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A Report on
Three days hands-on training on
"Hypermesh for Engineering Analysis"
Organized by
Department of Mechanical Engineering
In association with
ISTE Student Chapter
From 07.01.2026 to 09.01.2026

Report Submitted by: Mr. Manoj Kumar S Assistant Professor, Department of Mechanical Engineering.
Resource Person Details: Mr. GM Raja Mahendra, Mayinkrish Pvt Ltd, Bangalore
Total Participants: 55 students from the Department of ME
Venue: CAD/CAM LAB 2 (SRB106)
Mode of Conduct: Offline
Report Received on 21.01.2026.

The Department of Mechanical Engineering, Madanapalle Institute of Technology and Science, Andhra Pradesh, Madanapalle, in association with the ISTE Student Chapter, MITS, Madanapalle, organized a Three days hands-on training on **"Hypermesh for Engineering Analysis"** from Jan 7, 2026 to Jan 09, 2026. A total of 55 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. S. Manoj Kumar**, 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. **Mr. Manoj Kumar**, Asst.Prof./ME, introduced the resource person and handed over the session to them.

Objectives of the program:

- To provide fundamental knowledge of Finite Element Analysis (FEA) concepts and engineering applications.
- To familiarize participants with the Hypermesh interface and pre-processing workflow.
- To train participants in applying material properties, boundary conditions, and loads.
- To enable students to prepare analysis-ready models for structural engineering problems.
- To bridge the gap between theoretical engineering concepts and practical simulation tools.

Day-Wise Schedule and Topics Covered:

Day 1 (07-01-2026):

- Introduction to Finite Element Analysis (FEA) concepts and applications.
- Overview of Hypermesh interface and tool navigation.
- Importing CAD geometry and geometry cleanup techniques.
- Introduction to meshing concepts and element quality parameters**.**

Day 2 (08-01-2026):

- Detailed study of 1D and 2D meshing techniques.
- Mesh quality improvement and refinement methods.
- Material property definition and assignment.

- Boundary condition application and load case definition.

Day 3 (09-01-2026):

- Introduction to 3D meshing and solid element creation.
- Model verification and error checking procedures.
- Pre-processing for structural analysis.
- Practice session, troubleshooting, and interactive discussion.

During the Training Session

Outcomes of the Program:

- Participants gained a clear understanding of Finite Element Analysis (FEA fundamentals and workflows.
- Students were able to import CAD models and perform effective geometry cleanup.
- Participants developed practical skills in 1D, 2D, and basic 3D meshing techniques. Students learned to apply material properties, boundary conditions, and loads accurately.
- Participants became capable of checking mesh quality and preparing error-free analysis models. The program enhanced confidence in using Hypermesh for academic projects and engineering analysis applications.

Conclusion:

The Three days hands-on training on **"Hypermesh for Engineering Analysis"** was highly beneficial for the participants. It provided an in-depth understanding of Hypermesh integration and its applications in mechanical design and analysis. The initiative by the **Department of Mechanical Engineering** and the **ISTE Student Chapter** was appreciated by students and faculty alike.

I, Mr. Manoj Kumar S**, take this opportunity to express my deep sense of gratitude** to all those who have supported and contributed to the successful organization of this program. First and foremost, I extend my sincere thanks to the Management of our institution for their unwavering encouragement and continuous support in promoting academic and professional development initiatives. I am especially grateful **to Dr. P. Ramanathan**, Principal, for his kind permission, motivation, and financial support, which were instrumental in planning and executing this program effectively.