FACULTY DEVELOPMENT PROGRAMME

REPORT

ON

STRUCTURAL DESIGN USING STAAD.PRO

A PRACTICAL APPROACH

Organized by

DEPARTMENT OF CIVIL ENGINEERING
PMIST

DATE: April 17-22, 2023

TABLE OF CONTENT

1. OBJECTIVES OF THE PROGRAMME

STAAD Pro is a structural design with a user interactive interface which allows for the user working on it extremely easy. It can be used for modeling, analyzing and designing various structures such as towers, buildings, bridges, transportation facilities, utility and industrial structures. This can be utilized for designing building structures incorporating culverts, petrochemical plants, bridges, tunnels, piles and construction materials such as timber, steel, concrete, aluminum and cold-formed steel. This software can be used for all kinds of buildings of various architectural drawings under a plethora of loads. Steel buildings and connections can also be designed and successfully rendered to view the real-life resembling images for detailed clarity. To understand the Course contents as mentioned: Model Generation and Editing, Introduction to Loading, Automatic Load Generation, Concrete Design, Seismology, Steel Design, Report Generation and Foundation Design.

DEPARTMENT OF CIVIL ENGINEERING

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Email: headce@pmu.edu Web: www. pmu.edu

PERIYAR MANIAMMAI INSTITUTE OF SCIENCE & TECHNOLOGY
(Deemed to be University)
Established Under Sec. 3 of UGC Act, 1956 • NAAC Accredited
think • innovate • transform

Inauguration

A Five Day FDP on

Structural Design using STAAD.Pro – A Practical Approach

April 17-22, 2023

Date : 17.04.2023
Time : 10:00 AM

Venue: Marie Curie,
(Technical Block – I)

Welcome Address	:	**Dr. D.THAYALNAYAKI** Assistant Professor (SG) & Head Department of Civil Engineering
Felicitation Address	:	**Dr. V.A. SHANMUGAVELU** Associate Professor Department of Civil Engineering
Presidential Address	:	**Dr. S. SENTHAMIL KUMAR** Professor Dean- Faculty of Engineering and Technology
Key note about FDP	:	**Mr. G. THIRUMAL MURUGAN** Assistant Professor Department of Civil Engineering
Vote of Thanks	:	**Mr. D. Narendraprasad** Assistant Professor Department of Civil Engineering

3.BROCHURE

PERIYAR MANIAMMAI INSTITUTE OF SCIENCE & TECHNOLOGY

DEPARTMENT OF CIVIL ENGINEERING

ONE WEEK FDP
ON

STRUCTURAL DESIGN USING STAAD.PRO - A PRACTICAL APPROACH

APRIL 17-22, 2023

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About PMIST

Periyar Maniammai Institute of Science & Technology is proud to be a unique institution of higher learning and academic excellence. In an endeavor to fulfill the dreams of our Mentors Thanthai Periyar and Annai Maniammaiyar, the Institute is dedicated to its societal responsibility for transforming students from different parts of India and abroad into stalwarts by igniting their hidden talents. The University is committed to a green policy which includes sustainable development activities like landscaping and vegetation, water conservation, energy conservation, waste management and green building materials like fly-ash bricks. The Institution aims to achieve Zero Carbon Footprint by 2030. One of the ways identified for achieving this goal is reduction of wastage in energy and increasing the use of renewable energy. All pervasive greenery on the sprawling premises of the institution symbolizes the institution's success in countering environmental pollution and promoting Eco-friendliness

About the Department

Department of Civil Engineering was established in the year 1989 with B.E. degree programme in Civil Engineering and accredited by AICTE. Civil Engineering has a special status in Engineering education with the latest development in construction projects Outcome Based education is followed to educate, develop and train students to emerge as highly skilled Civil Engineers capable of designing, constructing and maintaining eco-friendly structures with hands on training in practical industrial consultancy services. The department of Civil Engineering offers quality engineering education by imparting content beyond syllabus for the attainment of course outcomes and program outcomes. The department has framed well-structured vision and Mission to attain the Institution Vision in consultation with the faculty members,
stakeholders and other administrators of the Institution.

