

ADITYA COLLEGE OF ENGINEERING & TECHNOLOGY

Permanently Affiliated to JNTUK, Kakinada * Approved by AICTE, New Delhi * Accredited by NAAC
Recognized by UGC Under section 2(f) and 12 (B) of UGC Act 1956
ADB ROAD, ADITYA NAGARA, SURAMPALEM-533437

Department of Mechanical Engineering

Date: 15.03.2021.

To
The principal
Aditya College of Engineering & Technology
Surampalem

Respected sir,

[Through Head of the Department]

Sub: Request for your approval to organize a certification course on "Implementation of Meshing methods in CFD" – reg.

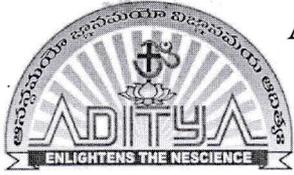
It's our greatest pleasure to bring to your kind notice that, we the Department of Mechanical Engineering would like to train our B.Tech students in the **Implementation of Meshing methods in CFD** adapted initially, with the help of our staff; as the present world is moving over the software design & simulations and also is a part of the Mechanical Engineering. It will be more helpful to the students in theoretical and technical point of view. In this regard we are requesting your permission for further proceedings.

Resource Person : Mr. Ch Pavan Kumar
Sr. Executive
Honorarium : Rs. 10000/-

*Forwarded to Principal.
15/03/21.*

[Signature]
Course Coordinator

[Signature]
PRINCIPAL
Aditya College of
Engineering & Technology
SURAMPALEM- 533 437



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Implementation of Meshing methods in CFD Syllabus

1. Introduction to CFD
2. Governing equations
3. Partial differential equations (Elliptical, Parabolic and Hyperbolic equations)
4. Meshing methods & Techniques
5. Grid generation
6. Staggered grid and unstaggered grid
7. Post processing Techniques
 - a. Finite Element Method
 - b. Finite Difference Method
 - c. Finite Volume Method
8. Problem solving using MATLAB.
9. Practicing the problems using MATLAB for grid independency check.

Course Coordinator

Head of the Department

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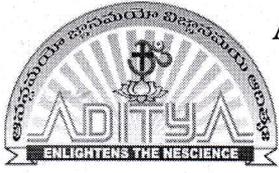
All the Mechanical students are here by informed that a one-week program is arranged to enhance the knowledge on **Implementation of Meshing methods in CFD**, as per the schedule from 05th April,2021. All the interested students can attend the program and utilize the opportunity. The schedule is attached.

Course Coordinator: Dr. M Murugan
+917010989382

16/03/21.

Head of the Department

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Schedule of Implementation of Meshing methods in CFD:

Day-1:

- FN Inauguration of the Program and speakers talk about the objectives of the event
- AN Introduction to CFD.

Day-2:

- FN Introduction to governing equations
- AN Partial differential equation, classification

Day-3:

- FN Introduction to meshing methods, necessity and applications
- AN Types of methods, 2D meshing techniques and 3D meshing techniques

Day-4:

- FN Staggered grid generation and applications
- AN Unstaggered grid generation and examples

Day-5:

- FN Description of FEM, FDM, FVM
- AN Introduction to MATLAB

Day-6:

- FN Programming for solving a basic heat transfer problem in MATLAB
- AN Generation of grids (mesh) in MATLAB and solving the problem

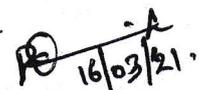
Day-7:

- FN Checking grid independency in solving the problems using MATLAB
- AN Comparison of results with respect to mesh

Day-8:

- FN Practice session & doubts clarification.
- AN Valedictory


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