

ABOUT D-CAD TECHNOLOGIES

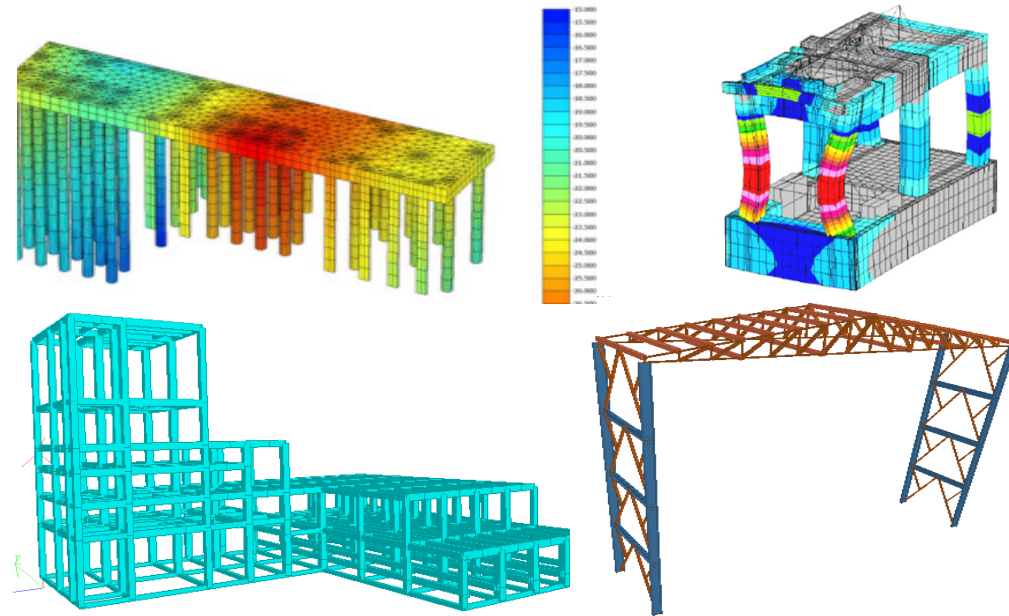
D-CAD Technologies provides the following services to industries:-

- **Consultancy services** to the industry for design and analysis solutions in the field
 - **Machine Foundation:** Machine Foundation Design; Vibration - Analysis – Isolation - Vibration Measurement
 - **Structural Dynamics:** Seismic (Earthquake) Qualification of Buildings and Industrial Structures, Industrial Systems etc.
 - **Vibration Troubleshooting :** Field Testing, Failure Analysis, Fault diagnostics, Fault Identification and Remedies.
 - **Training program** to the industry for design and analysis solutions in the field of
 - **Civil & Structural - special topics** such as structural dynamics, machine foundation, earthquake analysis & design, Renovation & modernisation;
 - **Application Software**
 - **STAADPRO** – Static & Dynamics Analysis and Structural design
 - **NISA** – Static & Dynamics Analysis
- ❑ D-CAD Technologies is a leading consulting firm in Vibration, Machine Foundation and Structural Dynamics.
 - ❑ Since 2008, it had been conducting Training programs on Machine Foundation and structural Dynamics for Practising Engineers spread throughout India as well as abroad.
 - ❑ Training division of D-CAD Technologies provides supreme learning of STAAD.Pro also , an ultimate resource for budding engineers and practising engineers. This institute supports upgrade knowledge of STAAD.Pro which has been assimilated in the form of courses meant for STAAD.Pro software learning.
 - ❑ After the training program, the students shall have a confidence level of doing tasks with a superior results. Professional courses offered at D-CAD Technologies are a perfect blend of the theory & practical experience to harmonize the training towards engineering stream. Our training institute ensures students' skills are honed to an good extent.