About STAAD pro

STAAD Pro is a structural design with a user interactive interface which allows for the user working on it extremely easy. It can be used for modeling, analyzing and designing various structures such as towers, buildings, bridges, transportation facilities, utility and industrial structures. This can be utilized for designing building structures incorporating culverts, petrochemical plants, bridges, tunnels, piles and construction materials such as timber, steel, concrete, aluminum and cold-formed steel. This software can be used for all kinds of buildings of various architectural drawings under a plethora of loads. Steel buildings and connections can also be designed and successfully rendered to view the real-life resembling images for detailed clarity.

About FDP

This course is specifically designed to cater the needs of civil engineering students and working professional to enrich the knowledge in structural engineering. It offers detailed knowledge on analysis and design of structures using STAADpro software. It completely covers model making, loading, member specifications, analysis, interpretation of results, and design of slabs, beams, column and footing. It also focused on reinforcement detailing and preparation of structural drawings.

Course contents:

- Model Generation and Editing
- Introduction to Loading
- Automatic Load Generation
- Concrete Design
- Seismology
- FEM / FEA
- Steel Design
- Report Generation
- Foundation Design

Eligibility:

The program is open to the Faculty of Engineering Colleges / Universities and other allied disciplines. Industry personnel working in the concerned/allied discipline and students can also attend.

How to apply:

Participants are required to fill the online registration form:
Click Here
Registration Fee Particulars:
Faculty and students: Rs 1500/- + GST (Rs.270)
Industry Participants: Rs 2000/- + GST (Rs.360)
Participants need to pay the Registration Fee Online using the following online transfer details:

Online transfer details

Account Name:
Account No:
IFSC Code: IOBA0001961
Bank and Branch: Indian Overseas Bank, Vallam
G- Pay

Important dates:

Last date for registration with fee: 12th April, 2023
Selection List by Email: 13th April, 2023

Selection Criteria:
Selection will be done based on first-come-first-serve basis to a maximum number of 20. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the online payment will be sent back. Candidates will be issued satisfactory certificates on successful completion of the course.

Coordinators

G.Thirumal Murugan, Assistant Professor,
D.Narendra Prasad, Assistant Professor,
Dr.VA.Shanmugavelu, Associate Professor,
Department of Civil Engineering
PMIST, Thanjavur, Tamilnadu.

Contact

9500978123, 9994288395, 9790035742
thirumalmurugang@pmu.edu
Marie Curie Hall

4.Programme Schedule

DEPARTMENT OF CIVIL ENGINEERING

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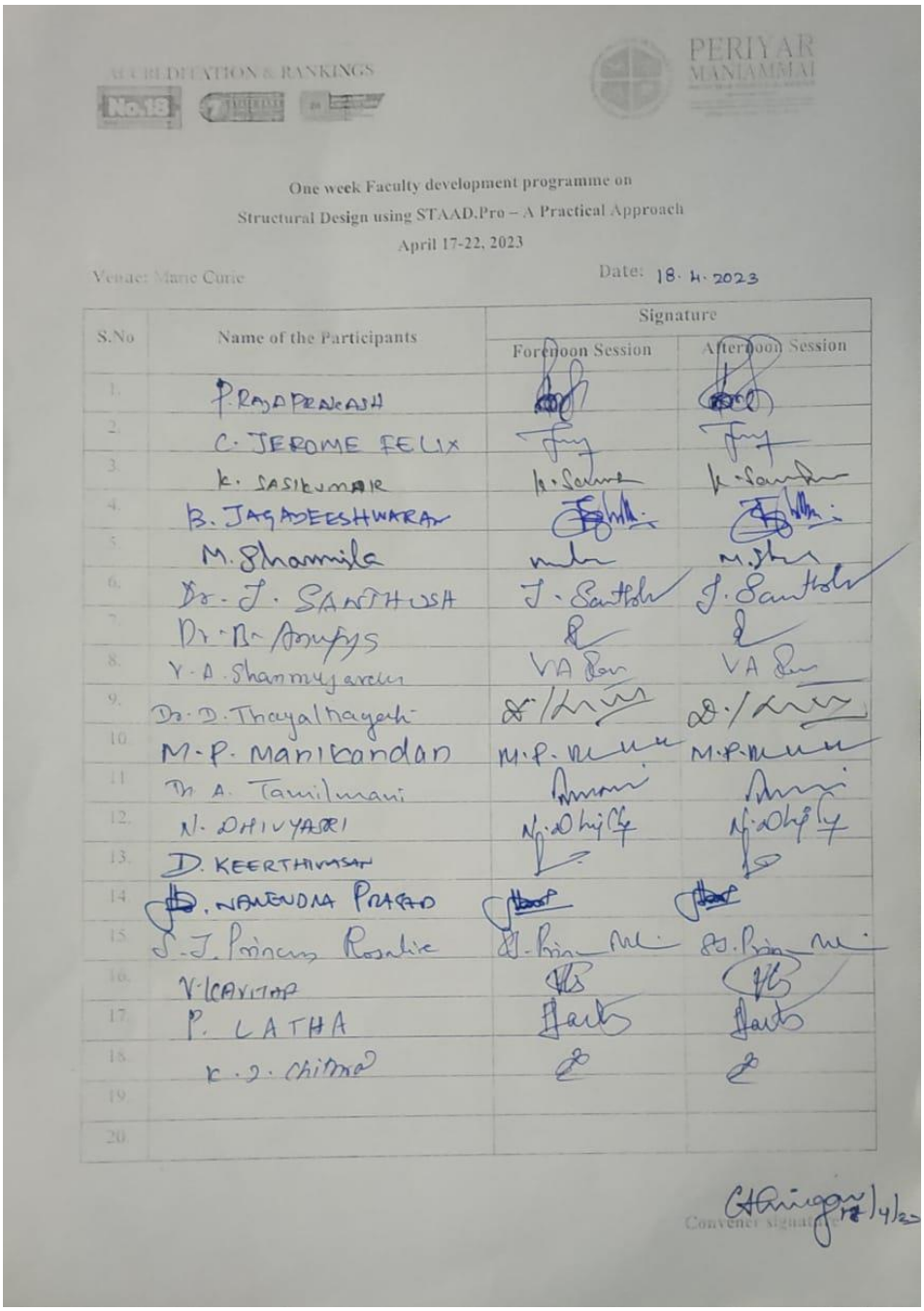
April 17-22, 2023

