

# SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY

Dindigul – Palani Highway, Dindigul 624 002

Date: 25.09.20

## CIRCULAR

It is planned to conduct Value Added Course for IV year students by Department of Civil Engineering along with CONCEPTURS

S.No	Year	Name of the Course	Period	No. of Days
1.	IV Year	STAAD PRO	01.10.20 to 15.10.20	11 Days

  
Faculty In-charge

  
HoD/Civil



  
Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
Principal  
SSM Institute of Engineering and Technology  
Kunathupatti Village Sindalagundu (Fo),  
Palani Road, Dindigul - 624 002



**SSM Institute of Engineering and Technology,  
Dindigul-624002.**

# **DEPARTMENT OF CIVIL ENGINEERING**



## Staad Pro

Cadd Technologies School of design Private limited,  
Coimbatore-641 009.



## **Technology Training**

STAAD PRO

**Dr.D.SENTHIL KUMARAN, M.B., Ph.D.,(MUS)**  
Principal

SSM Institute of Engineering and Technology  
Kuduthipatti Village, Sundalagundi (Raj.),  
Palani Road, Dindigul - 624 002

# STAAD PRO V8i

Sl.No	Content
1	Introduction to basic principles of Structural, Analysis and Design
2	Co-ordinate Systems , Units
3	Model Generation, Creating Nodes & Members
4	Model Editing Tools, Select Menu, Add Beam, Insert Node
5	Support Specification, Member Property and Material Specification
6	Loading - Creating a Primary Load
7	Loading - Nodal Load , Member Load
8	Wind Load, Moving load, Creating Load Combination
9	Introduction to Analysis
10	Perform Analysis, Overview of Output Page, Pre-analysis Print and Post-analysis Print
11	RC Design - Column and beam
12	FEM Modelling , Generate Plate Mesh
13	Member Truss, Plate Load
14	Slab Design- One way and Two way
15	Shear wall Modelling and Design
16	Introduction Seismology, Dynamic Analysis, Response Spectrum Analysis
17	Water Tank Design
18	Staircase Design



CADD TECHNOLOGIES SCHOOL OF DESIGN PRIVATE LIMITED

*[Handwritten signature]*

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
Principal  
SSM Institute of Engineering and Technology  
Kuttalupatti Village, Sindalagudi (Pal)  
Palani: Road, Dindigul - 624 006



**SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL.**  
**DEPARTMENT OF CIVIL ENGINEERING - VALUE ADDED COURSE (STAAD PRO)**  
**IV YEAR**

S.No	NAME	1.10.2020		2.10.2020		5.10.2020		6.10.2020		7.10.2020		8.10.2020		9.10.2020		12.10.2020		13.10.2020		14.10.2020		15.10.2020	
		FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
1	Abdul Kareem J	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	Anand S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
3	Aravindhan M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
4	Aravind Sriram S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
5	Arun Jose Angeline P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
6	Arun K G	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
7	Ashwin Bharath V	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
8	Balaji G	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
9	Balaji N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
10	Balamurugan M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	Chinna Kannan S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	Deepika G	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
13	Dhana Sekar S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
14	Gokula Kanna S S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
15	Gowthami S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
16	Hariharan C	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
17	Harini K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
18	Harishprabu D	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
19	Hari Vimanthan G	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
20	Ibrahim Sameer N	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
21	Ilavarasi S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
22	Jai Prasanth V	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
23	Jegadeesan P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
24	Jeyavahini GPNS	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
25	Kali Dhivakar M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
26	Karthika S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
27	Karthikeyan T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
28	Kavishree M	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
29	Kishore Arvind B	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
30	Laabha Dharshini K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
31	Lakshmanan B	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
32	Lalithdev K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
33	Lisha Lourds J	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
34	Mahalingasiva T	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
35	Maheshwaran P	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
36	Manojprabakar R	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
37	Mathavan S	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
38	Mohamed Aarif A	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
39	Mohamed Kasim Sarafath H	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
40	Mohamed Yunus A	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
41	Mohan Raj K	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

*Handwritten signatures and initials in blue ink, mostly "AB", are written across the top of the table, corresponding to the dates 15.10.2020.*

**W.D. SENTHIL KUMARAN, M.E., M.D., (NUS)**  
**Principal**  
**SSM Institute of Engineering and Technology**  
**Kattappath Village Sindalagundu (Po),**  
**Falac Road, Dindigul - 624002.**



*Handwritten signature in green ink.*






**STAAD PRO ASSESSMENT:**

**TOTAL MARKS: 20**

1. The new generation of STAAD is:  
A) STAAD-III for Windows  
B) STAAD-III for DOS  
C) STAAD Pro for DOS  
D) STAAD Pro V8i
  
2. In the input file and under Joint Coordinate, one of the following statement is true?  
A) 1,0,0,0  
B) 1000  
C) 1;0;0;0  
D) 100
  
3. What is Structure Wizard?  
A) Allows user to import AUTOCAD DWG files  
B) A Library of pre-defined structural shapes  
C) Brings Excel sheet to STAAD.Pro  
D) All of the Above
  
