



**2023**

**FDP**

**REPORT**

**TITLE**

**ANSYS FLUENT FOR BEGINNERS**

**25-07-2023 TO 27-07-2023**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**SAKTHI POLYTECHNIC COLLEGE**

**SAKTHI NAGAR, ERODE – 638315**

**COORDINATOR : Dr. A.SHYAM**

- Three-day Faculty Development Programme (FDP) on “ANSYS Fluent for Beginners” was conducted through online mode (Google Meet Platform) from 25<sup>th</sup> to 27<sup>th</sup> July 2023.
- The FDP Brochure was posted in the social media for wide publicity.

#### ORGANIZING COMMITTEE

<b>Chief Patron</b>	<b>Thiru. G. Muniyasamy</b> Correspondent, Sakthi Polytechnic College Sakthi Nagar – 638315
<b>Patron</b>	<b>Dr. N. Thangavelu</b> Principal, Sakthi Polytechnic College Sakthi Nagar – 638315
<b>Coordinator</b>	<b>Dr. A. Shyam</b> Lecturer, Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar – 638315
<b>Co-Coordinator</b>	<b>Mr. P. Kanagaraj</b> Lecturer, Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar – 638315

#### WHO CAN ATTEND

- Academicians
- Research scholars
- UG/PG students

#### REGISTRATION FORM

• Name : .....

• Gender : .....

• Qualification : .....

• Designation : .....

• Department : .....

• Institution : .....

• Address for Communication: .....

..... PIN.....

• E-mail : .....

• Phone (Off.) : .....

• Mobile No. : .....

#### Declaration

I declare that all the details furnished above are true to the best of my knowledge and I agree to abide by the rules and regulations governing the conduct of programme.

Date: \_\_\_\_\_ Signature of the Applicant

#### Sponsorship certificate

Dr./Mr/Mrs/Ms .....  
is an employee of our Institute and is hereby sponsored by us. He/She will be permitted to attend the online FDP, if selected.

Signature with seal of Head of the Institution  
/organization

#### ABOUT THE INSTITUTION

Sakthi Polytechnic College is functioning under the aegis of Sakthi Foundation Trust. Padma Bhushan Dr.N.Mahalingam, the famous industrialist and educationalist was the promoter and president of the foundation. The main objective of this institution is to impart quality technical education to the rural students. The institution is managed by a Governing Council with Dr M.Manickam Executive as Chairman. Representatives and experts from the fields of education and industry form the members of the Council. The institution has been approved by the All India Council for Technical Education (AICTE). Sakthi Polytechnic College is a Government Aided institution offering eight diploma programmes Recently five diploma programmes were accredited by NBA.

#### ABOUT THE DEPARTMENT

The Mechanical Engineering Department is a NBA accredited programme came in to existence in the year 1981 which is one of the oldest among the other diploma courses in Sakthi Polytechnic College. The department has achieved great success in engineering with extensive development of its students. Mechanical engineering is an important branch that requires a lot of practical and theoretical research. To achieve this, we have a highly qualified faculty team and well-maintained laboratories and workshops. Since its establishment, the Mechanical Engineering Department has maintained a steady growth in all areas of its activity and has played a key role in creating a vibrant and positive academic environment within the college.

#### REGISTRATION DETAILS

- Maximum of 100 participants are permitted to attend.
- WhatsApp and meeting link will be intimated through E-mail.
- Registration fee of Rs.150/- (Non-Refundable, Pay using SBI Collect details given below)
- Submit the payment screenshot and transaction details using the registration link

#### SBI COLLECT PAYMENT DETAILS

- Go to <https://www.onlinesbi.sbi/sbicollect/>
- Select "Educational Institutions" Category
- Search "Sakthi Polytechnic College"
- Filter by State "Tamil Nadu"
- Select payment category as "Registration Fees"
- Select Rs.150/-
- Give the required details and pay.

#### LINK FOR REGISTRATION FORM

Click the link below for registration  
<https://forms.gle/VZeuy3aN6FrQ4p8B9>

Any queries Contact : +91 9551386738,  
+91 9940771643



**SAKTHI POLYTECHNIC COLLEGE**  
**SAKTHI NAGAR – 638315**

**Department of Mechanical  
Engineering**  
**Organizing**

**Online Three Day Faculty  
Development Programme (FDP)**  
**on**  
**“ANSYS FLUENT FOR BEGINNERS”**

**25-07-2023 to 27-07-2023**

#### Important Dates:

**Last Date of Submission : 20.07.2023**  
**Intimation of Selection : 22.07.2023**

#### PROGRAM OVERVIEW

- Introduction to CFD
- Introduction to ANSYS Workbench
- Basics, Sketching in ANSYS Design Modeler
- ANSYS Meshing
- Setting Up the CFD Simulation in ANSYS Fluent
- Fluid Flow and Heat Transfer Applications
- Introduction to User Defined Functions (UDF)

#### CERTIFICATION

The e-Certificate will be provided to the participants those who are securing minimum attendance and assessment marks.

#### PROGRAM SCHEDULE

##### DAY 1 (25.07.2023)

- **Session #1** (10 am to 12 pm) : Introduction to CFD & ANSYS Workbench
- **Session #2** (02 pm to 04 pm) : Basics, Sketching in ANSYS Design Modeler & ANSYS Meshing

##### DAY 2 (26.07.2023)

- **Session #1** (10 am to 12 pm) : Setting Up the CFD Simulation in ANSYS Fluent
- **Session #2** (02 pm to 04 pm) : Fluid Flow and Heat Transfer Applications

##### DAY 3 (27.07.2023)

- **Session #1** (10 am to 12 pm) : Fluid Flow and Heat Transfer Applications & UDF
- **Session #2** (02 pm to 04 pm) : Assessment, Feedback & Valediction

- Total 38 participants registered through google form.
- All the 38 participants were shortlisted, approved and intimated.
- List of Approved Participants is tabulated below

S.No.	Name	Designation	Institute Name
1	B Selvasundaram	Lecturer	Sankar polytechnic college (Autonomous), Sankar nagar
2	Syed Mustafkhadri	Research Scholar	University B. D. T College of Engineering, Davangere
3	Dr. Aditya Pandey	Assistant Professor	BIT Sindri, Dhanbad, 828123
4	K.S.Raghul Anandh	Lecturer	SSM Polytechnic College Komarapalayam
5	Sakthivel P	Lecturer	Muthayammal Polytechnic Institution
6	Manikandan.R	Assistant Professor	M.Kumarasamy College of Engineering
7	Shubha T C	Assistant Professor	Government Engineering College, Haveri
8	K.Manikandan	Head of Department	830-Muthayammal polytechnic institution
9	S Bala Mohan	Lecturer In Mechanical Engineering	Government Polytechnic College - Simhadripuram
10	Midhun R	HOD / Assistant Professor	Sree Sakthi Engineering College
11	Subhajit Nayek, S.N.	Lecturer	Birla Institute of Technology, 56, B.T.Road, Kolkata 700050.
12	Mr. Sarode Kunal Vishwanath	Lecturer	SNJB,S SHHJB Polytechnic, Chandwad, Nashik, Maharastra
13	Hurmathulla Khan	Assistant Professor	HMS Institute of Technology, NH-4,Kesarmudu post, Karnataka
14	Karthik T	Assistant Professor	Kumaraguru College of Technology
15	Amruta Pravin Rananaware	Assistant Professor	Jayawantrao Sawant College of Engineering, Pune.
16	Archana Devi D	Lecturer	Mohamed Sathak Polytechnic College, Kilakarai
17	Abhay Rajan	Assistant Professor	NSS College of Engineering Palakkad
18	Kalingaraj.N	Lecturer	212, Nachimuthu Polytechnic College, Pollachi
19	Mr Saurabh Das	Lecturer	Global Institute of Science and Technology

<b>S.No.</b>	<b>Name</b>	<b>Designation</b>	<b>Institute Name</b>
20	Sandeep Yadav	Assistant Professor	MBM University, Jodhpur, Rajasthan
21	Ganesh Jagannath Pagar	Research Scholar	MET BKC IOE, Nashik
22	Dr. Ritwik Das	Lecturer	Global Institute of Science & Technology, ICARE Complex, Haldia
23	Mr. Suvadip Sukul	Lecturer	Global Institute of Science & Technology, ICARE Complex, Haldia
24	Sk Aminul Islam	Lecturer	Global Institute of Science & Technology, ICARE Complex, Haldia
25	Mr. Soumya Kanti Mandal	Lecturer	Global Institute of Science & Technology, ICARE Complex, Haldia
26	Mr. Debajyoti Mukherjee	Lecturer	Global Institute of Science & Technology, ICARE Complex, Haldia
27	Ms. Priyanka S.Barde	Assistant Professor	Jayawantrao sawant college of Engineering, Hadapsar, Pune
28	Ms. Renuka S. Kanojiya	Assistant Professor	Jayawantrao Sawant College of Engineering, Hadapsar, Pune
29	Sivakumar A	Lecturer	Nachimuthu Polytechnic college
30	Yamini Kasu	Assistant Professor	CMR college of engineering and technology
31	Sarathkumar C	Lecturer	134, Government Polytechnic College, Sankarapuram-606401
32	Anees K J	Assistant Professor	Government Engineering College Idukki
33	Velmurugan T	Lecturer	134-Government polytechnic College, Sankarapuram, Kallakurichi district.
34	Karthik S	Lecturer	134 Government Polytechnic College Sankarapuram
35	Dr. B. Naveen	Lecturer	Government polytechnic college, R K Nagar
36	Akhil C.K	Assistant Professor	Sanjay Ghodawat University, Kolhapur
37	Dr Eknath Nivrutti Aitavade	Asst Prof	JSPMs JSCOE PUNE
38	E.Petchimuthu	Student	National Engineering College, Kovilpatti, Thoothukudi(Dist)

- An official WhatsApp group has been created for seamless communication between the organizers and the participants.