Programme Schedule

Date	10 am to 11 am	11am to 11.20 am	11.20 am to 1 pm	1 pm to 2pm	2pm to 3.15 pm	3.15 pm to 3.30 pm	3.30 pm to 4.30pm
17.04.2023	Introduction about Reinforced concrete design	TEA BREAK	RCC structures analysis	LUNCH BREAK	Practice in lab (GIS lab)	TEA BREAK	Practice in lab (GIS lab)
18.04.2023`	Design of RCC element		Design of RCC element				
19.04.2023	Introduction about wind load and seismic load		Design of RCC element according to wind load and seismic load				
20.04.2023	Introduction about industrial structures		Design of steel truss				
21.04.2023	Design of special structures		Design of special structures		Feedback session	Valediction	
22.04.2023	Online Evaluation / Feedback session (online)						

5. Sample Attendance



PERIYAR MANIAMMAI

One week Faculty development programme on

Structural Design using STAAD.Pro – A Practical Approach

April 17-22, 2023

Venue: Marie Curie

Date: 18.4.2023

S.No	Name of the Participants	Signature	
		Forenoon Session	Afternoon Session
1.	P. RAJAPRAKASH		
2.	C. JEROME FELIX		
3.	K. SASIKUMAR		
4.	B. JAGADEESHWARAN		
5.	M. Shamila		
6.	Dr. J. SANTHOSH		
7.	Dr. R. Anupys		
8.	V. A. Shanmuganeeru		
9.	Dr. D. Thayalnayaki		
10.	M. P. Manikandan		
11.	Dr. A. Tamilmani		
12.	N. DHIVYASRI		
13.	D. KEERTHIVASAN		
14.	D. NARENDRA PRASAD		
15.	S. J. Princy Rosalin		
16.	V. KAVITHA		
17.	P. LATHA		
18.	K. J. Chitra		
19.			
20.			

Convener Signature 18/4/23

6. Programme Report

Venue : Mari Curie Hall / GIS Lab

No. of Participants : 18

Workshop Highlights

- Structural Analysis capabilities of STAAD Pro.
- Preprocessing, analysis and post processing
- Types of Structural Analyses
- Types of static and dynamic loadings
- Reinforced Concrete and Steel
- Advanced concrete design

