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NBA Accredited - B.Tech. (CIVIL, CSE, ECE, EEE, MECH, CST), MBA & MCA

A Report on Five-day skill development program on "Advanced ANSYS"
Organized by Skill Development Cell In association with Department of Mechanical Engineering
From 07.07.2025 to 11.07.2025

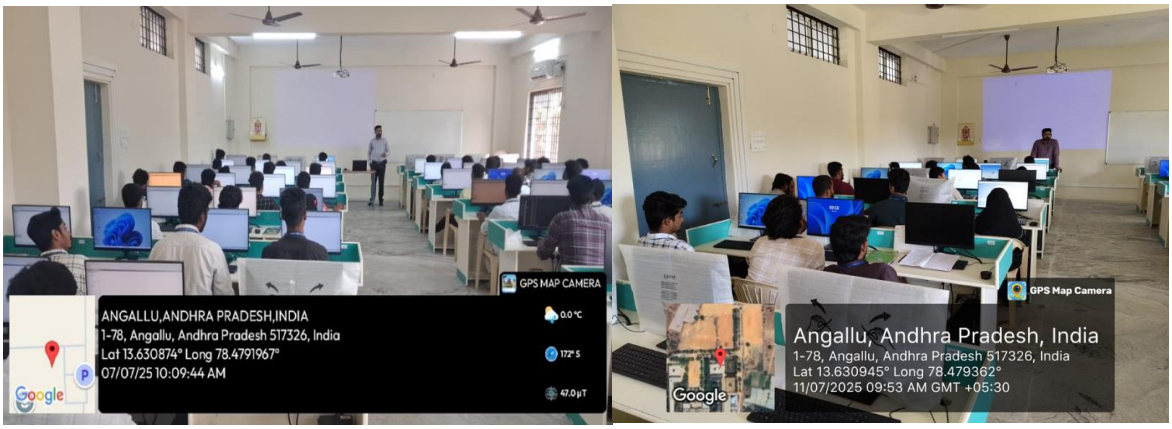

Photo during the Training Session

Report Submitted by: - Dr. V.B. Thurai Raaj, Assistant Professor in EEE, Coordinator-Skill Development Cell & SPOC, APSSDC t-SDI.
Event Co-Coordinators: Mr. Aravindhan D, Assistant Professor, Department of Mechanical Engineering; Mr. Aravindhan D, Assistant Professor, Department of Mechanical Engineering; Dr. Ved Prakash, Assistant Professor, Department of Mechanical Engineering.
Resource Person Details: Mr. Kumar Mayank Priyadarshi, Aylin Technologies Private Limited, Delhi
Total Participants: 50 students from the Department of ME
Venue: Computer Lab No. NPN-005
Report Received on 30.07.2025
Mode of Conduct: Offline

The Skill Development Cell, Madanapalle Institute of Technology and Science, Andhra Pradesh**,** Madanapalle, in association with the Department of Mechanical Engineering, MITS, Madanapalle, organized a five-day skill development program on "**Advanced ANSYS**" from July 07, 2025, to July 11, 2025. A total of **50** students participated in this program, making the event a success.

A summary of the skill development program is as follows:

Dr. S. Baskaran, Associate Professor and head of the Department of Mechanical Engineering, participated in the inaugural function. Mr. D. Aravindhan, Asst. Prof. /ME delivered the Welcome Address, followed by Dr. S. Baskaran, who welcomed the resource person and emphasized the importance of the training program. Dr. Ved Prakash, Asst. Prof. / ME, introduced the resource person and handed over the session to them.

The program schedule and topics are listed below, along with the duration. The forenoon session runs from 09:15 AM to 12:15 PM, and the afternoon session is from 01:15 PM to 05:15 PM.

Day	Session	Topic Discussed
Day- 1	Morning	Introduction to Advanced ANSYS and Advanced Meshing.
	Afternoon	Advanced Meshing and Model Preparation.
Day- 2	Morning	Nonlinear Structural Analysis
	Afternoon	Advanced Nonlinearities, Contact, Large Deformation, and Material Plasticity in ANSYS
Day- 3	Morning	Coupled Field and Thermal Analysis.
	Afternoon	Thermal-Structural Coupling and Multiphysics Simulation Techniques and Best Practices.
Day- 4	Morning	Dynamic and Vibration Analysis.
	Afternoon	Modal, Harmonic, and Transient Dynamic Analysis for Real-World Engineering Applications.
Day- 5	Morning	Automation and Customization.
	Afternoon	ANSYS Scripting and Customization.

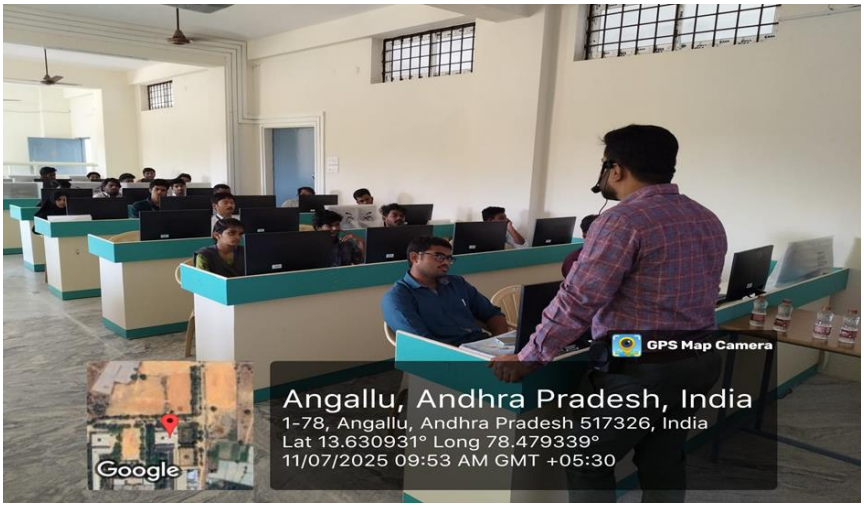

Photo during the Training Session

Outcomes:

1. Understand mesh quality metrics and their impact on solution accuracy. Learn techniques to create advanced meshes (sweep, multi-zone, and inflation layers).
2. Identify types of nonlinearities (material, geometric, and contact) and when they are relevant.
3. Transfer thermal results as loads to structural models for thermal stress analysis.
4. Set up transient dynamic simulations to analyze time-varying loads.

I, Dr. V B Thurai Raaj, Coordinator of the Skill Development Cell, express my gratitude to the Management and Dr. C. Yuvaraj, Principal, for granting permission and providing financial support to organize this program. I thank Dr. C. Kamal Basha, Professor and Vice Principal of Administration, for providing the necessary support promptly. I appreciate Dr. S. Baskaran, Associate Professor and HOD/ME, for his ongoing guidance in all aspects. I also thank Mr. Aravindhan D. & Dr. Ved Prakash, Assistant Professors, Department of Mechanical Engineering, for their continuous support as event co-coordinators throughout this training program. I would like to take this opportunity to thank the entire SDC team.