**SPC\_MECH\_FDP\_ANSYS**  
WhatsApp group



This group QR code is private. If it is shared with someone, they can scan it with their WhatsApp camera to join this group.

- FDP schedule, Inaugural invitation and agenda was shared to all the participants through WhatsApp group.
- The Chief guest Dr. S.Iniyan, Former Dean, CEG Campus, Anna University, Chennai, Tamilnadu was invited to inaugurate the FDP.



**SAKTHI POLYTECHNIC COLLEGE**

*Government Aided Polytechnic College, Sakthi Nagar - 638315*

**Department of Mechanical Engineering**

*(NBA Accredited)*

*Cordially invite you to the*

**INAUGURAL CEREMONY**

*Faculty Development Programme (FDP) on*  
**“ANSYS FLUENT FOR BEGINNERS”**

**25.07.2023 to 27.07.2023**

*Chief Guest*

**Dr. S.Iniyan**

*Former Dean, CEG Campus,  
Anna University, Chennai*

*Patron*

**Dr. N.Thangavelu**

*Coordinator*

**Dr. A.Shyam**

*Lecturer, Mech*

*Principal*

*Co-coordinator*

**Mr.P.Kanagaraj**

*Lecturer, Mech*

*On*

**25.07.2023**

*Time: 10.00 am*

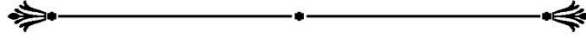
*Venue: Google Meet*





# SAKTHI POLYTECHNIC COLLEGE

Government Aided Polytechnic College, Sakthi Nagar, Erode – 638315



## INAUGURAL CEREMONY

### AGENDA

**Date: 25.07.2023**

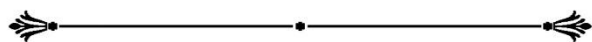
**Time: 10.00 am to 10.30 am**

- Welcome Address** : **Mr. P.Kanagaraj**  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar – 638315.
- Presidential Address** : **Dr. N.Thangavelu**  
Principal,  
Sakthi Polytechnic College,  
Sakthi Nagar – 638315.
- About Chief Guest** : **Dr. A.Shyam**  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar – 638315.
- Chief Guest** : **Dr. S.Iniyan**  
Former Dean,  
CEG Campus,  
Anna University,  
Chennai.
- Vote of Thanks** : **Mr. P.Kanagaraj**  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar – 638315.



# SAKTHI POLYTECHNIC COLLEGE

Government Aided Polytechnic College, Sakthi Nagar, Erode – 638315

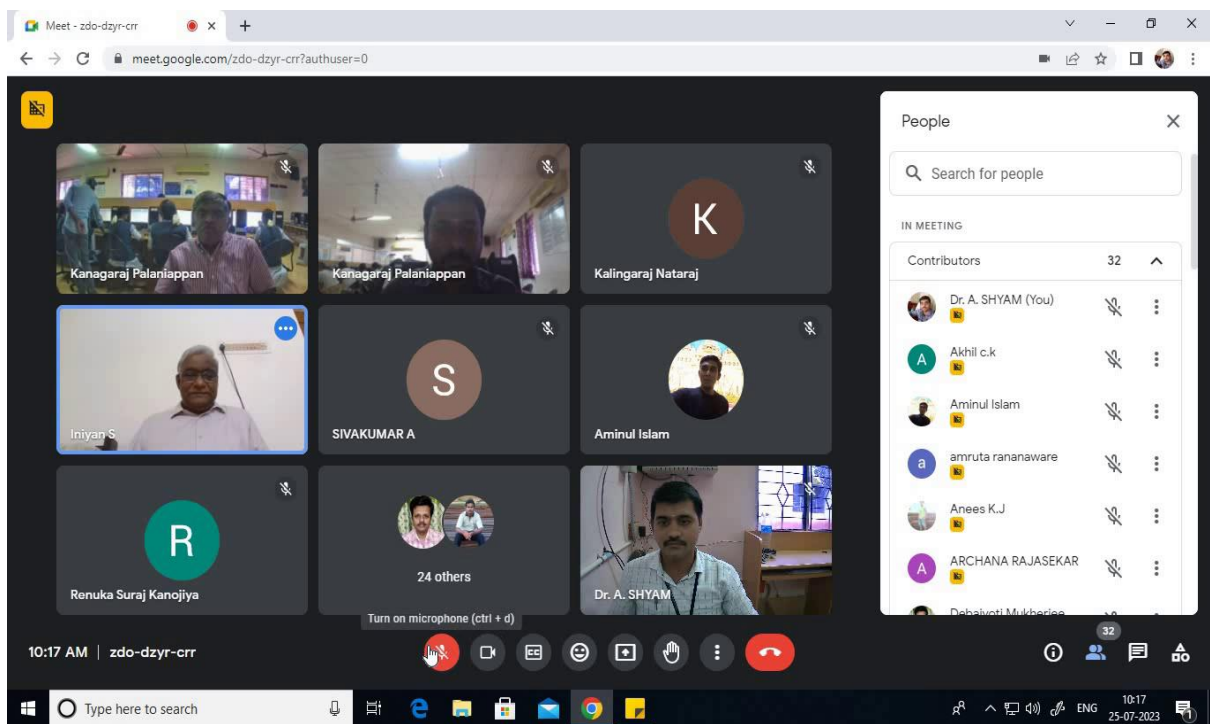
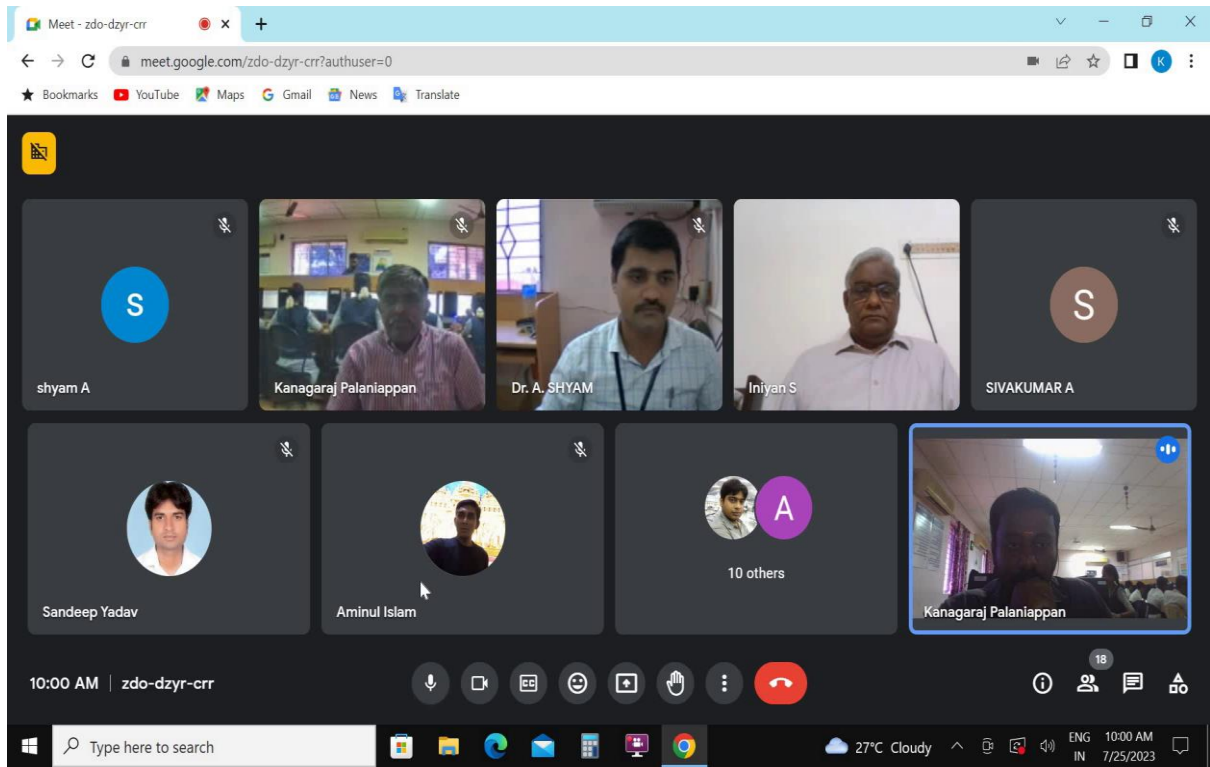


## FDP Schedule

Date	Session	Time	Topic
25.07.2023	I	10.30 am to 12.00 pm	Introduction to CFD & ANSYS Workbench
	II	02.00 pm to 04.00 pm	Basics, Sketching in ANSYS Design Modeler & ANSYS Meshing
26.07.2023	I	10.00 am to 12.00 pm	Setting Up the CFD Simulation in ANSYS Fluent
	II	02.00 pm to 04.00 pm	Fluid Flow and Heat Transfer Applications
27.07.2023	I	10.00 am to 12.00 pm	Fluid Flow and Heat Transfer Applications & UDF
	II	02.00 pm to 04.00 pm	Assessment, Feedback & Valediction

- In the first day (25.07.2023), the inaugural ceremony was conducted in the presence of Dr. N.Thangavelu, Principal, Dr. S.Iniyan, Chief Guest, Dr. A.Shyam, Coordinator and Mr. P.Kanagaraj, Co-coordinator.