Description of the Event

Day 1	• Introduction to general features in STAAD PRO. • Introduction to Staad and its components. • Introduction to Structural Analysis • Role of Structural Analysis in Civil Engineering Projects • Classification of Structures • Analytical Models
Day 2	• Analysis of Portal Frame. • Modelling of 3D Portal Frame. • Analysis and Design of Reinforced Concrete Structures • Super Structure Design 3 Covers both Steel and Concrete Members
Day 3	• Performing Analysis after Design. • Working with Editor Input file of Staad. • Familiarity with Various Commands used in Staad Input File. • Using Post Processing Command in the Structure. • Analyzing various Analysis Results at various members and Joints. • Viewing Staad Output File 3 Design File of Structure.
Day 4	• Analysis of Plane Truss • Design of steel truss
Day 5	• Analysis of liquid retaining. Example: Over Head water tank. • Stadd foundation
Day 6	Evaluation of knowledge of the participants regarding understand level of STADD Pro.

7. Certificate

8. Geotagged Photo (Online screen shots Photos)

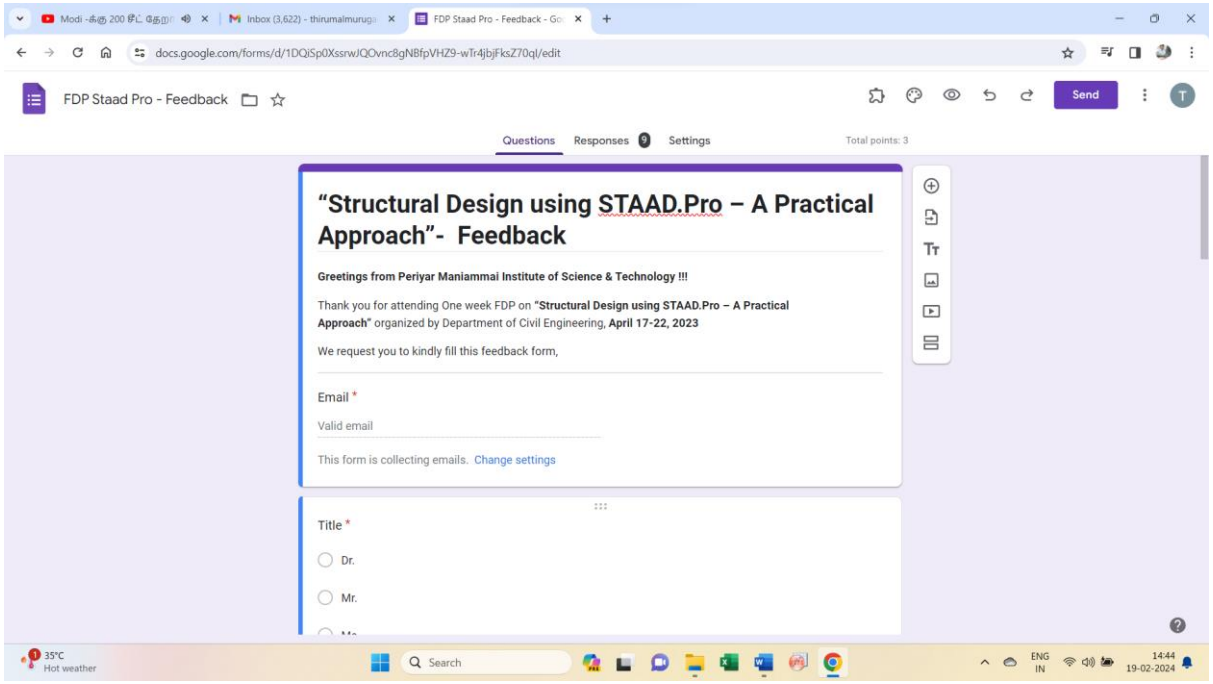
A View of FDP on STADD Pro – Feedback Session

