

## CERTIFICATE IN STAAD.PRO

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## About Glister Eduversity

Today is the era of working parents and due to workload, they do not get enough time to support their children's education. Therefore, they are Heavily blamed by All, in the current dialogue and debate about Improving the education system, the disadvantages of improper parenting is known to all.

It is time to start parenting in the education system. With the Glister Eduversity, We present you the solution to all such problems switching towards telephonic parenting, proper guidance and development graph.

This is the first Indian institution to provide education care with parenting. Glister Education offers telephonic parenting with a right strategic plans for the student, online test series, seminar, scholarship programs, in really attractive packages.

We also guide their appoinments as well as their Strategies. So, let's don't wait, and acheive nothing less than success with Glister Eduversity Parenting cum Education Care.



**CEO/Director: Amit Pandey** 

## Mission

The mission of Glister Eduversity is to educate the citizens and citizen-leaders for our society.

We do this through our commitment to the transformative power of a liberal arts and sciences education.

Beginning in the classroom with exposure to new ideas, new ways of understanding and new ways of knowing, students embark on a journey of intellectual transformation.

Through a diverse living environment, where students live with people who are studying different topics, who come from different walks of life and have evolving identities, intellectual transformation is deepened and conditions for social transformation are created.

From this we hope that students will begin to fashion their lives by gaining a sense of what they want to do with their gifts and talents, assessing their values and interests, and learning how they can best serve the world.

#### Vision

Glister Eduversity will set the standard for residential liberal arts and sciences education in the twenty-first century. We are committed to creating and sustaining the conditions that enable all Glister Eduversity students to experience an unparalleled educational journey that is intellectually, socially, and personally transformative.

Welcome to the Glister Eduversity, varanasi. For more than three Years, Glister Eduversity has served as our nation's flagship comprehensive institution of higher education.

Our primary goal is to become one of the most prominent and excellent educational Institute in the world. We are fortunate to have a talented, highly committed teaching and support staff here to ensure the learning environment of our students is the best it can be. Our faculties are renowned scholars and accomplished practitioners who are actively engaged in the academic excellence and innovative research ideas of the modern world. Our students are innovators, engineers, managers, great scientists, entrepreneurs, and aspiring leaders - from every age group and are located at every corner of the country. Our unique teaching and learning process with a proper blend of theory and practice crosses the boundaries of nations towards industry-readiness and global excellence.

**Program overview**STAAD is the abbreviation for Structural Analysis and Design. STAAD.Pro is one of the popular software that is used for analyzing & 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 aluminum. 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 . It is used for 3D model generation, analysis and multi-material design. The course objective is to train the students in Structural Modeling, Designing and Analysis, Integrated Design and Finite Element Analysis. The course is useful for the Students, faculty members of various engineering colleges and P.G and U.G Students of Civil Engineering.

## **Salient Features**



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..



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.



You Will get Certificate and Mark sheet after Completion of Course that will be Universally Accepted.



## **Course Objective**

The 3 Months STAAD.pro course is for the Learners who want to be a Civil Engineer or Structural Designer, with the aim to learn, develop and practice required by the market. In this course, the emphasis is put on the learner to acquire the ability to perform as a confident and competent Civil Engineer.

#### The objectives of this course are to:

This course titled " Certificate in STAAD.pro teaches you all the things required for the structural analysis and design of a building. This course, as the title says, doesn't require you to have any prior experience in this software or any other structural design software. It will teach all the aspects of the software from very basic of software . The course has been very systematically arranged so that you can best understand the software. Once you complete this course, you will have all the necessary knowledge to do structural design of a building. You can work as a structural designer or can do the structural design of buildings on your own projects.

#### **Description of the Software**

STAAD Pro stands for Structural Analysis and Design Program. STAAD.Pro is the leading Structural Analysis and Design Software . STAAD.Pro is the professional's choice for steel, concrete, timber, aluminum, and cold-formed steel design of virtually any structures including culverts, petrochemical plants, tunnels, bridges, piles and much more.

