aims to provide a deep understanding of the prestressing systems and trains you to use the IS Code 1343:2012 with confidence. This course is exclusively for civil engineering professionals, structural engineers, and architects.

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:

4th Jan 2023 – 8th Jan 2023:

10 am – 12 pm, 3 pm – 5 pm

Venue: NIT-Rourkela.

Program Fees:

Industry Professionals: Rs. 9500/- (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/5dB8TNHdgUrKfKc99>

Last Date of Registration: 30-12-2022

Terms and Conditions:

1. Program fees once paid cannot not be refunded.
2. Program fees does not include accommodation and food.
3. Limited accommodation is available in Institute Guest House on first-come-first-served basis.