CIVIL ENGINEERING INDUSTRIAL INTERNSHIP (CEII)

7 Days 60 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 &

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

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 Summer Internship '20"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