Skills by TuxDa

2023

COMPLETE RCC PROJECT DESIGN + INTERNSHIPS [HIGH-RISE : G+40]

#Welcome_to_world_of_opportunities

www.tuxda.in

SOFTWARES INCLUDED

Structural Design (G+40) + Manual Design + Structural Detailing

ETABS

SAFE

SAP2000

BIS

RCDC

DE

INDIAN & INTERNATIONAL DESIGNE CODES COVERED

INDIAN STANDARDS

- IS 456
- IS 875
- IS 1893
- IS 13920
- SP 34
- IS 16700

INTERNATIONAL STANDARDS

- UBC 97
- CEB FIP 2010
- ACI 318
- BS 8110

Introduction

1. Roles and responsibilities of Structural Designer
2. Complete project life cycle
3. Various departments and respective scope
4. Introduction to RCC structures
5. Thumb Rules in design
   - Slab
   - Beam
   - Column
   - Footing

Live Projects Covered

1. **G + 5**
2. **G + 7**
3. **G + 11**
4. **G + 34**
5. **G + 40 (Complex Project)**
6. **Bungalow Projects**

Bungalow projects are included to **KICKSTART** your own structural firm

Superstructure Design

ETABS

- Understanding client requirements
- Intro. to Architectural Plan
- Grid-Line method
- Center-Line method
- Gravity Loads & *Lateral* Loads
- Modelling, Placing & Orientation of column
- Types of required analysis
- Criteria for shear wall
- Loading criteria & loading types
- Types of plate elements
- Modal Analysis
- Codal requirements
- Design of RCC Elements
- Design of Shear Wall

Superstructure Design

ETABS Advanced

- [x] Everything in ETABS mentioned on previous page, along with following data
  - Different types of structural systems
  - Different SMF (Stiffness Modification Factors)
  - Uncracked Model
  - Strength Model
  - Service Model
  - Wind gust analysis
  - Wind tunnel analysis
  - Energy Vs. Virtual work diagram
  - Composite structure elements
  - Orthogonal & non-orthogonal analysis
  - Modal Analysis
  - HRC Norms
  - Buckling Analysis
  - Creep & Shrinkage Analysis
  - Concept of transfer girder
  - Concept of PT elements
  - Selection & Provision of PT elements
  - Optimization of design

Stability Checks

- Deflection check
- Story Drift
- Base Shear Scaling
- Soft Story
- Creep Deflection
- Axial shortening
- Story stiffness
- Differential SMF
- Deflection against wind & Earthquake
- Torsion irregularity

DBR

Preparation of design report | Client dealing
High-Rise committee norms | Municipal submission
Submission of data

Mock Test - I

- Mock Modelling Test
- Project Activity
- Presentation in the form of DBR

Manual Design

- Step-by-step procedure for Design of RCC elements
- IS Code requirements
- Structural analysis concepts
- Designing of RCC elements using Excel sheets
- Designing of RCC elments using manual calculations

Mock Test - II

- [x] Project Activity
- [x] Presentation in the form of PPT

Substructure Design

SAFE

- Introduction to foundation system
- Types of foundation
- Criteria for selection of foundation type
- Types of support
  Point Spring | Line Spring | Area Spring
- Soil bearing capacity (SBC)
- Geotechnical soil report
- Manual design of foundation system
- Property assignment of rigid zones for walls and ramps
- Design strips
- Tendon load and its losses. Loading : dead, live, wind, earthquake, temperature, notional, live load reduction
- Releases, supports, diaphragms, all definition parameters
- Design of stirrups
- Design of slabs based on finite element method
- Design of raft & pile foundations
- Design of punching shear reinforcement (stud rails).
- Flat slabs with post tensioning.
- Checks on post tensioning stress
- Generating output & display of deformed geometry
- Detailing & reporting techniques
- Codes & software interaction by considering national and International Codes

Stability Checks

- Punching shear check
- One-way shear check
- Settlement check
- SBC Check
- Concept of design checks
- Detailing of foundation system
- Soil structure and interaction(SSI). 3. Checks on foundation system
  - a. Deflection
    - i. Short term deflection.
    - ii. Long term deflection considering creep.
  - b. Crack Width
  - c. Punching Shear
    - i. One-Way Shear.
    - ii. Two-Way Shear.
  - d. Reinforcement checks.

- Differential settlement of foundation and its control.
- Nonlinear analysis by considering long term creep.
- Nonlinear analysis for cracked conditions.
- Significance of each analysis and its uses using various codes.