ABOUT OUR CEO

D-CAD Technologies was established in 2003 by **Dr. K G Bhatia** (former General Manager, BHEL and member of various scientific boards of Govt. of India). Dr. K. G. Bhatia, a Civil Engineering graduate of IIT BHU, has completed Masters in Structural Dynamics (with specialization in Earthquake Engineering) from IIT Roorkee and Doctorate in Applied Mechanics from IIT Delhi. He was the UNESCO participant, at the International Institute of Seismology & Earthquake Engineering (IISEE), Tokyo, Japan for Advanced Research in the field of earthquake Engineering. Formerly, he was the President - Indian Society of Earthquake Technology (ISET), Chairman ISET Delhi Chapter & Expert Member - Group on Earthquake Preparedness, Govt. of NCT of Delhi. He is a well known research scientist in the field of Structural Dynamics, and an expert in the profession of Machine Foundation Design, Seismic Qualification, Failure Analysis and Weight Optimization. He has got about 45 years of rich experience in these field. Dr. Bhatia has carried out machine foundation design and conducted field studies on variety of machineries and their foundations for various projects. With this rich experience, Dr. Bhatia has brought out a Handbook on **“Foundations for Industrial Machines – a handbook for Practising Engineers”**. He shares his experience with Practising Engineers, Students, Academicians, Researchers and Industry people through the Training Programs, Workshops/ Seminars and Guest Lectures.

STAAD.Pro for STRUCTURAL ANALYSIS AND DESIGN



STAAD - “Structural Analysis And Design”, is a computer aided structural analysis software that helps Structural Engineers to Analyse complex and laborious problems in a very efficient manner with reasonably good accuracy of results.

The program is used for analysis and design of various reinforced and steel buildings and industrial structures. Inbuilt Design codes are already embedded in the program.

D-CAD
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Course Content

STAAD.Pro FOR STRUCTURAL ANALYSIS (STATIC) AND DESIGN MODELING – LIMITATIONS - IMPERFECTIONS

PROGRAM CODE: STD01

MODULE 1. Basic Engineering (5 hrs)

- ✓ Basics of Engineering Mechanics
 - Force, Moment, Reaction, Centroid & Moment of Inertia
- ✓ Basics of Strength of Materials
 - Material & Geometric Properties – Shear Force and Bending Moment, Def., stress and strain
- ✓ Load Calculations
 - Dead Load, Live Load, Wind Load, Earthquake Load
 - Load Combinations as per Code

- ✓ Basic Knowledge about reactions at supports.
- ✓ Calculating deflections of simple beams like Simply Supported or Cantilever Beams etc.
- ✓ Understanding of load calculations and combinations as per code.

MODULE 2. STAAD.PRO Tools (5 hrs)

- ✓ **Modeling tools**
 - File setup, Selection tools
 - Geometry – Beam element, Plate element, Solid element
 - General – member size, specifications, Supports, Loads
 - Analysis – types of analysis and options.
 - Design – design parameters, commands to various international codes.
- ✓ **Post processing (Results) tools**
 - Joint Displacement, Reactions, Instability
 - Member Forces (Axial force, Bending moment, shear force)
 - Plate (Slab) – Contours (stresses, Moments, shear stress etc.)
- ✓ **Errors & warnings**
 - Elimination of errors and warnings.

- ✓ Understanding features and tools available with STAAD for performing various tasks.
- ✓ Modeling of structural basic elements.
- ✓ Understanding STAAD's capabilities and Limitations.

MODULE 3 Modeling and analysis (5 hrs)

- ✓ Creating the new Structures with different types of loading conditions.
 - Simple beams modeling and analysis.
 - Simple frame modeling and analysis.
 - 2D portal frame modeling and analysis.
 - 2D RC frame modeling and analysis.
 - 3D Multi framed structure modeling and analysis.
- Eradication of errors and warnings

- ✓ Increased confidence level in modeling of structural components.
- ✓ Understanding warnings and its causes.
- ✓ Understanding errors and its causes.
- ✓ Techniques to remove error and warnings

MODULE 4 Practising Real life Problem (Concrete) (5 hrs)

- ✓ Real life problems with different types of loading conditions on RCC frames.
- ✓ 2D & 3D Multi framed structure modeling and analysis.
- ✓ Single story building RC frame analysis and design.
- ✓ Multi storied RC Building frame analysis and design.
- ✓ Eradication of errors and warnings.

