

OFFICE OF THE REGISTRAR
NOTICE

Ref: REG: - 792209-CDC/VAT-2021-22/TB

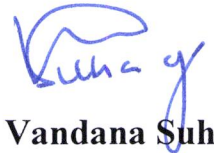
Date: 10th March 2022

Subject: Schedule for Technical Training – STAAD PRO (VAT-18)

Attention: Students of B.Tech 6th Semester (Civil Engineering)

The abovementioned students are hereby informed that the Technical Training – STAAD PRO will be held from **14th March 2022 to 28th March 2022** for the students of B.Tech 6th Semester (Civil Engineering).

NOTE: The training is mandatory for all the students to attend.



Dr. Vandana Suhag
Registrar

Registrar
DIT University, Dehradun

To:

- All Deans / Directors
- HoDs
- Head CDC

With the request to bring the above
to the notice of the students

Copy to:

- Chairman
- Chancellor
- Vice Chancellor
- Pro Vice Chancellor
- ICT Manager – to upload on website

For information please



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VAT-18: STAAD Pro Software Training – Civil

Objective:

STAAD is the abbreviation for Structural Analysis and Design. STAAD.Pro is one of the popular software that is used for analysing & designing structures like – buildings, towers, bridges, industrial, transportation and utility structures. Designs may include any building structures like tunnels, culverts, bridges, piles, petrochemical plants; and building materials like timber, concrete, steel, cold-formed steel, and aluminium. STAAD or STAAD.Pro was developed by Research Engineers International at Yorba Linda, CA in 1997. To get rid of the boring & time-consuming manual procedures Structural Engineers started using automated software STAAD pro.

Duration: 40 Hrs (From 14th March 2022 to 28th March 2022)

Course Coordinator: Dr. Mansa Swami (Assistant Professor- Mechanical Engineering)

Venue: Vishveshwarya Civil Engineering Computer Lab.

Course Overview:

STAAD.Pro[®] is one of the most widely-used software for developing and analyzing the designs of various structures, such as petrochemical plants, tunnels, bridges etc. STAAD.Pro[®] v8i, the latest version, allows civil engineering individuals to analyze structural designs in terms of factors like force, load, displacements etc. Multisoft Virtual Academy STAAD.Pro[®] v8i online training builds expertise in using the software at a professional level in domains, including construction companies, government agencies, architecture firms etc.

Participants are equipped with various software functionalities like model generation and editing; loading analysis; concrete designing etc. The STAAD.Pro[®] v8i software training also offers proficiency in using the seismology; report generation; and steel and foundation design features. After completing the STAAD.Pro[®] v8i training, individuals can work as Structure Designers, Project Managers, Building Analysts, Quality Analysts, Bridge, Designers etc.

STAAD.Pro Software Capabilities:

- Analyse for time dependent effects
- Check designs for cold-formed sections
- Comply with seismic requirements
- Create finite element meshes


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- Design & analyse with finite element meshes, structural models
- Design beams, columns, walls and resisting frames
- Design to international design standards

A handwritten signature in blue ink, appearing to read 'Sury', is positioned above the printed name.

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- Loads and load combinations
- Integrate slab and foundation designs
- Model reinforced concrete, steel
- Structural design documentation
- Share structural models

Why to learn?

STAAD.Pro provides flexible modeling environment, fluent data collaboration, and advanced features. It best structural analysis & design software that supports Indian as well as all international codes.

STAAD.Pro permits structural engineers to design & analyze any type of structure virtually. Structural consultants, structural engineering firms, departments in construction companies, government agencies, owner/operators, offshore platform designers, many more are extensively using this software.

Learning Objectives:

The course will cover all the steps involved in structural analysis & designing of concrete & steel.

This course will introduce one to STAAD Pro's state of the art user interface, prevailing analysis and design engines with a sophisticated finite element (FEM), visualization tools, and dynamic analysis capabilities.

Some of the features that we focus in training include:

Model Generation: Generation of an interactive menu-driven model with concurrent 3D display 2D & 3D graphics generation using rectangular or polar coordinate systems Segments of repetitive geometry used to generate complex structural models.

- **Model Verification:** 2D/3D drawings on screen and printer/plotter full 3D shapes for frames, elements Isometric or any rotations for full 3D viewing.
- **Static Analysis:** 2D/3D analysis on the basis of state-of-the-art Matrix method to handle extremely large work. Linear, non-linear, p-delta analysis with automatic load & stiffness correction.
- **Dynamic/Seismic Analysis:** Mass modelling, frequency, and mode shape Response spectrum extraction, analysis of time history Modal damping ratio for individual models.
- **Secondary Analysis:** Finite element capabilities, concrete design, steel design, and timber design. Forces & displacements at sections between nodes. Maximum & minimum force envelopes.



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Learning Outcome:

- Students are able to complete object-oriented instinctive 2D/3D graphic model generation.
- Students are able to learn to use pull-down menus, tool-tip help, and floating toolbars.
- Students are able for carrying out flexible zooms and multiple views.
- Students knew to make isometric & perspective views and 3D shapes.
- Students knew the use of simple command language and built-in command file editor.
- Students have learnt how to generate graphics/text input.
- Student are able to do efficient algorithm that will minimize disk space requirements.
- Student are able to learn to take presentation quality printer plots of geometry and results as part of the run output.
- Student are able to perform accurate and numerically efficient plate/shell element incorporating out-of-plane shear & in-plane rotation; automatic element mesh generation; comprehensive element stress output including in-plane stresses, out-of-plane shear, bending & principal stresses at nodal, as well as, user-specified points.
- Student have learnt how to achieve user-specified design parameters to customize a design.
- Student knew to perform code check, member selection and optimized member selection consisting of analysis/design cycles.
- Student are able to design concrete beams/columns/slabs/footings as per all major

