

(Approved by AICTE, Delhi | Affiliated to JNTUH, Hyderabad ) Hyderabad | PIN:500068

#### **HYDERABAD**

### **REPORT ON**

# One Week Faculty Development Program on Finite element analysis using ANSYS

( 20-12-2016 to 24-12-2016)

Organized by

DEPARTMENT OF MECHANICAL ENGINEERING



(Approved by AICTE, Delhi | Affiliated to JNTUH, Hyderabad) Hyderabad | PIN:500068

#### **Department of Mechanical Engineering**

06-12-2016, Nagole.

To, The Principal SIET, Nagole, Hyderabad.

Sub: Request for permission to conduct FDP on "One Week Faculty Development Program on Finite element analysis using ANSYS" during 20-12-2016 to 24-12-2016.

Sir,

The department of Mechanical Engineering would like to conduct FDP on "One Week Faculty Development Program on Finite element analysis using ANSYS" during **20-**12-2016 to 24-12-2016 for external and internal faculties. In this regard, I request you to give your approval for the same. The estimated budget is as given below

#### **Budget Proposal**

Honorarium (External Resource Persons = 6*3000)	Rs. 18,000/-
Travel Expenses (4* 750)	Rs. 2,000/-
Flexi Banners	Rs. 1,000/-
Stationary –FDP Kit (pen, pad, files)	Rs. 2,000/-
Certificates	Rs. 2,000/-
Refreshments (6days)	Rs. 3,000/-
Miscellaneous	Rs. 2,000/-
Total	Rs. 30,000/-

Hence I request you to grant the amount of Rs.30, 000/- for the smooth conduction of the FDP. Thanking you,

Yours Sincerely,



(Affiliated to JNTUH, Hyderabad & Approved by AICTE)
Accredited to NAAC Nagole, Hyderabad-68

13-02-2016, Nagole.

To, Dr.Suresh Akella, Principal, SIET Hyderabad.

Sir,

Sub: Invitation for one week Faculty Development Programme as Resource person-Reg

Sreyas Institute of Engineering and Technology (SRYS) one of the esteemed institution located in a peace environment at Hyderabad, which was approved by AICTE, New Delhi, and affiliated to JNTUH.

Our vision is to impart education, in a conducting ambience, as comprehensive as possible, with the support of the modern technologies and produce graduates and post graduates in engineering with the ability and passion to work wisely, creatively, and effectively for the betterment of our society.

On behalf of Sreyas institute of engineering & technology, I am pleased to have the honour of inviting you to deliver the lecture in **One Week Faculty Development Program** 

on Finite element analysis using ANSYS Scheduled during 20-12-2016 to 24-12-2016.

We will be grateful to you in accepting our invitation.

Thanking You,

Yours sincerely,

Tokeddy



(Affiliated to JNTUH, Hyderabad & Approved by AICTE) Accredited to NAAC Nagole, Hyderabad-68

> 13-02-2016, Nagole.

Dr. Ratnakar Reddy, Assoc.Prof, MED, CBIT, Hyderabad.

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> 13-02-2016, Nagole.

Mr. Chetan, BIMIT, Hyderabad.

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(Mr. A C S Reddy) HOD- Mechanical Engg.

tokeddy



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13-02-2016, Nagole.

Mr. N. Sai Srinivas. UNISCENT Technologies, Hyderabad.

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13-02-2016, Nagole.

Mr.Krishna Rao, Managing Director, SKM Technologies, Hyderabad.

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13-02-2016, Nagole.

Mr.J Sandeep, Asst. prof, MED, SIET, Hyderabad.

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#### One Week Faculty Development Program O.B. Finite element analysis using ANSYS (20-12-2016 to 24-12-2016) 1. Name: 2. Designation: 3. Organization: 4. Address: 5. Mobile No: 6. E-mail ID: 7. Teaching Experience: 8. Accommodation required: Yes/No 9. DD Particulars: Rs.\_\_\_\_, Dt.\_\_\_ Declaration The above information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and

regulations of the course and shall attend the course for the

Signature& Scal of Head of the Institution

Chief Patron

Sri A. <u>Vinay</u> Kumar Reddy, Chairman

Patron(s)

Sri Ch. Rayindranath, Secretary Sri N.Sharath Reddy, CEO.