- The Coordinator of the programme welcomed all the participants and initiated the first session.
- At the end of each session, a feedback cum attendance form has been collected (google form) from the participants for rendering their views.
- The screenshot of some sessions are as below,

Meet - zdo-dzyr-crr

meet.google.com/zdo-dzyr-crr?authuser=0

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

**FACULTY DEVELOPMENT PROGRAMME (FDP) ON  
"ANSYS FLUENT FOR BEGINNERS"**

**Session #1**

**Introduction to CFD & ANSYS Workbench**

By  
**Dr. A.SHYAM M.E., PhD**

10:21 AM | zdo-dzyr-crr

28°C Cloudy

ENG 10:21 AM IN 7/25/2023

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

**Navier-Stokes Equations**

$$\rho \left( \frac{\partial u_x}{\partial t} + u_x \frac{\partial u_x}{\partial x} + u_y \frac{\partial u_x}{\partial y} + u_z \frac{\partial u_x}{\partial z} \right) = -\frac{\partial p}{\partial x} + \mu \left[ \frac{\partial^2 u_x}{\partial x^2} + \frac{\partial^2 u_x}{\partial y^2} + \frac{\partial^2 u_x}{\partial z^2} \right] + \rho g_x$$

$$\rho \left( \frac{\partial u_y}{\partial t} + u_x \frac{\partial u_y}{\partial x} + u_y \frac{\partial u_y}{\partial y} + u_z \frac{\partial u_y}{\partial z} \right) = -\frac{\partial p}{\partial y} + \mu \left[ \frac{\partial^2 u_y}{\partial x^2} + \frac{\partial^2 u_y}{\partial y^2} + \frac{\partial^2 u_y}{\partial z^2} \right] + \rho g_y$$

$$\rho \left( \frac{\partial u_z}{\partial t} + u_x \frac{\partial u_z}{\partial x} + u_y \frac{\partial u_z}{\partial y} + u_z \frac{\partial u_z}{\partial z} \right) = -\frac{\partial p}{\partial z} + \mu \left[ \frac{\partial^2 u_z}{\partial x^2} + \frac{\partial^2 u_z}{\partial y^2} + \frac{\partial^2 u_z}{\partial z^2} \right] + \rho g_z$$

$$\rho \frac{D}{Dt} v = -\nabla p + \mu \nabla^2 v + \rho g$$

Source: ANSYS, Inc. & Dr. Sharad N. Pachpute, IITD

10:35 AM | zdo-dzyr-crr

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

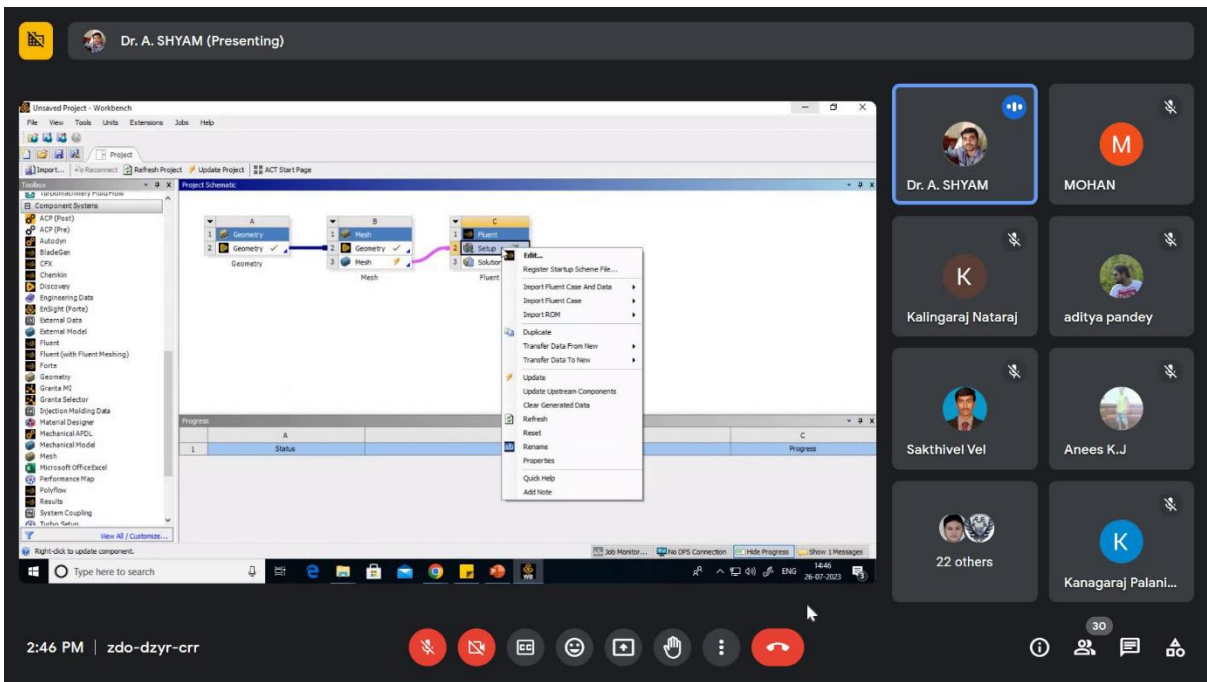
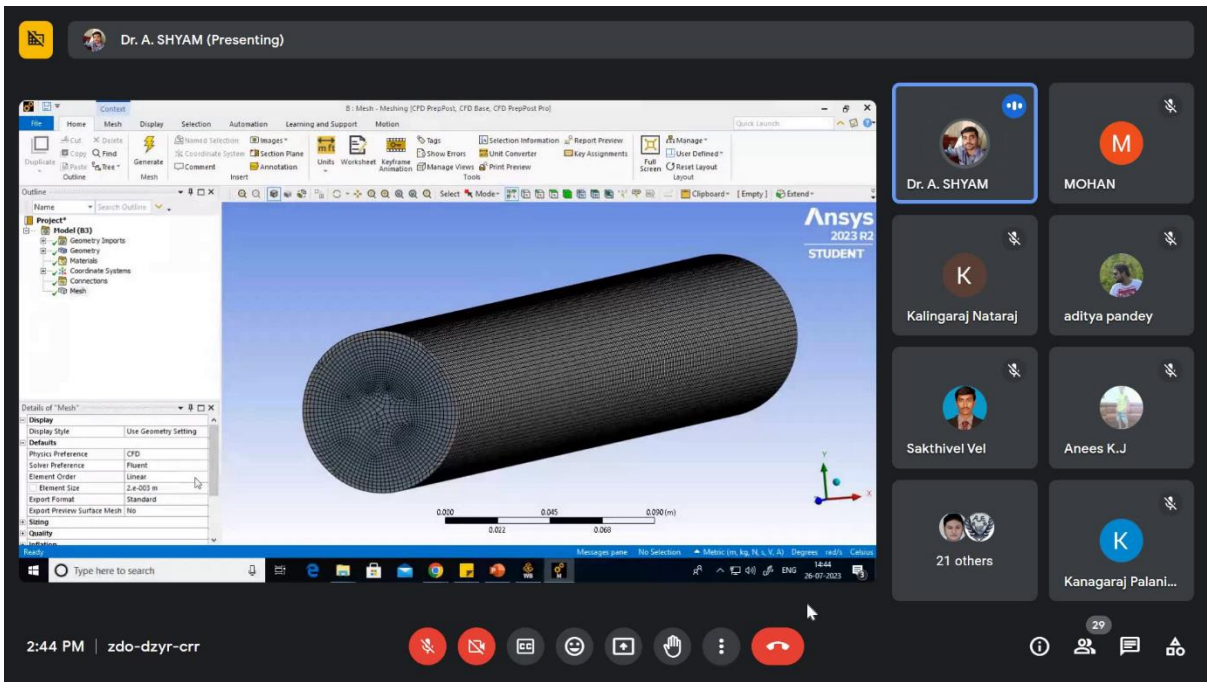
**FACULTY DEVELOPMENT PROGRAMME (FDP) ON  
"ANSYS FLUENT FOR BEGINNERS"**