Course Contents:

- Introduction to STAAD.Pro® V8i
- Model Generation and Editing
- Introduction to Loading
- Automatic Load Generation
- Concrete Design
- Seismology
- FEM / FEA
- Steel Design
- Report Generation
- Foundation Design

Target Audience

- B Tech. Students



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Content Structure:

Chapter 1	Introduction to STAAD.Pro® V8i	3 hours
Chapter 2	Model Generation and Editing	3 hours
Chapter 3	Introduction to Loading	4 hours
Chapter 4	Automatic Load Generation	4 hours
Chapter 5	Concrete Design	6 hours
Chapter 6	Seismology	5 hours
Chapter 7	FEM / FEA	4 hours
Chapter 8	Steel Design	4 hours
Chapter 9	Report Generation	4 hours
Chapter 10	Foundation Design	3 hours

Annexure - I

Value added course Details (Academic Year: 2021-22)

VAT Course Name: STAAD Pro Training

VAT Code: VAT 18

Duration in Hours: 42

Number of Students Enrolled: 43

Number of Students Completed: 40

Grades:

G= GOOD ; S = Satisfactory ; P = Poor ; W = Withdraw

Student ID	Student Name	Program/Course	Year	Passing Grade
180101033	SHOEB MALIK	Bachelor of Technology in Civil Engineering	3rd Year	G
190101001	YUVIKA SINGH	Bachelor of Technology in Civil Engineering	3rd Year	S
190101002	MOHIT SINGH GHUGTAYAL	Bachelor of Technology in Civil Engineering	3rd Year	S
190101003	AAYUSH NATH	Bachelor of Technology in Civil Engineering	3rd Year	S
190101004	HRITHIK RAJ PATEL	Bachelor of Technology in Civil Engineering	3rd Year	G
190101005	AYUSH DWIVEDI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101006	ABHINAV SHUKLA	Bachelor of Technology in Civil Engineering	3rd Year	G
190101007	AAYUSHI ANAND	Bachelor of Technology in Civil Engineering	3rd Year	G
190101008	RAHUL RANJAN	Bachelor of Technology in Civil Engineering	3rd Year	G
190101009	VISHESH SRIVASTAVA	Bachelor of Technology in Civil Engineering	3rd Year	S
190101010	ANMOL SHARMA	Bachelor of Technology in Civil Engineering	3rd Year	G
190101011	PRASHANT RANA	Bachelor of Technology in Civil Engineering	3rd Year	S
190101012	HASHIR ANSARI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101013	PRIYA RAMESH SINGH	Bachelor of Technology in Civil Engineering	3rd Year	G
190101014	RAVI RANJAN SINGH	Bachelor of Technology in Civil Engineering	3rd Year	S
190101015	MADHUMITA MISHRA	Bachelor of Technology in Civil Engineering	3rd Year	S
190101016	ABHINAV SARASWAT	Bachelor of Technology in Civil Engineering	3rd Year	S
190101017	ROBIN KUMAR	Bachelor of Technology in Civil Engineering	3rd Year	G
190101018	RIA BISHT	Bachelor of Technology in Civil Engineering	3rd Year	G
190101019	KAMYA RASTOGI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101020	AMEESHA UPADHYAY	Bachelor of Technology in Civil Engineering	3rd Year	G
190101021	VISHAL CHAUDHARY	Bachelor of Technology in Civil Engineering	3rd Year	P
190101022	AVINASH KUMAR PANDEY	Bachelor of Technology in Civil Engineering	3rd Year	S
190101023	FAYQUE HASAN JAMALI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101024	ANKUR RANA	Bachelor of Technology in Civil Engineering	3rd Year	S
190101025	NIKHILESH NEGI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101026	DIGYANSHU PALIWAL	Bachelor of Technology in Civil Engineering	3rd Year	G
190101027	ABDUL RAFEY	Bachelor of Technology in Civil Engineering	3rd Year	S
190101031	SHAYNA LAKHNOTRA	Bachelor of Technology in Civil Engineering	3rd Year	S
190101033	PRIYA SHARMA	Bachelor of Technology in Civil Engineering	3rd Year	P
190101035	DHEERAJ SINGH	Bachelor of Technology in Civil Engineering	3rd Year	G
190101037	ANIL TAMANG	Bachelor of Technology in Civil Engineering	3rd Year	G
190101038	UTKARSH TYAGI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101039	SANTOSH RANENI	Bachelor of Technology in Civil Engineering	3rd Year	G
190101040	APARNA DEO	Bachelor of Technology in Civil Engineering	3rd Year	G
190101041	AJAY KUMAR YADAV	Bachelor of Technology in Civil Engineering	3rd Year	S


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200101900	ABHISHEK RANA	Bachelor of Technology in Civil Engineering	3rd Year	G
200101901	RAJESH SINGH	Bachelor of Technology in Civil Engineering	3rd Year	S
200101902	SUMIT PANWAR	Bachelor of Technology in Civil Engineering	3rd Year	G
200101903	RAGHAV SHARMA	Bachelor of Technology in Civil Engineering	3rd Year	G
200101904	A.G. JOHN POLE	Bachelor of Technology in Civil Engineering	3rd Year	P
200101905	AKARSH KAINURA	Bachelor of Technology in Civil Engineering	3rd Year	S
200101910	PRANAV VASHISTHA	Bachelor of Technology in Civil Engineering	3rd Year	S

Received.
Jaiwan Datar
Career Development Cell
DIT University, Dehradun



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