Sri A. Hriday Reddy, Vice Chairman

Advisor

Dr. Suresh Akella, Principal

Program Coordinator

Mr. Y Krishna, Assoc. Professor., Mech. Engg.

HOD

Mr. Y Krishna, Assoc. Professor

Coordinator(s)

Mr. A C S Reddy, Assoc. Professor, Mech Engg. Mr. K Sainath, Assoc Professor, Mech Enga Dr. A C Umamaheshwer Rao, Assoc Prof Mech Enga

#### Organizing Member(s)

Mr. K L N Murthy Mr. B Sundeen Mr. Praveen B. Ronad Mrs.RamouDeepikaMr.T.Raxi

Mr. K Raja Şekhar, Mr. Manjunath B Mr. P Branders Kurnar Mr.K. Nageswarana Mr. B. Sanjanna Mr. D.V. Paleshwar Mr. M A S R Abbilash

Mr. J. Sandeep, Kumar Mr. G. Nagesh, Mr. M. PurushothamReddy Ms. B SpandanaMr. T Suman

Address for Correspondence

Department of Mechanical Engineering Szevas Institute of engineering and Technology, Nagole - 500068, Telangana

Mobile: 8886287868 E-mail: me.hod@sreyas.ac.in



One Week Faculty Development Program Finite element analysis using ANSYS (20-12-2016 to 24-12-2016)



Department of Mechanical Engineering

SREYAS INSTITUTE OF ENGINEERING AND TECHNOLOGY

Nagole, Hyderabad - 500068. Website: <u>www.sreyas.ac.in</u>

#### About the Institute

Sreyas Institute of Engineering & Technology (SIET) is established in the year 2011 by Sreyas Educational Society. It is located in the heart of Hyderabad city about 5 km from Nagole metro station. SIET has been in the forefront imparting high quality technical education. State of the art infrastructure in all branches of engineering, dedicated and qualified staff, highly conducive environment for teaching learning process are the hallmarks of this professionally managed institution. The institute is an affiliated to JNTUH and accredited by NAAC. The Institute offers Civil Mechanical Engineering, Engineering, Electronics and Communication Engineering and Computer Science Engineering courses.

#### About the Mechanical Engineering Department

The department of Mechanical Engineering was established in the year 2011 and offers UG & PG programs in Mechanical Engineering. The Department has qualified, dedicated, experienced and trained faculty with a deep sense of commitment towards the students and Institution. Teaching faculty with proficiency in various subjects motivates students to participate in research activities and skill development programs. The Department has state of the art laboratories, R&D lab and labs with well-equipped hardware and software facility.

#### About the FDP

The FDP focuses on Finite Element Method (FEM) which is a numerical and computer-based technique for solving a variety of practical engineering problems involving structural, thermal and fluid flow domains. It is recognized by developers and users as one of the most powerful numerical analysis tools ever devised to analyze complex problems of engineering. The underlying theory of the method is now well established, with many books and courses providing adequate explanations of the theory. However, most people using the method, via commercial software or in house codes, do not often understand the method as applied to engineering problems, especially in generating output data and interpreting the results. As participants are expected from different institutes, this course would provide an excellent opportunity for the participants to interact with one another and discuss problems and solutions of mutual interest. The main objective of this faculty development program is to promote the basic and applications of finite element methods to solve the several types of engineering problems. Applicability of the method and different types of formulation procedures will be explained. Complete step-by-step details will be presented for typical one, two and three dimensional analyses. The programme includes hands-onsessions for solving engineering problems using ANSYS software.