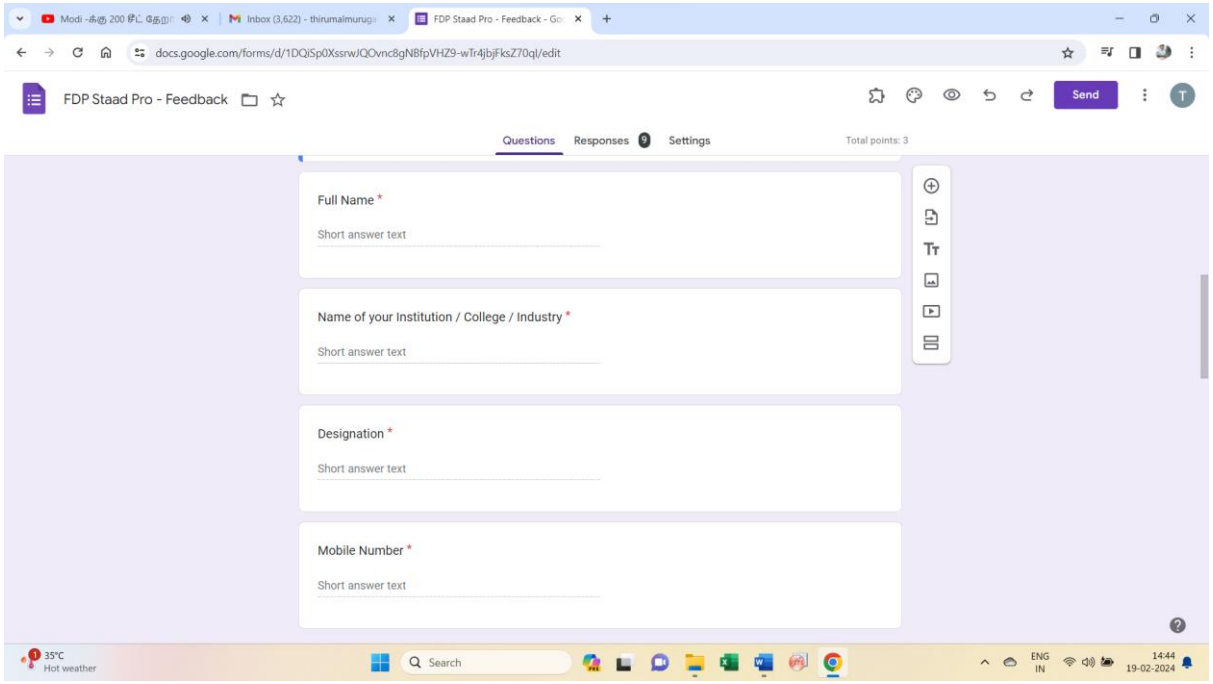
Certificate Distribution to the participants by our honorable VC Sir.

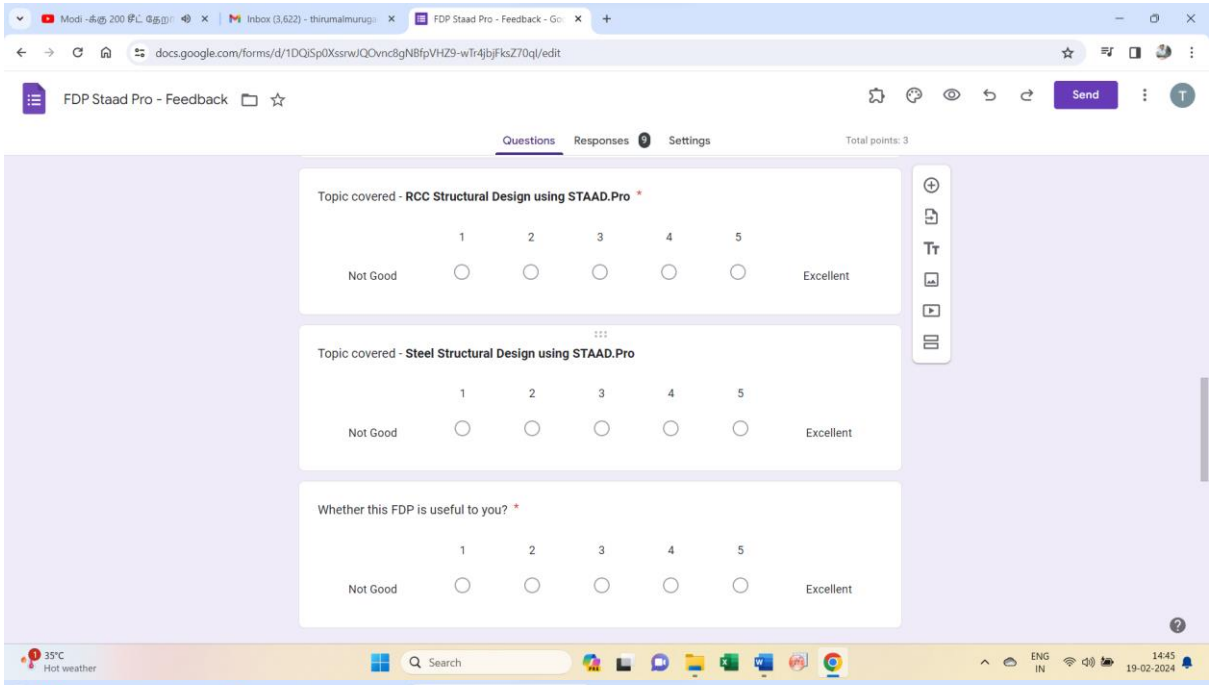
Certificate Distribution to the participants by our honorable VC Sir.

