CIVIL ENGINEERING INDUSTRIAL INTERNSHIP (CEII)
7 Days 69* hours Intensive Certified Internship
India’s one and only Course work based Internship Exclusively on Civil Engineering & Construction Technologies With Industry expert sessions, Factory & Site Visits, Team based Industry Projects

Internship Structure

**Day wise – Session Plan**
Day 1 – Basics of structures & Transportation structure design + Project Allocation
Day 2 -Field Lab 1 – Surveying/NDT – Basic operations training – Total Station, DGPS etc.
Day 3 – Industry Visit 1 – Visit to a construction site to learn onsite procedures.
Day 4 – Industry Visit 2 – Visit to a construction materials manufacturing facility with experts Interaction.
Day 5 – Industry Visit 3 – Visit to a concrete/reinforcement products related factory with experts Interaction.
Day 6 – Precast Technology & Earth quake resistant/Seismic structure design
Day 7 – Career Guidance & Presentation of project and Award Ceremony

**Day 1 - Basics of various structural design + Project Allocation**

**Reinforced Structural Construction**
- Planning Phase, Design Phase, Construction Phase
- Adoption of Adequate Structural System
- Design Codes & Handbooks
- Basic Design Consideration

**Analysis & Design**
- Safety, Serviceability & Economy
- Design Philosophies
- Behavior of Flexure, Shear & Bond
Tall Building Design – Philosophies, Practices, Codes followed and tools used
- Wind tunnel study
- Various Load considerations
- Various tools used
- Material consideration

Transportation Structure Design
- Advanced Materials in pavements and other Transport structures like Airports
- Metro, Bridges & Flyovers
- Activity of Transportation design structure

Structural Design Philosophy
- Various Phases From Planning to Execution Of Transport systems

Special Load Cases
- Seismic
- Wind
- Snow
- Dust
- Blast
- Hydrostatic
- Moving Loads
- Erection loads, Crane Loads and other Construction Loads
- Load combination

Project Phase
Students will be assigned in to teams and allotted a civil project on 1st day of the course and mentored by our in house expert’s team/visiting faculties.

Day 2
Introduction to Civil Surveying or Civil NDT
- Role of surveying at various stages of construction
- Equipment’s & Other tools (eg Total Station, Autolevel, GIS, Laser Distance meter, Ultrasonic Wall Scanner and Rebar Scanner etc)
- Hands on Training – All Basic operations in latest Total station & DGPS**
Day 3

**Advanced Surveying or NDT**
- Various Advanced Surveying techniques and practices
- Differential GPS (DGPS) – How it functions and techniques used in surveying.
- Survey project – Students will be split into teams and provided with Survey project to implement all the techniques they learned and submit it as a report.
- Various NDT Techniques used in the construction Industry.

**Day 4 & 5 – Industry Visits**
- To construction equipment/Materials manufacturing factories and lab session with experienced Industry expert guidance.

**Day 6 – Precast Technology**

**Mechanization in the field of Civil Engineering**

**Framework**
- Recent Developments in various systems of formwork like Tunnel formwork (Mivan..etc.)
- Durability & Workability
- Repeatability

**Reinforcing Steel & Concrete**
- Cut & Bend Steel
- Welded Wire Mesh
- Dynamic Concrete
- Self-Compacted Concrete

**Precast Technology**
- Latest Technologies & Tools used in precast industry

**Earthquake Engineering**

**Performance of Structure during Earthquake**
- Ground Shaking
- Ground Failure
- Inertia forces
- Seismic Loads
- Factors effecting Seismic loads
- Velocity & Acceleration Spectrum
Failure Mechanism of Earthquake
• Important Parameters of Seismic Design
• Ductility

General Concepts of Earthquake Resistant Design
• Category of Buildings
• Structural Framing
• Torsion in Buildings
• Concept of Isolation
• Detailing Procedures as per BIS Standards

Day 7
Presentation of Allotted Projects by various teams

• Best Teams will be selected and awarded “Winner of CEII Winter Internship ’18” with prizes.
• Best Students who perform well throughout the event will get “Best Intern Award” and certificate of Excellence.

Note: Expertshub has all rights to change the structure of the program based upon expert’s availability and lab conditions without prior notification to anybody.
*no of hours mentioned are calculated by both class room training & the time student spend outside the class room for their project work.
** Depend upon the equipment’s availability

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