**Session #3**

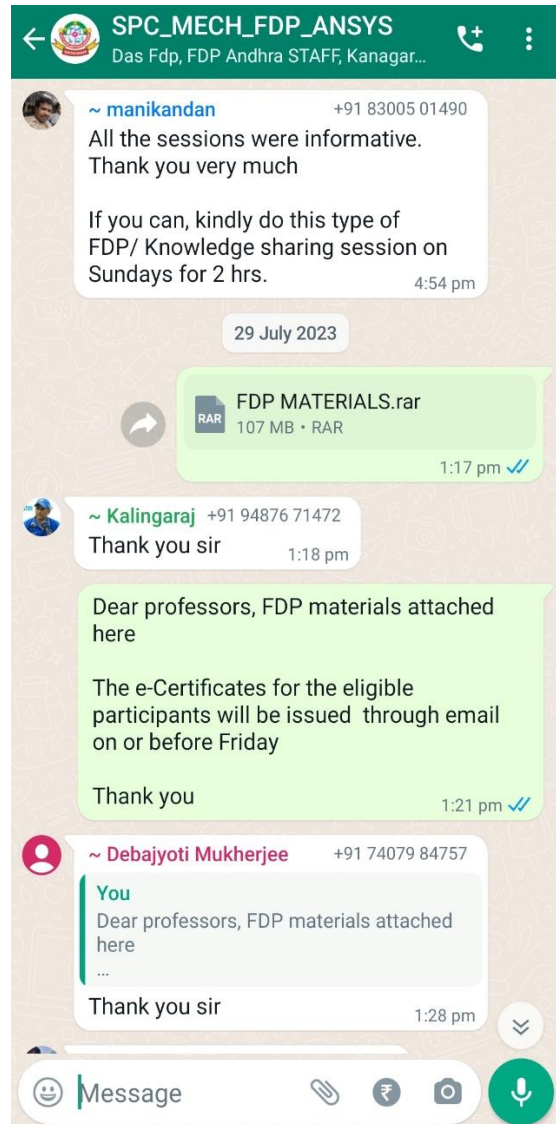
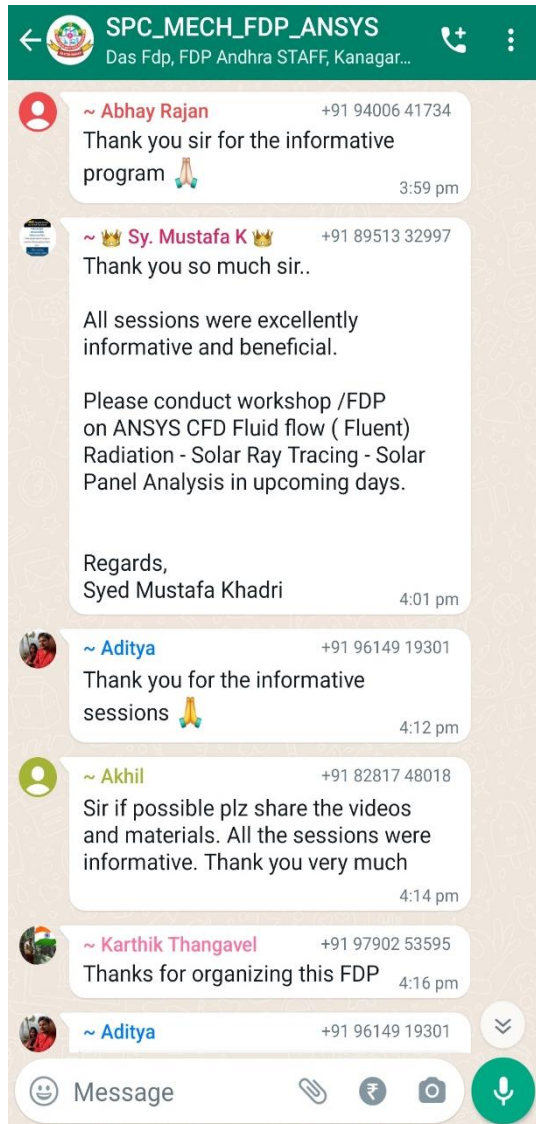
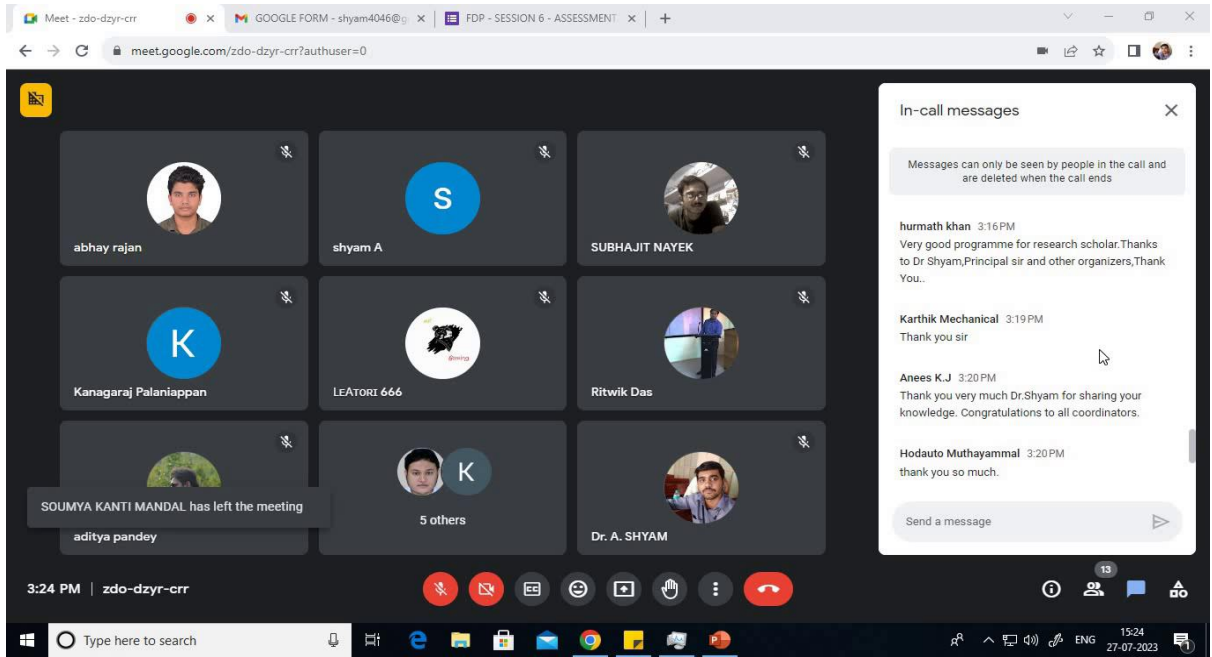
**Setting Up the CFD Simulation in ANSYS Fluent**

By  
**Dr. A.SHYAM M.E., PhD**

10:06 AM | zdo-dzyr-crr



- On the final day (27.07.2023), a test has conducted for assessing the knowledge transfer to participants from 2pm to 3pm.
- The Valediction was conducted in the presence of Dr. N.Thangavelu, Principal, Dr. A.Shyam, Coordinator and Mr. P.Kanagaraj Co-coordinator.
- The participant Mr. S.Bala Mohan, Lecturer In Mechanical Engineering, Government Polytechnic College, Simhadripuram, Andhra Pradesh provided excellent feedback about the FDP. Other participants provided their feedback in the chatbox and WhatsApp group are listed below,



- The e-certificate for the eligible participants (having minimum attendance and assessment marks in the test) was issued on 04.08.2023 (Friday). The sample certificate is given below



- The Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar, Erode, Tamil Nadu, wishes to thank our Management and Principal for given approval to conduct this three-day online FDP and providing a platform to disseminate the knowledge on ANSYS FLUENT to the faculty members of the Government Polytechnic College, Government Engineering College, Research scholars and PG Students.



**2024**

**FDP**

**REPORT**

**TITLE**

**CFD SIMULATION USING ANSYS FLUENT**

**27-02-2024 TO 29-02-2024**

**DEPARTMENT OF MECHANICAL ENGINEERING**

**SAKTHI POLYTECHNIC COLLEGE**

**SAKTHI NAGAR, ERODE – 638315**

**COORDINATOR : Dr. A.SHYAM**

- Three-day Faculty Development Programme (FDP) on “CFD SIMULATION USING ANSYS FLUENT” was conducted through online mode (Google Meet Platform) from 27<sup>th</sup> to 29<sup>th</sup> Feb 2024.
- The FDP Brochure was posted in the social media for wide publicity.

### ORGANIZING COMMITTEE

<b>Chief Patron</b>	<b>Thiru. G. Muniyasamy</b> Correspondent, Sakthi Polytechnic College Sakthi Nagar – 638315
<b>Patron</b>	<b>Dr. N. Thangavelu</b> Principal, Sakthi Polytechnic College Sakthi Nagar – 638315
<b>Coordinator</b>	<b>Dr. A. Shyam</b> Lecturer, Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar – 638315
<b>Co-Coordinator</b>	<b>Mr. P. Kanagaraj</b> Lecturer, Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar – 638315

### WHO CAN ATTEND

- Academicians
- Research scholars
- UG/PG students

### REGISTRATION FORM

- Name : .....
- Gender : .....
- Qualification : .....
- Designation : .....
- Department : .....
- Institution : .....
- Address for Communication: .....
- ..... PIN .....
- E-mail : .....
- Phone (Off.) : .....
- Mobile No. : .....

#### Declaration

I declare that all the details furnished above are true to the best of my knowledge and I agree to abide by the rules and regulations governing the conduct of programme.

Date: \_\_\_\_\_ Signature of the Applicant

#### Sponsorship certificate

Dr./Mr./Mrs/Ms ..... is an employee of our Institute and is hereby sponsored by us. He/She will be permitted to attend the online FDP, if selected.

Signature with seal of Head of the Institution /organization

### ABOUT THE INSTITUTION

Sakthi Polytechnic College is functioning under the aegis of Sakthi Foundation Trust. Padma Bhushan Dr.N.Mahalingam, the famous industrialist and educationalist was the promoter and president of the foundation. The main objective of this institution is to impart quality technical education to the rural students. The institution is managed by a Governing Council with Dr M.Manickam Executive as Chairman. Representatives and experts from the fields of education and industry form the members of the Council. The institution has been approved by the All India Council for Technical Education (AICTE). Sakthi Polytechnic College is a Government Aided institution offering eight diploma programmes Recently five diploma programmes were accredited by NBA.

### ABOUT THE DEPARTMENT

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### REGISTRATION DETAILS

- Maximum of 100 participants are permitted to attend.
- WhatsApp and meeting link will be intimated through E-mail.
- Registration fee of Rs.150/- (Non-Refundable, Pay using UPI ID or Scan QR Code given below).
- Submit the payment screenshot and transaction details using the registration link.

### UPI ID & QR CODE

- UPI ID: **sakthipolytechnic@sbi**
- Name: **Sakthi Polytechnic College**



### CERTIFICATION

The e-Certificate will be provided to the participants those who are securing minimum attendance and assessment marks.

### LINK FOR REGISTRATION FORM

Click the link below for registration

<https://forms.gle/qxSdFy34nnFzM9LF6>

**Any queries Contact : +91 9551386738, +91 9940771643**



**SAKTHI POLYTECHNIC COLLEGE**  
**SAKTHI NAGAR – 638315**

**Department of Mechanical Engineering**

**Organizing**

**Online Three Day Faculty Development Programme (FDP) on “CFD SIMULATION USING ANSYS FLUENT”**

**27-02-2024 to 29-02-2024**

#### Important Dates:

**Last Date of Submission : 20.02.2024**  
**Intimation of Selection : 22.02.2024**

### PROGRAM OVERVIEW

- Introduction to CFD and ANSYS Fluent.
- ANSYS Workbench Interface.
- Geometry Creation using ANSYS Design Modeler
- ANSYS Meshing, Mesh Quality Parameters.
- Setting Up the CFD Simulation in ANSYS Fluent
- Turbulence Modeling
- 2D and 3D - Fluid Flow Simulations.
- 2D and 3D - Heat Transfer Simulations.
- Multiphase flow & User Defined Functions (UDF).

### PROGRAM SCHEDULE

#### DAY 1 (27.02.2024)

- **Session #1** (10 am to 12 pm) : Introduction to CFD, ANSYS Workbench & ANSYS Fluent.
- **Session #2** (02 pm to 04 pm) : Geometry Creation using ANSYS Design Modeler, ANSYS Meshing, Mesh Quality Parameters.