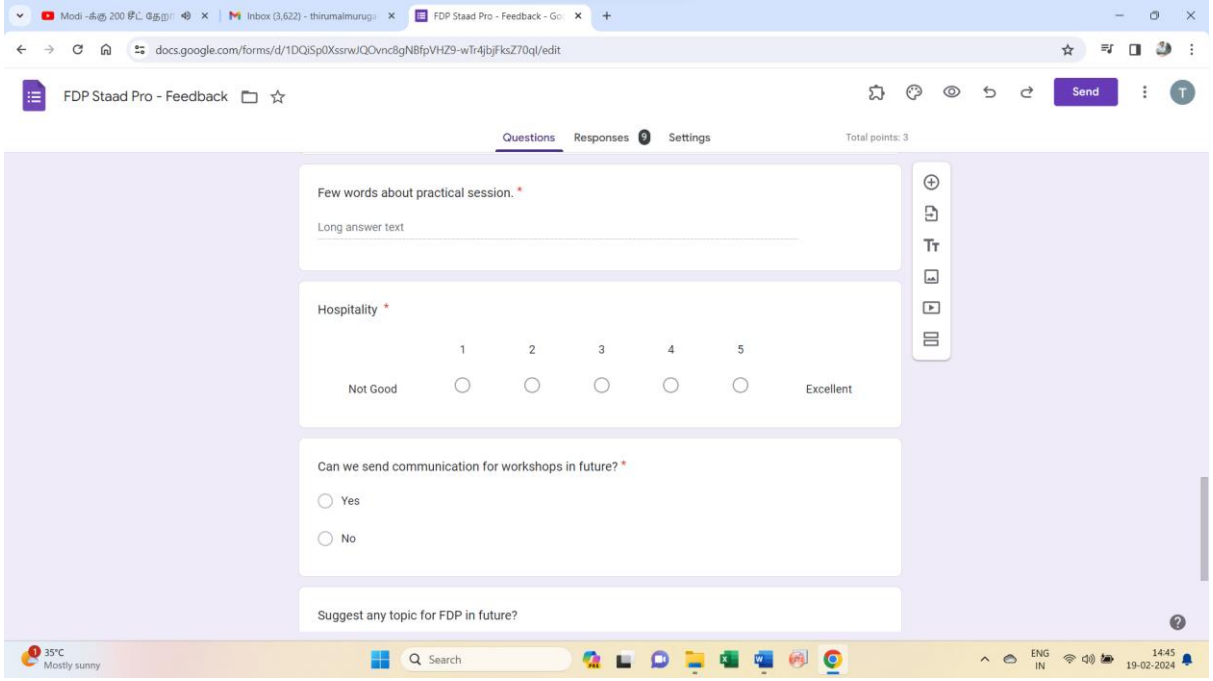
Feed back given by the participants

9. Feedback Form






FDP Staad Pro - Feedback
Send
Questions
Responses 9
Settings
Total points: 3
Topic covered - RCC Structural Design using STAAD.Pro *
1 2 3 4 5
Not Good
Excellent
Topic covered - Steel Structural Design using STAAD.Pro
1 2 3 4 5
Not Good
Excellent
Whether this FDP is useful to you? *
1 2 3 4 5
Not Good
Excellent


FDP Staad Pro - Feedback
Send
Questions
Responses 9
Settings
Total points: 3
Few words about practical session. *
Long answer text
Hospitality *
1 2 3 4 5
Not Good
Excellent
Can we send communication for workshops in future? *
Yes
No
Suggest any topic for FDP in future?

10. Outcomes of the programme

Totally 18 participants are benefited from this FDP. Out off 18 participants 5 real time practicing engineers are attended. The participants got knowledge on analysis and design of structures like RCC and Steel structures by using the STADD Pro software. Student know to perform code check, member selection and optimized member selection consisting of analysis/design cycles.