Mock Test - III

- ☑ Mock Modelling Test
- ☑ Project Activity
- ☑ Presentation in the form of DBR

Structural Detailing

- IS 456 Requirements
- Design steps for RCC elements
- Detailing requirements as per IS 1893 & IS 13920
- Step by step procedure for exporting data from ETABS to RCDC
- Detailing as per "Resultant Method" & "Descrete Method"
- Setting of RCC drawings as per site requirements
- Detailing of slab, beam, column, shear wall, footing

Water Tank + Septik Tank + Staircase

SAP2000

- UGT |OGT | OHT
- Analysis of Plate Elements
- Shell Stress Analysis
- Flexural Stresses
- Tank design using manual calculations
- Site requirements
- Detailing requirements

MOCK INTERVIEWS

Mock-Interviews *and* ***Mock-Modelling tests*** *to ensure your smooth interview experience*

"With our Mock-Interview Panel, from the ***largest structural firms in the Civil Engineering Industry****, you are rest assured to crack real life job-interviews with confidence and right attitude"*

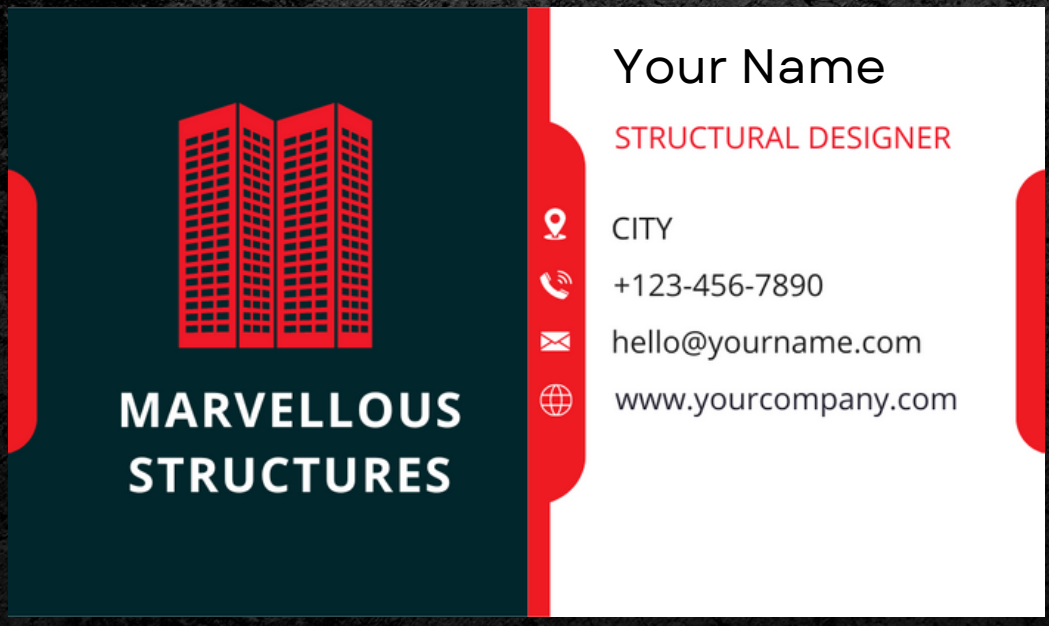
DEDICATED PLACEMENTS

- Blog writing
- Resume preparation
- Portfolio preparation
- Video portfolio

BUSINESS SUPPORT

- Hand Holding support for your consultancy works

" Your business cards on us because we believe in our teaching & we believe in you! "



SPECIAL FEATURES

★★★★★ *Best ever syllabus in market !*

25 weeks intense training

Team of Industry Expers (10+ yrs. exp.)

Hand Holding Support *for your consultancy works*

100% Dedicated Placement Assistance

super duper ***Lifetime TuxDa Mentorship***

WHY JOIN TUXDA?

Director's Message

- *Embark on an exciting journey towards becoming a skilled Structural Design Engineer! Join my High-Rise structural design course, where your growth is my top priority. With a genuine interest in nurturing your talents, I am committed to providing you with comprehensive knowledge and practical skills. The course covers the full syllabus in just 3.5 months, ensuring an efficient learning experience.*
- ***Here's the best part :*** *The fees for this invaluable opportunity are extremely affordable, making it accessible for all aspiring Structural Design professionals. Grab on to this chance to enhance your career prospects and unlock endless possibilities in the world of Sky Scrapers.*

Enroll today and let's shape your future together!  

Regards,
Hitesh Chaudhari
Founder @TuxDa

STILL IN DOUBT?

Let's Talk

CLICK HERE