#### DAY 2 (28.02.2024)

- **Session #1** (10 am to 12 pm) : Setting Up the CFD Simulation.
- **Session #2** (02 pm to 04 pm) : 2D & 3D Fluid Flow and Heat Transfer Simulation.

#### DAY 3 (29.02.2024)

- **Session #1** (10 am to 12 pm) : 3D Fluid Flow and Heat Transfer Simulation, Multiphase flow & UDF.
- **Session #2** (02 pm to 04 pm) : Multiphase flow, UDF, Assessment, Feedback & Valediction.

\*All sessions will be handled by the coordinator\*

- Total 59 participants registered through google form.
- All the 59 participants were shortlisted, approved and intimated.
- List of Approved Participant are tabulated below,

Sn	Sal.	Name with Initial	Designation	College Name
1	Mr.	MANIKANDAN R	LECTURER	K S R POLYTECHNIC COLLEGE, TIRUCHENCODE, NAMAKKAL -637 215.
2	Mr.	B SELVASUNDARAM	LECTURER	SANKAR POLYTECHNIC COLLEGE, SANKAR NAGAR
3	Mr.	VIJAYAKUMAR A	LECTURER	SRI DURGADEVI POLYTECHNIC COLLEGE, KAVARAIPETTAI
4	Mr.	ALWIN ANTO	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
5	Mr.	AKSHAY A	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
6	Mr.	ABHIRAM SONU T	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
7	Mr.	ABHINAV V S	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
8	Mr.	BHUVANESH M	RESEARCH SCHOLAR	CEG CAMPUS, ANNA UNIVERSITY
9	Prof.	VIPULKUMAR B GONDALIYA	ACADEMIC HEAD	OM ENGINEERING COLLEGE, JUNAGADH, GUJARAT
10	Mr.	EZHILARASAN MURUGAN	RESEARCH SCHOLAR	COLLEGE OF ENGINEERING GUINDY, ANNA UNIVERSITY
11	Mr.	S BALA MOHAN	LECTURER	GOVERNMENT POLYTECHNIC COLLEGE -SIMHADRIPURAM
12	Mr.	RAMESH ANANDHAN P	STUDENT	DR.MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY, POLLACHI 642003
13	Dr.	ABHISHEK JAIN	PROFESSOR & PRINCIPAL	ADINA INSTITUTE OF SCIENCE & TECHNOLOGY SAGAR (M.P.) 470002)
14	Dr.	M.MUTHUKANNAN	PROFESSOR	SSM INSTITUTE OF ENGG AND TECH, DINDIGUL
15	Mr.	SEENIVASAPERUMAL V	ASSISTANT PROFESSOR	SSM INSTITUTE OF ENGINEERING AND TECHNOLOGY, DINDIGUL.
16	Mr.	NARESH KUMAR	PHD RESEARCH SCHOLAR	AMITY UNIVERSITY RAJASTHAN, JAIPUR - INDIA 303002
17	Mr.	VIVEK KUMAR SHARMA	ASSISTANT PROFESSOR	THE ICFAI UNIVERSITY, HIMACHAL PRADESH



<b>Sn</b>	<b>Sal.</b>	<b>Name with Initial</b>	<b>Designation</b>	<b>College Name</b>
18	Mr.	ASHVEER SINGH	ASSISTANT PROFESSOR	ARYA COLLEGE OF ENGINEERING & I.T.
19	Mr.	ABHAY RAJAN	ASSISTANT PROFESSOR AD HOC	NSS COLLEGE OF ENGINEERING PALAKKAD
20	Mr.	VISHAL CHANDEL	WORKSHOP SUPERINTENDENT(M.E.)	GOVT. POLYTECHNIC SUNDER NAGAR, MANDI, HIMACHAL PRADESH
21	Mrs.	FARAH NAAZ KAZMI	H.O.D (MECHANICAL ENGG.)	GOVT. POLYTECHNIC SUNDER NAGAR, MANDI, HIMACHAL PRADESH
22	Mr.	LOVE KISHORE	WORKSHOP SUPERINTENDENT(M.E.)	GOVT. POLYTECHNIC SUNDER NAGAR MANDI, HIMACHAL PRADESH
23	Mr.	TEJENDER DEV BRARI	WORKSHOP SUPERINTENDENT(M.E.)	GOVT. POLYTECHNIC SUNDER NAGAR, MANDI, HIMACHAL PRADESH
24	Mr.	S.SRINIVASAN	LECTURER	THIAGARAJAR POLYTECHNIC COLLEGE, SALEM
25	Prof.	HEMANT P. PATHADE	ASSISTANT PROFESSOR	AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
26	Mr.	GOWRISANKAR N	LECTURER	KONGU POLYTECHNIC COLLEGE, PERUNDURAI, ERODE-638060
27	Mr.	SARVALINGAMOORTHY P	HOD (REGULAR)	KONGU POLYTECHNIC COLLEGE, PERUNDURAI, ERODE-638060
28	Mr.	MYILSAM Y P	LECTURER	KONGU POLYTECHNIC COLLEGE, PERUNDURAI, ERODE-638060
29	Mr.	SHANMUGASUNDARAM A	LECTURER	KONGU POLYTECHNIC COLLEGE, PERUNDURAI, ERODE- 638060
30	Mr.	GOPALAKRISHNAN M	HOD (REGULAR)	KONGU POLYTECHNIC COLLEGE, PERUNDURAI, ERODE-638060
31	Mr.	P SAKTHIVEL	HOD (REGULAR)	MUTHAYAMMAL POLYTECHNIC INSTITUTION, RASIPURAM, NAMAKKAL-637408
32	Mr.	VIRENDER PAUL	LECTURER MECHANICAL ENGINEERING	GOVERNMENT POLYTECHNIC SUNDERNAGAR
33	Mr.	VANKUDOTH VISHNU VARDHAN	STUDENT	GLOBAL INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOINABAD CHILKURU BALAJI

<b>Sn</b>	<b>Sal.</b>	<b>Name with Initial</b>	<b>Designation</b>	<b>College Name</b>
34	Mr.	P SAI KUMAR REDDY	STUDENT	GLOBAL INSTITUTE OF ENGINEERING & TECHNOLOGY CHILKUR ROAD MOINABAD 501504
35	Mr.	VISLAVATH SUNIL KUMAR	STUDENT	GLOBAL INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOINABAD, CHILKUR.
36	Mr.	DATTU BALU GHANE	RESEARCH SCHOLAR	AMRUTVAHINI COLLEGE OF ENGINEERING, SANGAMNER
37	Mr.	MOHAMMED ABDUL FAAZ MALIK	STUDENT	GLOBAL INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOINABAD, RANGAREDDY.
38	Ms.	GOURI BHASALE	ASSISTANT PROFESSOR	ARMY INSTITUTE OF TECHNOLOGY
39	Ms.	NIKITA ARUN GOPALE	STUDENT	AMRUTVAHINI ENGINEERING COLLEGE SANGAMNER
40	Mr.	D.MAHENDRAN	LECTURER	SAKTHI POLYTECHNIC COLLEGE, SAKTHI NAGAR, ERODE
41	Mr.	MAHEEP PALIWAL	UNDERGRADUATE STUDENT	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY UDAIPUR
42	Mr.	PRAHLAD SINGH	UNDERGRADUATE	TECHNO INDIA NJR UDAIPUR RAJASTHAN
43	Mr.	VAIBHAV PUROHIT	UNDERGRADUATE STUDENT	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY, UDAIPUR (RAJASTHAN)
44	Dr.	JYOTHI SANKAR P R	ASSOCIATE PROFESSOR	NSS COLLEGE OF ENGINEERING, PALAKKAD
45	Dr.	AKASH A R	POST DOCTORAL FELLOW	NITK SURATHKAL
46	Mr.	J SASIKUMAR	LECTURER	SAKTHI POLYTECHNIC COLLEGE, SAKTHI NAGAR
47	Mr.	ABHINAV ARUN	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
48	Mr.	ARJUN G	STUDENT	NSS COLLEGE OF ENGINEERING, PALAKKAD
49	Mr.	KOWSHIKRAJA T	STUDENT	DR.MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY
50	Mr.	VIVEK V M	ASSISTANT PROFESSOR ADHOC	NSS COLLEGE OF ENGINEERING PALAKKAD
51	Mr.	PAWAN JAIN	STUDENT	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY UDAIPUR RAJASTHAN

Sn	Sal.	Name with Initial	Designation	College Name
52	Mr.	VARUNDEV S	STUDENT	DR MAHALINGAM COLLEGE OF ENGINEERING AND TECHNOLOGY
53	Mr.	ADITYA VAGERWAL	UNDER GRADUATE	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY, UDAIPUR RAJASTHAN
54	Mr.	KUNAL GURJAR	STUDENT	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY, KALADWAS
55	Mr.	JAY VERMA	STUDENT	TECHNO INDIA NJR INSTITUTE OF TECHNOLOGY
56	Mr.	DEVADATH GOPAKUMAR	STUDENT	NSS COLLEGE OF ENGINEERING PALAKKAD
57	Mr.	RENJITH RAJ	ASSISTANT PROFESSOR	VIDYA ACADEMY OF SCIENCE AND TECHNOLOGY, THRISSUR, KERALA 680501
58	Mrs.	JEYACHITRA L	HOD	SANKARA POLYTECHNIC COLLEGE , SARAVANAMPATTY, COIMBATORE - 641035
59	Mr.	NUMAN AHAMED N	STUDENT	BMS COLLEGE OF ENGINEERING, BASAVANGUDI

- An official WhatsApp group has been created for seamless communication between the organizers and the participants.



- FDP schedule, Inaugural invitation and agenda was shared to all the participants through WhatsApp group.