- ✓ Understanding behaviour of 2D & 3D frames.
- ✓ Understanding of Design parameters & commands.
- ✓ Understanding design outputs- reinforcement details for drafting of drawings.

MODULE 6 Practising Real life Problem (Slab) (5 hrs)

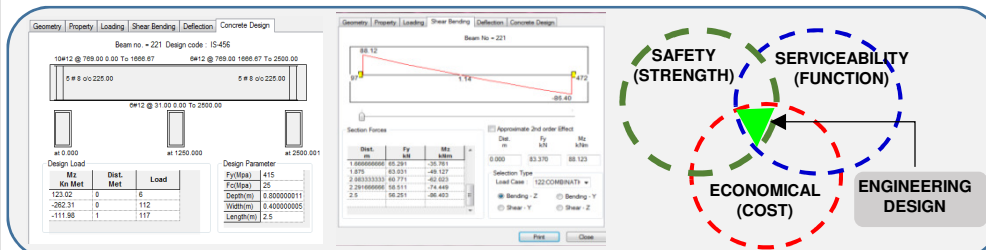
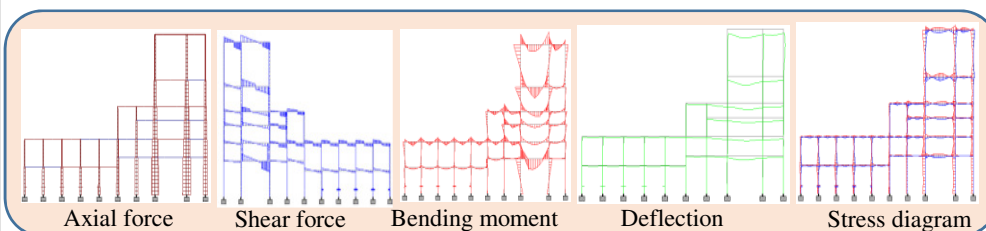
- ✓ Real life problems with different types of loading conditions on slab or floors
- ✓ Slab modeling, meshing, connectivity of structural members and analysis.
- ✓ Single story & Multi storied RCC building analysis and design.
- ✓ Eradication of errors and warnings

- ✓ Understanding of loading, analysis and design of slab
- ✓ Modeling and generation of Slab
- ✓ Understanding of slab stresses, design & reinf

MODULE 7 Interaction & project (5 hrs) _ Optional

- STAADPro tools.
- Modeling related clarifications.
- Design parameters, commands and clarifications.
- Elimination of errors and warnings.
- Project work 1
- Project work 2
- Project work 3

- ✓ Enhanced confidence level of students on modeling.
- ✓ Comparison of STAAD results with Closed form solutions.
- ✓ Understanding intricacies involved in Real Life Projects using STAAD.Pro



Some of our projects

- ✓ Paradeep Phosphate Ltd - Design of pile supported concrete raft
- ✓ Fichtner India - Framed table top deck foundation - Design of STG Foundation
- ✓ Hindustan Times - Dynamic Analysis of Press Foundation
- ✓ Kitimat Modernization Project, Montreal, Canada
- ✓ Zuari Cement, Yerraguntla, AP, India.
- ✓ Zuari Cement, Chennai grinding Unit, TN, India.
- ✓ India Cements, Mahi, Rajasthan, India.
- ✓ Prism Cements, Satna, M.P, India.
- ✓ Star Cements, Clinkerization Plant, Ras Al kahimah, U.A.E

Registration Details

Course details

Course Duration : 60 hours
Course Fee : INR 12,000/-

Discounts:

Group Discount : 20%
Referral Discount : 10%

Registration may be done by paying registration fee of INR 1000/- either by cash, cheque or DD.
Requisite amount of cheque may please be drawn in favor of "D-CAD Technologies
For Registration or Course related clarifications, please contact to details as below:-

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