#### **Learning Outcome :**

Student will be able to complete object-oriented instinctive 2D/3D graphic model generation.

□ Student will learn to use pull-down menus, tool-tip help, and floating toolbars.

□ Student will be able for carrying out flexible zooms and multiple views.

□ Student will know to make isometric & perspective views and 3D shapes.

□ Student will know the use of simple command language and built-in command file editor.

□ Student will learn how to generate graphics/text input.

□ Student will be able to do efficient algorithm that will minimize disk space requirements.

□ Student will learn to take presentation quality printer plots of geometry and results as part of the run output.

□ Student will be able to perform accurate and numerically efficient plate/shell element incorporating outof-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 will learn how to achieve user-specified design parameters to customize a design.

Student will know to perform code check, member selection and optimized member selection consisting

of analysis/design cycles.

□ Student will be able to design concrete beams/columns/slabs/footings as per all major

#### 1. Title of the Course

The Course shall be called as "Certificate Course in STAAD.pro", a Regular course of 3 months (120 hrs.) duration.

#### 2. Duration of the Course

This is a Part time course of 120 hrs. Extended over a period of 3 months duration.

#### 3. What You Will Get:

You Will Get a Mark sheet and a Certificate That Will be Universally Acceptable.

#### 4. Aims and Objectives of the Course

This Course Is Designed With Only One Aim to Give You Brief Introduction About STAAD.pro, So that You can Make a Better Career in Civil Engineering.

#### 5. SCOPE:

STAAD.pro Trainer, Design Engineer, Freelancer

#### 6. Syllabus

The syllabus is design to fulfill aforesaid objectives containing theory subjects as well as practical in STAAD.pro

Getting Started with STAAD.pro	Theory : 50 Marks, Practical/Assignment : 50
	Marks
Introduction to STAAD.pro	Theory : 50 Marks, Practical/Assignment : 50
	Marks
History Analysis	Theory : 50 Marks, Practical/Assignment : 50
	Marks
Structural Design Manual	Theory : 50 Marks, Practical/Assignment : 50
Calculations	Marks

#### 7. Eligibility Conditions

The course is meant for engineers and executives interested in Structural design using STAAD Pro. It is meant for beginners, as well as a refresher course for those already involved in the process of Structural Analysis & Design. The course is also useful for the faculty members of various engineering colleges and P.G and U.G students of Civil Engineering.

8. Course Fee: INR 7,500+GST/-



#### **Unit 1 :- Getting Started With STAAD.pro**

Understanding Unit Conversion Tables . Overview of Structural Design & Analysis, Stresses and Strains , Shear Force & Bending Moment Diagrams. Introduction to Types of Structures . Overview of Steel, Concrete and Foundation Design g. Introduction to Finite Element Analysis.

#### **Unit 2 :- Introduction to STAAD.pro**

Features, Hardware Requirements, Graphical User Interface, Starting a New Project, Working with User Interface: Menu Bars, Tool Bars, Tabs, Snap Node / Beam Window, Data Area, Main Window. Opening and Existing Project, Saving a Project, Configuring Units, Keyboard Shortcuts, Importing Model in STAAD.Pro, Coordinate Systems. Modeling of Structures, STAAD Editor, Assigning Properties, Loads & Load combinations, Bridge Deck Design, Static Linear Analysis, Response Spectrum & Time.

#### **Unit 3 :- History Analysis**

Perform Analysis, Run Analysis, P-Delta & Buckling Analysis, Pre Analysis Print, Post Analysis Print, RC Beam, Column Design, Design of Steel Structures, Foundation Design

#### **Unit 4 :- Structural Design Manual Calculations**

Detail and Detailing Requirements, Slab Design, Beam Design, Column Design, Design of Footing, Design of Staircase.



### **Books For Reference**







Structural Design Of Multi Storeyed Buildings

The Content Code

P.Sarah

**U.H Varayani** 



Illustrated Design of Reinforced Concrete Buildings Dr. S.r.karve & amp (Author), Dr. V.l.shah



Design Of R.c.c Buildings using Staad.pro T.s Sharma