- The Chief guest Dr. N.M.Sivaram B.E., M.Tech., PhD., Assistant Professor, Department of Mechanical Engineering, National Institute of Technology (NIT), Puducherry was invited to inaugurate the FDP.



**S.P.C.**

 **SAKTHI POLYTECHNIC COLLEGE**  
Sakthi Nagar - 638 315

 **Department of Mechanical Engineering**  
NBA Accredited

*Cordially Invite you to the*

**INAUGURAL CEREMONY**

Faculty Development Programme (FDP) on  
**"CFD SIMULATION USING ANSYS FLUENT"**  
27.02.2024 TO 29.02.2024

**CHIEF GUEST**  
Dr.N.M.Sivaram B.E., M.Tech.,Ph.D.,  
Assistant Professor  
Department of Mechanical Engineering  
National Institute of Technology, Puducherry  
Karaikal - 609 609

**CHIEF PATRON**  
Thiru.G.Muniasamy  
Correspondent

**Patron**  
Dr.N.Thangavelu  
Principal

**Coordinator**  
Dr.A.Shyam  
Lecturer, Mech

**Co-Coordinator**  
Mr. P.Kanagraj  
Lecturer, Mech

**On 27.02.24**  
**Time : 9.30 - 10.00 a.m**  
**Venue : Google meet**



# SAKTHI POLYTECHNIC COLLEGE

SAKTHI NAGAR - 638 315  
DEPARTMENT OF MECHANICAL ENGINEERING  
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FACULTY DEVELOPMENT PROGRAMME ON "CFD SIMULATION USING ANSYS FLUENT"

# INAUGURAL CEREMONY AGENDA

TUESDAY  
27 FEBRUARY  
9.30 AM - 10.00 AM

"The only way to get started is to quit talking and begin doing." - Walt Disney

01

WELCOME  
ADDRESS

Mr.P.kanagaraj,  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar - 638 315.

02

PRESIDENTIAL  
ADDRESS

Dr. N.Thangavelu,  
Principal  
Sakthi Polytechnic College,  
Sakthi Nagar - 638 315.

03

ABOUT CHIEF  
GUEST

Dr. A.Shyam,  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar - 638 315.

04

CHIEF GUEST  
ADDRESS

Dr. N.M.Sivaram B.E.,M.Tech.,Ph.D.,  
Assistant Professor,  
Department of Mechanical Engineering,  
National Institute of Technology,Puducherry  
Karaikal - 609 609.

05

VOTE OF THANKS

Mr.P.kanagaraj,  
Lecturer,  
Department of Mechanical Engineering,  
Sakthi Polytechnic College,  
Sakthi Nagar - 638 315.



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SAKTHI NAGAR - 638 315  
DEPARTMENT OF MECHANICAL ENGINEERING  
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**FACULTY DEVELOPMENT PROGRAMME ON "CFD SIMULATION USING ANSYS FLUENT"**

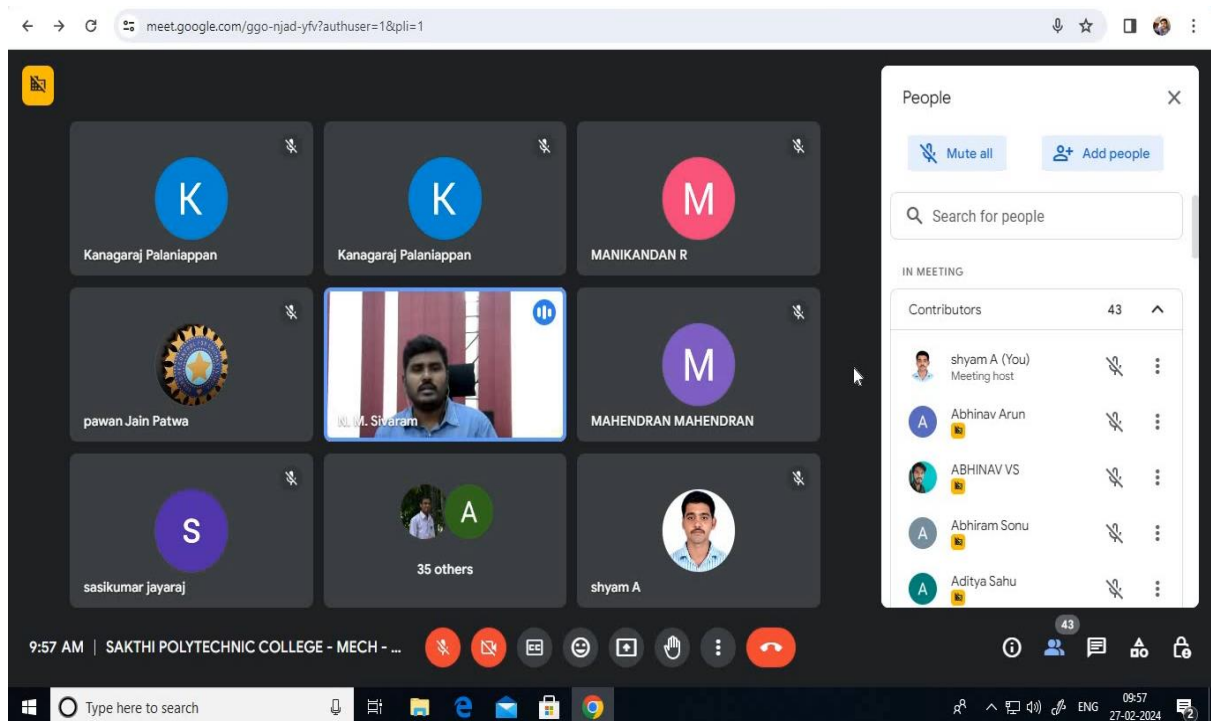
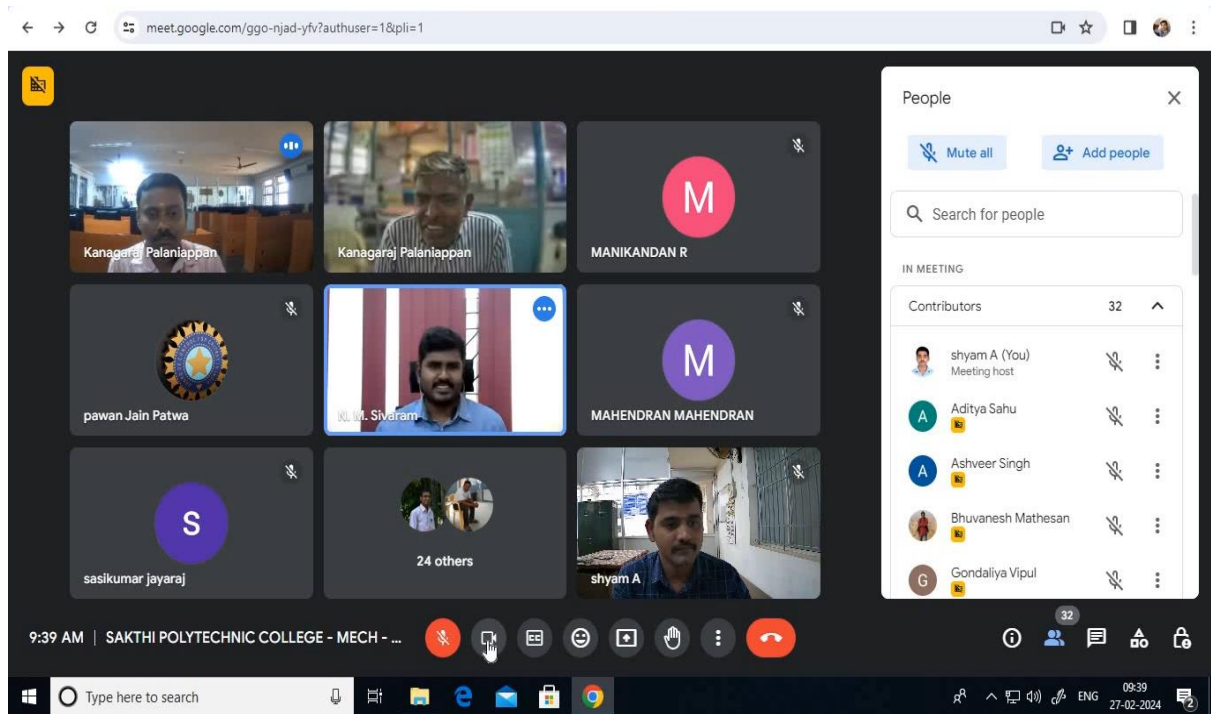
# FDP SCHEDULE

SESSIONS WILL BE HANDLED BY Dr.A.SHYAM

"You may delay, but time will not." - Benjamin Franklin

Date	Session	Time	Topic
27.02.24	I	10 .00A.M TO 12.00 PM	Introduction to CFD, ANSYS Workbench & ANSYS Fluent.
27.02.24	II	2.00 P.M TO 4.00 PM	Geometry Creation using ANSYS Design Modeler, ANSYS Meshing, Mesh Quality Parameters.
28.02.24	I	10 .00A.M TO 12.00 PM	Setting Up the CFD Simulation.
28.02.24	II	2.00 P.M TO 4.00 PM	2D & 3D Fluid Flow and Heat Transfer Simulation.
29.02.24	I	10 .00A.M TO 12.00 PM	3D Fluid Flow and Heat Transfer Simulation, Multiphase flow & UDF.
29.02.24	II	2.00 P.M TO 4.00 PM	Multiphase flow, UDF, Assessment, Feedback & Valediction.

- On the first day (27.02.2024), the inaugural ceremony was conducted in the presence of Dr. N.Thangavelu, Principal, Dr. N.M.Sivaram, Chief Guest, Dr.A.Shyam, Coordinator and Mr. P.Kanagaraj, Co-coordinator.