4. In the mirror function which of the following statements is true  
A) I can mirror around any of the three main planes  
B) I can define a user-defined plane to mirror around it  
C) I can only mirror around X-Z plane  
D) There is only copy mode in mirror
  
5. If you delete nodes, the beams and plates attached to them will be intact  
A) True  
B) False
  
6. Instead of inputting cross section we can input Ix,Iy, Iz  
A) True but only for circular section  
B) False, you have to input cross-section always  
C) You have use the standard section available in wizard



  
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Principal  
SSM Institute of Engineering and Technology  
Kuttathupattu Village, Sindalagundi (P.O.),  
Palani Road, Dindigul 624 002



D) True for all sections

7. You can't assign a prismatic cross-section to steel beam

A) True

B) False

8. STAAD Pro

A) Has facility to declare Truss members

B) In space model can't differentiate between beams and Truss members

C) Will treat Truss members as ordinary members in Space structure

D) All of the above

9. You can't edit the floor load from the data area:

A) True

B) False

10. STAAD Pro perform Analysis is:

A) Taking into consideration the displacement of nodes

B) Taking into consideration the stiffness correction

C) Multi-iteration Analysis

D) None of the above

11. STAAD Pro Perform Analysis is:

A) Taking into consideration the Displacement of Nodes

B) Taking into consideration the Stiffness Correction

C) Multi-Iteration Analysis

D) None of the Above

12. You can also edit the parameters in structure wizards models.

A) True

B) False

13. In Concentrated Load, P is:

A) Value of Load    B) Force Direction    C) Perpendicular distance from the member

D) All of the above

14. How many types of meshing we have in STAAD.Pro?

A) 1    B) 2    C) 5    D) 4



*Handwritten signature in green ink.*

**Dr.D.SENTHIL KUMAR M.E (Ph.D., 2008)**  
Principal  
SSM Institute of Engineering and Technology  
Kuttichanpet Village, Chinnaiyagundu (Po),  
Palani Road, Dindigul - 624 002.

15. The minimum and maximum limits of number of divisions of each side are 1 to 100.

- A) True                      B) False

16. For Plates, Which one of the following is true?

- A) In order to release a Plate you can release the Beams holding the plate  
B) You can release the Nodes of the Plates.  
C) You can release more than one Nodes of the Plates.  
D) Options B & C.

17. With the help of which of the following functions, you can duplicate Nodes, Beams, and Plates, in the direction of X, Y, Z?

- A) Circular Repeat    B) Mirror    C) Translational Repeat    D) Insert Nodes

18. By default, Response Reduction Factor Value for Special RC Moment Resisting Frame is?

- A) 1                      B) 3                      C) 6                      D) 5


19. In floor load, Y is the:

- A) Affective height  
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D) All of the Above

20. In Meshing Parametric dialog box, by default, bias value is \_\_\_\_ and divi value is \_\_\_\_.

- A) Bias is 1 Divi is 15                      B) Bias is 1 Divi is 11                      C) Bias is 2 Divi is 10  
D) Bias is 1 Divi is 10



  
Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (MUS)  
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Kuthupatti Village, Sindalagundu (Po),  
Tamil Nadu, Dindigul - 624 002.



shreethi.c.

**STAAD PRO ASSESSMENT:**

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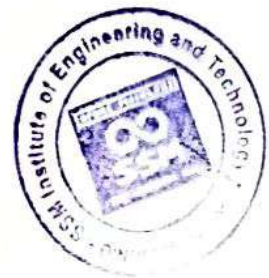
15  
20

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Dr.D.

**Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)**

Principal

SSM Institute of Engineering and Technology

Kuttalampatti Village, Sindalagundu (P.O.),

Palani Road, Dindigul - 624 002

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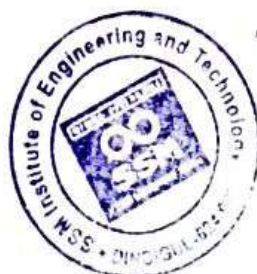
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Dr. D. SETHI, Director, I.T. & R.D., IIT  
SSM Institute of Engineering and Technology  
Kattankuppatti Village, Sindalagundu (Po),  
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Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
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SSM Institute of Engineering and Technology  
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R. Vallhaya Kumar

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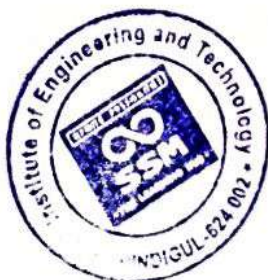
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- A) Bias is 1 Divi is 15 B) Bias is 1 Divi is 11 C) Bias is 2 Divi is 10  
D) Bias is 1 Divi is 10

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SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL - 624 002

Department of Civil Engineering

STUDENT FEEDBACK FORM

Name of the Student: *Vijayalakshmi. V*

Year/Sem: *IV ya*

Date: *15.10.20*

Dear Student,

You are required to give your feedback on the following aspects.