#### Resource Person

Dr. Suresh Akella, principal, SIET
Dr. Ratnakar Reddy, Assoc Prof MED, CBIT
Mr. Krishna, Raq, MD, SKM Technologies
N. Sai Srinivas, LUNISCENT
Mr. Chetan, BIMIT
J Sandeep, Asst. prof MED, SIET

Program Schedule

Day 1: Inaugration Ceremony:

Address by Sri A Vinay Kumar Reddy, Chairman,

SriChintalaRavindranath, Secretary, SIET. Sri N. Sharath Reddy, CEO, SIET.

Sri A. Hriday Reddy, Vice Chairman, SIET.

Dr. Suresh Akella, Principal, SIET.

Session 2

Overview of FEM and its applications Finite element formulation starting from Formulation Quadrilateral and higher

Day 2

Governing equations. One dimensional finite element analysis Two dimensional finite element analysis

Day 3:

Order elements Solution of 1D and 2D problems using ANSYS software. Solution of axisymmetric and 3D

Day 4

Problems Dynamic analysis of Finite element formulation

Day 5

Case studies and valedictory function

Registration fee Registration fee for each participant (Faculty/ student/ research scholar) is Rs. 250.



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#### **Department of Mechanical Engineering**

Date: 17/12/2016

#### **CIRCULAR**

This is to inform all Staff that, Department of Mechanical Engineering is organising a five days FDP-Faculty Development Program "FEA-Finite Element Analysis using ANSYS" from 20/12/2016 to 24/12/2016

So, All Mechanical staff requested to attend the FDP and get benefited.

HOD,ME

#### Copy to:

- 1. Chairman's desk
- 2. Secretary desk
- 3. Principal

## **Registration form**

	Development Program on
Finite element an	to 24-12-2016)
I. Name: J. Shek	can .
2. Designation: ASSI	· prot
3. Organization: S1	ET
4. Address: Mechai	nical Engs
Def	ot, SIET, Hydro
5. Mobile No:	
6. E-mail ID: Sheka	v. k@svejas.aci
7. Teaching Experience:	
8. Accommodation require	d: Yes/No
9. DD Particulars: Rs	, Dt
Deci	laration
The above informat	ion provided is true to the best of
my knowledge. If selected, I	agree to abide by the rules and
	d shall attend the course for the
entire duration.	
Place: HY D Date:	19/12/2016
@	
Applicant Signature	Signature& Seal of Head of the Institution
mScores	

# Report

Day	Content	Resource Person	
Day 1	<ul> <li>Introduction to FEA</li> <li>Plain stress analysis</li> <li>Axi symmetry analysis</li> <li>Mirror symmetry</li> <li>Overview of FEM and its applications Finite element formulation starting from Formulation Quadrilateral and higher</li> </ul>	<ul> <li>Dr.Suresh Akella, principal, SIET</li> <li>Dr. Ratnakar</li> <li>Reddy, Assoc.</li> <li>prof,MED,CBIT</li> </ul>	
Day 2	<ul> <li>Introduction to Meshing</li> <li>Different Meshing Method and Mesh control</li> <li>Governing equations One dimensional finite element analysis Two dimensional finite element analysis</li> </ul>		
Day 3	<ul> <li>Post processing Techniques</li> <li>Case Studies</li> <li>Order elements Solution of 1D and 2D problems using ANSYS software Solution of axisymmetric and 3D</li> <li>Review/Recap and Case study base assessment</li> </ul>		
Day 4	<ul> <li>Problems Dynamic analysis of Finite element ☐         formulation</li> <li>Case Study on Thermal analysis of Machining Process</li> <li>Static and Transient Analysis</li> <li>- Case Study (Analytical/Numerical/Computational)</li> <li>Computational Fluid Dynamics on Battery Thermal Management System for Electric Vehicles         <ul> <li>- Case Study</li> </ul> </li> </ul>	• Mr.Krishna Reddy,MD,SKM Technologies	
Day 5	<ul> <li>Case Study on Flow and Heat transfer Analysis</li> <li>Analytical/Numerical/Computational</li> <li>Static and Transient Analysis</li> <li>Computational Fluid Dynamics         <ul> <li>Case Study</li> </ul> </li> </ul>	<ul> <li>N. Sai</li> <li>Srinivas, UNISCENT</li> <li>Mr. Chetan,</li> <li>BIMIT</li> <li>J Sandeep,</li> <li>Asst.</li> <li>prof, MED, SIET</li> </ul>	
	Review/Recap and Case study base assessment and Valedictory function	• J Sandeep, Asst. prof,MED,SIET	