- The Coordinator of the programme welcomed all the participants and initiated the first session.
- At the end of each session, feedback cum attendance form has been collected (google form) from the participants for rendering their views.
- The screenshot of some session are as below,

meet.google.com/ggo-njad-yfv

shyam A (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

Fixed pipe wall

Fluid Flow with Fixed Boundary

Fluid Flow with Moving Boundary

Wind Mill Aerodynamics

Wind Flow Blade

Source: ANSYS, Inc. & Dr. Sharad N. Pachpute, IITD

26

11:24 AM | SAKTHI POLYTEC...

53

11:24 AM  
2/27/2024

Meet - ggo-njad-yfv

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

**FACULTY DEVELOPMENT PROGRAMME (FDP) ON  
"CFD SIMULATION USING ANSYS FLUENT"**

**Session #1**

**Introduction to CFD, ANSYS Workbench  
& ANSYS Fluent**

*By*  
**Dr. A.SHYAM M.E., PhD**

1

2:03 PM | SAKTHI POLYTECHNI...

32

2:03 PM  
2/27/2024



Meet - ggo-njad-yfv

Dr. A. SHYAM (Presenting)

3:22 PM | SAKTHI POLYTECHNI...

vivek kumar sharma

Dr. A. SHYAM

44 others

Kanagaraj Palaniappan

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

### Workflow

Import/Geometry Creation

- Sketches and Planes
- 3D Operations
- Extrude, Revolve, Sweep, etc.
- Geometry Import Options
- Bi-Directional CAD Neutral

Geometry Modifications

- 3D Operations
- Booleans, Decompose, etc.
- Geometry Cleanup and Repair
- Automatic Cleanup
- Simplification, Mid-surface, Fluid Extraction

Meshing

- Meshing Methods
- Hybrid Mesh Tet, Prisms, Parametric
- Finite Element, Sweep meshing
- Assembly Meshing
- Global Mesh Settings
- Local Mesh Settings
- Sizing, Controls, etc.

Solver

- Fluid Flow (CFX)
- Geometry
- Mesh
- Setup
- Solution
- Results

Handwritten notes:

- New design
- Space claim
- New Design
- Geometry
- Meshing
- Setup
- Solution
- CFD Post

Source: ANSYS, Inc.

10:05 AM | SAKTHI POLYTECHNIC COLLEGE - MECH ...

Dr. A. SHYAM

AKSHAY. A

ABHINAV VS

Kunal Gurjar

mylisamy palanisa...

NARESH KUMAR

24 others

Kanagaraj Palaniappan

Meet - ggo-njad-yfv

meet.google.com/ggo-njad-yfv

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
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FDP

- There are two ways to postprocess CFD results from FLUENT
  - FLUENT postprocessing tools – legacy tools integrated in the FLUENT solver
  - ANSYS CFD-Post application – a state-of-the-art postprocessor for ANSYS CFD products. CFD-Post can run as a standalone postprocessor, or within Workbench
- Both postprocessors include many tools for analyzing CFD results
  - Isosurfaces
  - Contour plots (shaded and graded)
  - Streamlines and pathlines
  - XY plotting
  - Animation creation
- Contains the ability to postprocess any user-defined quantity either defined through custom field functions or user-defined memory (UDF).

Source: ANSYS, Inc.

3

2:13 PM | SAKTHI POLYTECHNIC COLLEGE - MECH - ...

Activate Windows  
Go to Settings to activate Windows.

14:13  
28-02-2024

meet.google.com/ggo-njad-yfv?authuser=0

Dr. A. SHYAM (Presenting)

SAKTHI POLYTECHNIC COLLEGE  
MECHANICAL ENGINEERING

FDP

SIMULATION

Case 1 - Pressure Contour - View from sluice gate

Case 2 - Pressure Contour - View from sluice gate

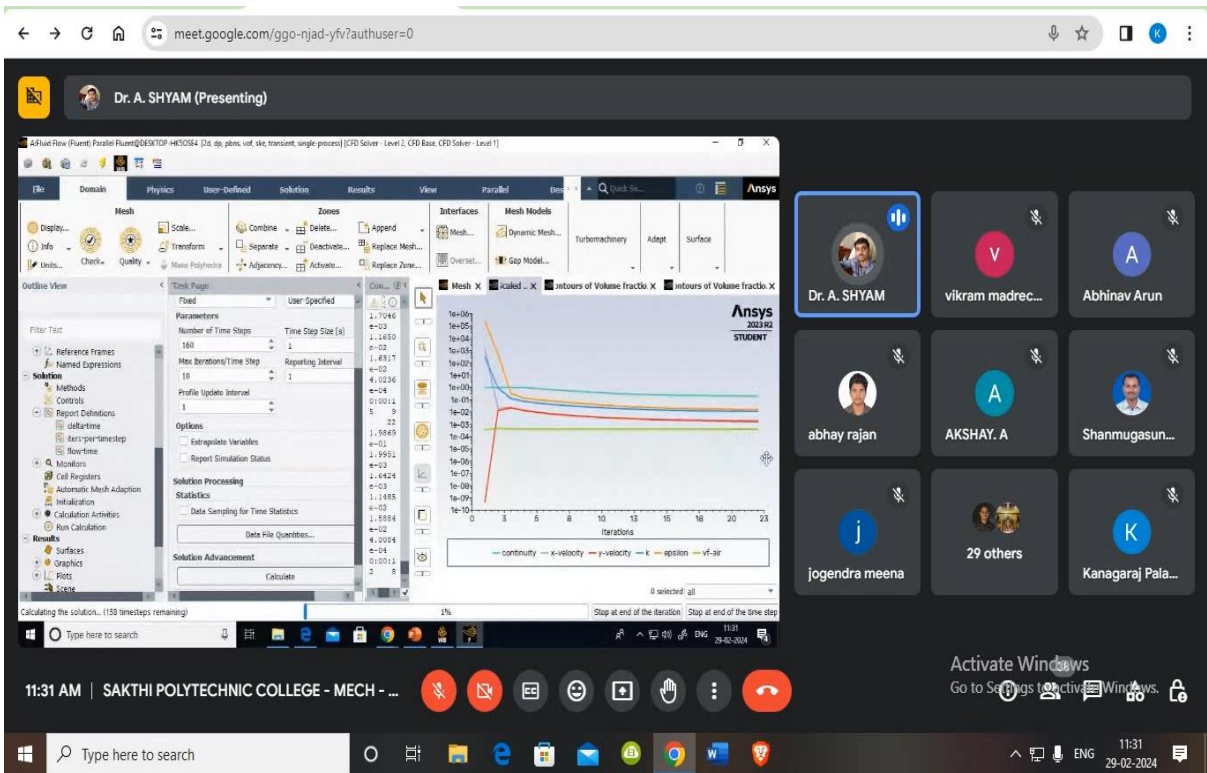
Source: ANSYS, Inc.

32

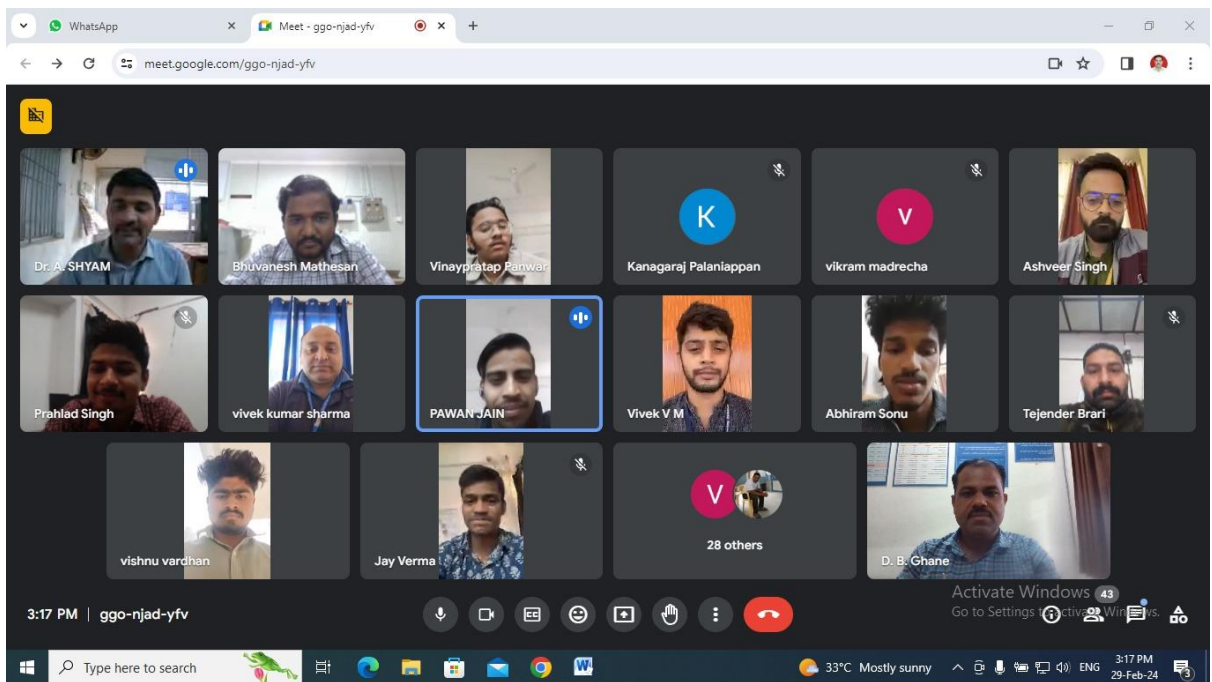
11:16 AM | SAKTHI POLYTECHNIC COLLEGE - MECH - ...