S No	Criteria	Rating				
		Excellent	Very good	Good	Fair	Satisfactory
1	Course content		✓			
2	Skill development		✓			
3	Motivation		✓			
4	Regularity and Punctuality of trainer		✓			
5	Coverage of syllabus	✓				
6	Interaction	✓				
7	Individual attention	✓				
8	Outcome		✓			

*[Signature]*  
Faculty In-charge

*[Signature]*  
HOD/Civil



*[Signature]*  
Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
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SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL - 624 002

Department of Civil Engineering

STUDENT FEEDBACK FORM

Name of the Student: Abinash

Year/Sem: IV yr

Date: 15.10.20

Dear Student,

You are required to give your feedback on the following aspects.

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5	Coverage of syllabus			✓		
6	Interaction			✓		
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Deenay

Faculty In-charge



Dr. D. Senthil Kumar

Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
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Kuttrathupatti Village, Sindalagundu (Po),  
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Hod/Civil



SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL - 624 002

Department of Civil Engineering

STUDENT FEEDBACK FORM

Name of the Student: *Ranya Si*

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5	Coverage of syllabus	<i>✓</i>				
6	Interaction	<i>✓</i>				
7	Individual attention		<i>✓</i>			
8	Outcome		<i>✓</i>			

*[Signature]*

Faculty In-charge



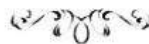
*[Signature]* *[Signature]*  
HoD/Civil

Dr.D.SENTHIL KUMARAN, M.E., Ph.D., (NUS)  
Principal  
SSM Institute of Engineering and Technology  
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Palani Road, Dindigul - 624 002



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# Certificate of Completion



AWARDED TO

**SHAHD AFRID S**

on successful completion of

**COMPUTER AIDED STRUCTURAL ANALYSIS AND DESIGN using STAAD  
Pro. V8i - VALUE ADDED COURSE at SSM INSTITUTE OF ENGINEERING AND  
TECHNOLOGY, Dindigul During October 1<sup>st</sup>, 2020 - October 15<sup>th</sup>, 2020**



**Course Advisor**

Er. S. SAKTHIVEL B.E., A.M.I.E., F.I.V.,  
Structural Consultant, Registered Valuer for Wealth Tax (13/2013-2014)



**Head - Training**

Er. S. ANTONY JEYENDRAN M.E. (Struct.), M.I.E., F.I.V.,  
Proprietor - CONCEPTUEURS



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**Date of Issue - December 7<sup>th</sup>, 2020**



**Dr. D. SENTHIL KUMARAN, M.E., Ph.D., (MUS)**

Principal

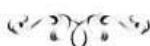
SSM Institute of Engineering and Technology  
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Palani Road, Dindigul - 624 002.





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## Credentials



Student Name : SHAHD AFRID S  
Register No. : ASO200067  
Course Instructor : Er.S.Antony Jeyendran B.E., M.E.(Struc.), M.I.E., F.I.V

### Computer Aided Structural Analysis and Design of Structures - VAC

#### Module I - Basics

Basics of Structural Analysis and Design, Finite Element Analysis Concepts, Geometry Creation(STAAD Editor, GUI, Structure Wizard), Beams, Move, Repeat Commands, Geometry Menu, Select Menu, Tools Menu

#### Module II - Specifications, Loads and Analysis

Material Property, Member Property, Member Specifications, Supports, Primary Loads, Selfweight, Nodal Loads, Member Loads, Floor Loads, Area Loads, Secondary Loads, Load combinations(Manual & Automatic), Perform Analysis Command, Analysis, Result Interpretation

#### Module III - Post Processing, Structural Design and Detailing

Post Processing Mode, Post Processing Print Commands, BMD and SFD, Reinforced Concrete Design, Steel Design, Result Interpretation, Detailing Basics

#### Module IV - Plates, Wind and Seismic

Plates, Surface Meshing, Plate Properties, Plate Specifications, Plate Loads, Wind Load Definition, Wind Load, Seismic Load Definition, Seismic Load, Response Spectrum Analysis

#### Module V - Project

RCC - Residential

RCC - Water Tanks (Plates)

Steel - Framed Structure

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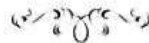


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**NITHEESH KUMAR S**

on successful completion of

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**Course Advisor**

Er.S.SAKTHIVEL B.E., AMIE, FIV,  
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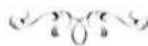
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## Credentials



Student Name : NITHEESH KUMAR S  
Register No. : ASO200047  
Course Instructor : Er.S.Antony Jeyendran B.E., M.E (Struc.), M.I.E., F.I.V

### Computer Aided Structural Analysis and Design of Structures - VAC

#### Module I - Basics

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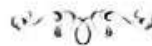


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**RAHUL R**

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**Course Advisor**

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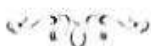






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## Credentials



Student Name : RAHUL R  
Register No. : ASO200057  
Course Instructor : Er.S.Antony Jeyendran B E , M E (Struc ) , M I E , F I V

### **Computer Aided Structural Analysis and Design of Structures - VAC**

#### **Module I - Basics**

Basics of Structural Analysis and Design, Finite Element Analysis Concepts, Geometry Creation(STAAD Editor, GUI, Structure Wizard), Beams, Move, Repeat Commands, Geometry Menu, Select Menu, Tools Menu

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