FDP on Finite Element Analysis using ANSYS





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#### **Department of Mechanical Engineering**

# One Week Faculty Development Program on Finite element analysis using ANSYS

## **Faculty Registered**

S.No	Name of the Full-time teacher
1	Dr SURESH AKELLA
2	Dr P M DIAZ
3	Mr Y KRISHNA
4	Mr K L N MURTHY
5	Mr. J Shekar
6	Mr. T Krishna Chaitanya
7	Mr R NAVEEN KUMAR
8	Mr. A C SEKHAR REDDY
9	Mr K RAJASHEKAR
10	Mr. J V Ramakanth
11	Ms. USHA JYOTHIR MAI
12	Mr PRAVEEN B RONAD
13	Mr P PRAVEENKUMAR
14	Mr MANJUNATH BHAJANTRI
15	Mr. C L N Kameshwar Rao
16	Mr. Krishna Srujith
17	Mr. Y Balram
18	Mr. K V R S Sairam



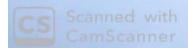
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#### Department of Mechanical Engineering

Five days faculty development program on Finite Element Analysis using ANSYS

#### (20-12-2016 to 24-12-2016) **Attendance Sheet**

S. No.	Faculty Name	Day 1	Day 2	Day 3	Day 4	Day 5
1	Dr Suresh Akella	Asurech A	Burest 9	fourish +	Suresh	Afteresh
2	Dr P M Diaz	200	Sac	2	Za !	2
3	Mr Y Krishna					
4	Mr K L N Murthy	(4/2)	A4-	13	(dal-	
5	Mr. J Shekar	8	8	(8_	8	12
6	Mr. T Krishna Chaitanya	dataye	- Shattay	dajaye	Latery	dutage
7	Mr R Naveen Kumar	lecal	level	Recel	Recol	lead
8	Mr. A C Sekhar Reddy	See	Acer	Ace	Ace	Au
9	Mr K Rajashekar	Lyt	Toth	Poil	- Tojl	Soft
10	Mr. J V Ramakanth	IR	TR	TR	JR	28
11	Ms. Usha Jyothir Mai	LS.	4	y	LS.	49
12	Mr Praveen B Ronad	1	L	l	l	1
13	Mr P Praveenkumar	dies	Turs	July	Jul	Jung