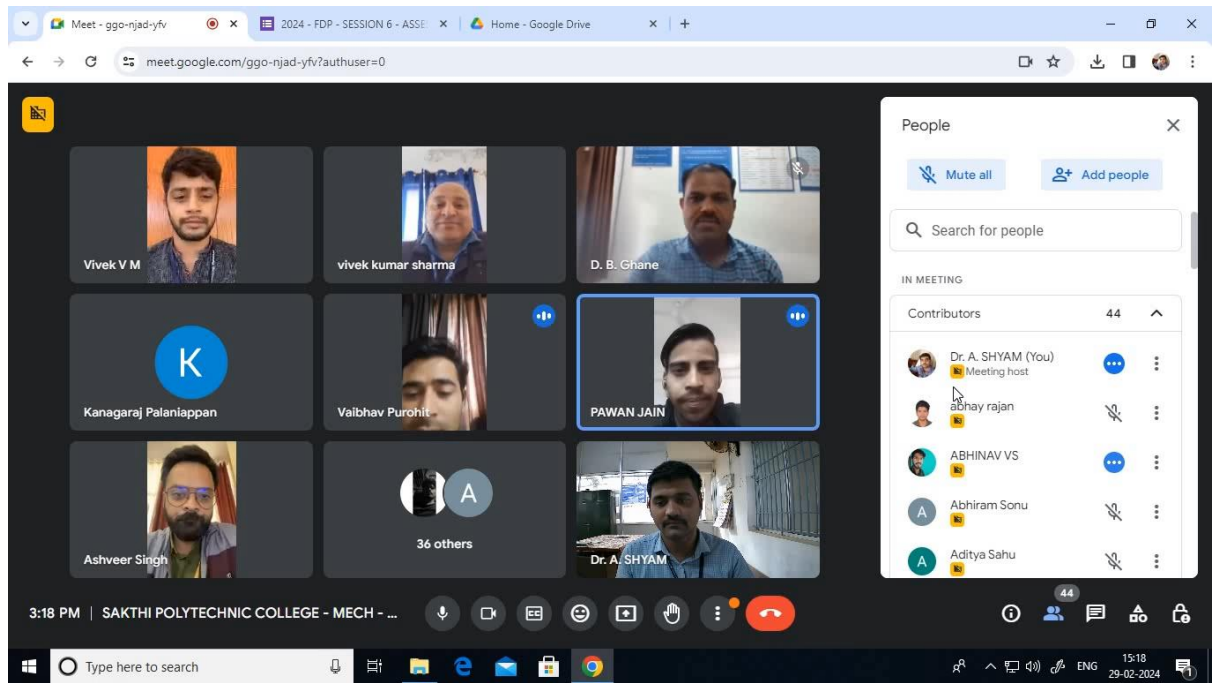
Activate Windows  
Go to Settings to activate Windows.

11:16  
29-02-2024

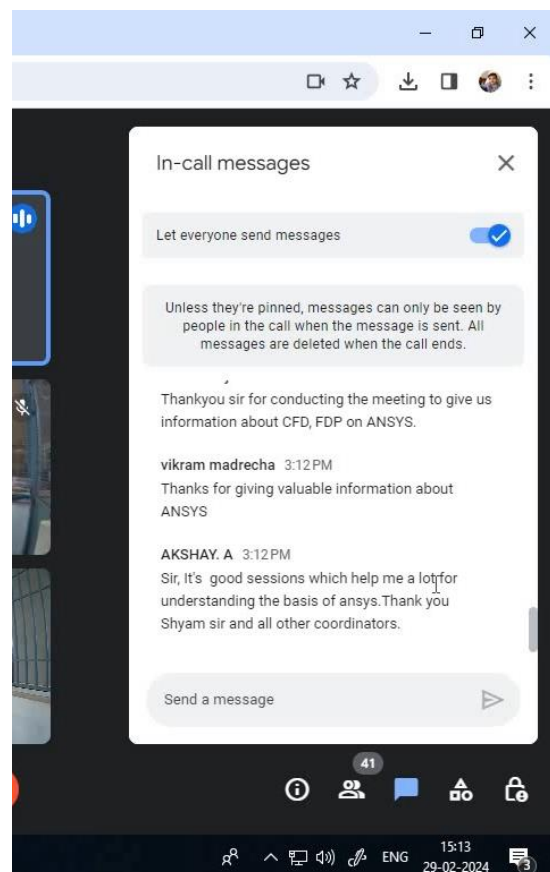
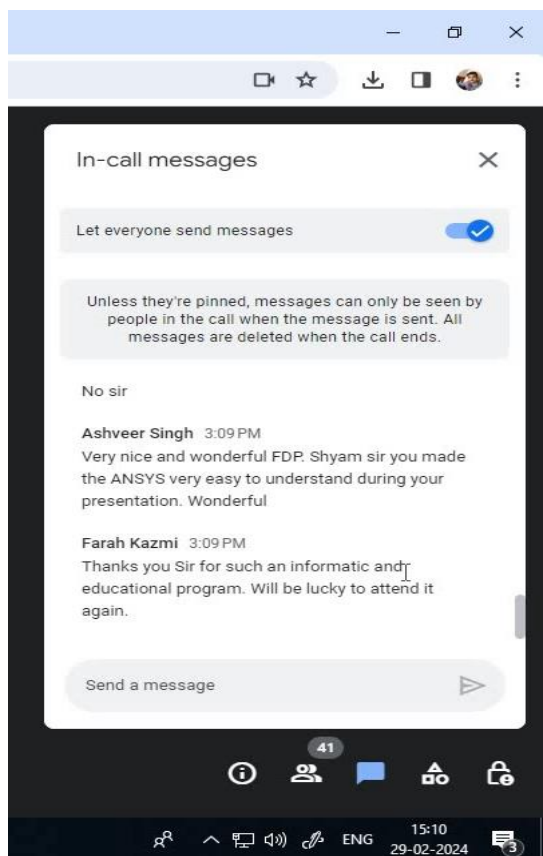


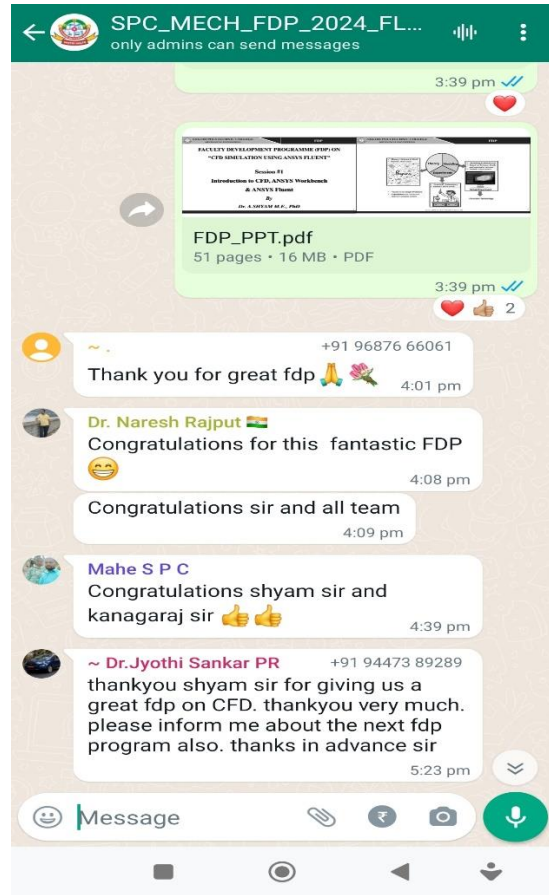
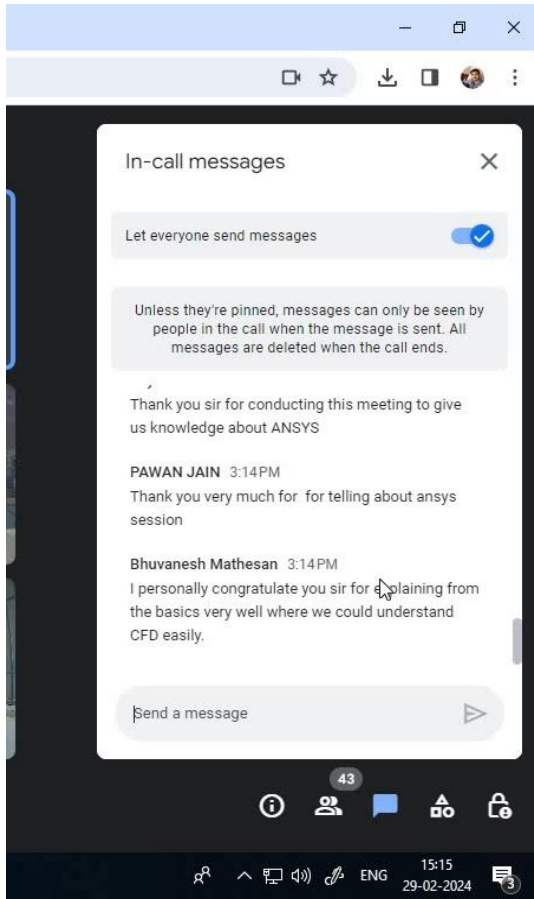
- On the final day (29.02.2024), a test has conducted for assessing the knowledge transfer to participants from 2pm to 3pm.
- The Valediction was conducted in the presence of Dr.A.Shyam, Coordinator and Mr. P.Kanagaraj Co-coordinator. Group photos also been taken.





- The participant Mr. Dattu Balu Ghane, Lecturer in Mechanical Engineering, Government Polytechnic, Awasari (Khurd), Tal-Ambegaon, Dist-Pune provided excellent feedback about the FDP. Other participants provided their feedback in the chatbox and WhatsApp group are listed below,





- The e-certificate for the eligible 56 participants (having minimum attendance and assessment marks in the test) was issued on 09.03.2024 (Saturday). The sample certificate is given below





- The registration fees of Rs. 150/- has been collected from each participant. Total amount of Rs. 8850/- has been generated through this FDP.
- The Department of Mechanical Engineering, Sakthi Polytechnic College, Sakthi Nagar, Erode, Tamil Nadu, wishes to thank our Management and Principal for given approval to conduct this three-day online FDP and providing a platform to disseminate the knowledge on ANSYS FLUENT to the faculty members of the Government Polytechnic College, Government Engineering College, Research scholars, UG and PG Students.