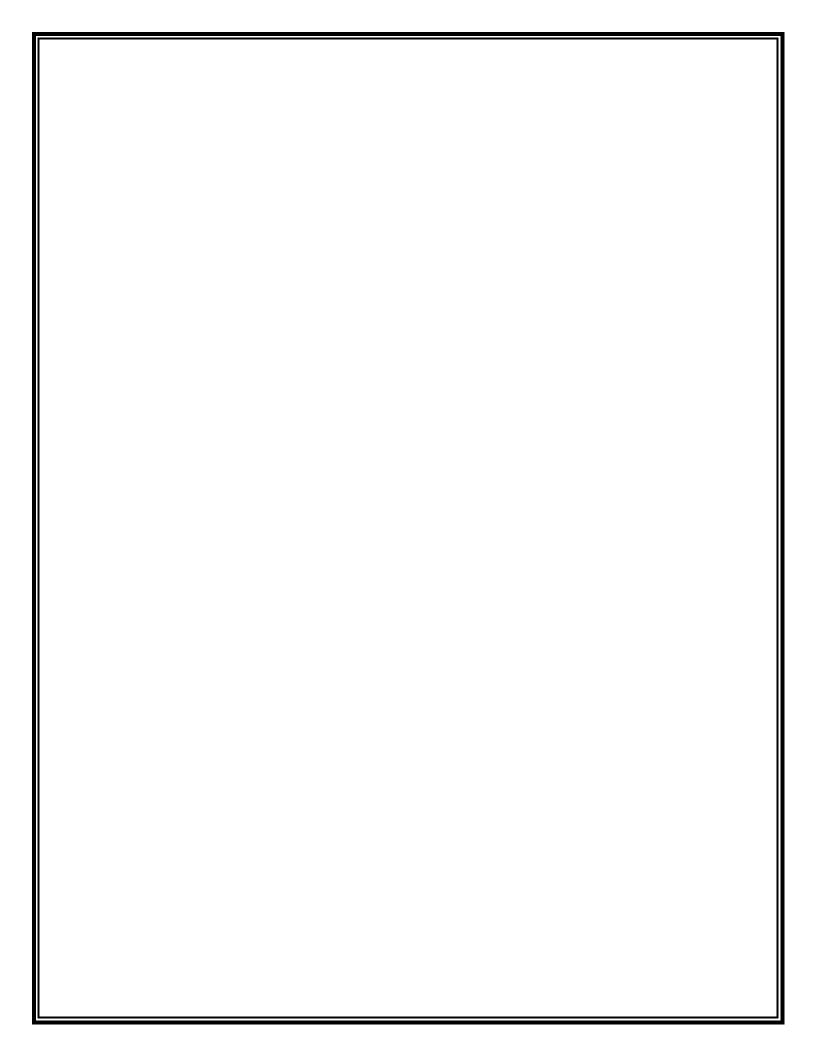




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# Department of Mechanical Engineering

Department of Asset			THE STATE OF THE S			
		50	al	OF	of	
14	Mr Manjunath Bhajantri	City.	Q1	d	d	4
15	Mr. C L N Kameshwar Rao	9	luce	Tint	furt	fert.
16	Mr. Krishna Srujith	tos	Just	000	D-6	Dr
17	Mr. Y Balram	BI	2	<i>y</i> 11		Knes
18	Mr. K V R S Sairam	tws	lms	Kurs		





# SREYAS Institute of Engineering & Technology (Approved by AICTE, Delhi | Affiliated to JNTUH, Hyderabad) Hyderabad | PIN:500068

Department of Mechanical Engineering Feedback form for FDP on "One Week Faculty Development Program on Finite element analysis using ANSYS

Date: 24.12.2016
1. What did you like the most about this FDP?
Recent FEM analysis and methods
2. What aspects of this program could be improved?
Multi physics could be included
3. How do you Judge that this FDP will helpful in your career as a Teacher?
4. Are you satisfied with the FDP kindly rate the program freely highlighting positive points?
Yes 10/10
Comments if any:
Suggestion if any:
No
e Nousen kumar
Name of Participant: R. Navce 9 kumar.  Institution: S.J.E.T. Department: MED.

Thank you for your valuable Feed back



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Hyderabad | PIN:500068

Date: 27-12-2019

To, The principal. SIET,

Nagole, Hyderabad.

Sub: Expenses towards conduction of FDP on "One Week Faculty Development Program on Finite element analysis using ANSYS"

-Reg

I am grateful to the institution management for the necessary arrangement and support made for the success of one week FDP. Here with I have giving details of expenses occurred in smooth conduction of FDP.

#### **Amount Received**

Institute	Rs. 28000/-
Amount Spent	\$ market to a state of the stat
Honorarium for Resource persons	Rs. 18000/-
Travelling	Rs. 1200/-
Brochure Printing and Banner	Rs. 1000/-
Hospitality, Certificate printing, Tea & Snacks	Rs. 4000/-
Banner Printing	Rs. 1000/-
Total Expenses	Rs. 25200/-

Hence the remaining amount of Rs.2800 /- to the accounts department

Thanking You Yours sincerely

HOD- MED