



CENTRE FOR ADVANCED STUDIES

DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY

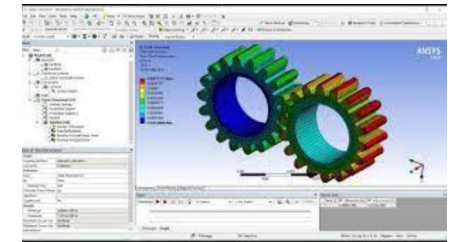
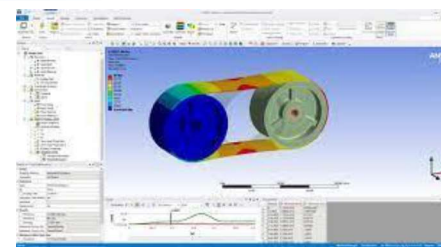
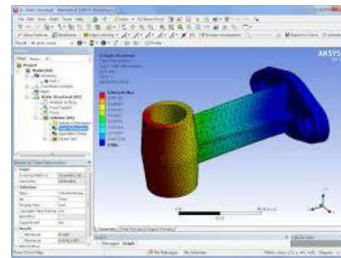


9-13 May 2022

5-Days Short-Term Course

on

ANSYS Software



Highlights



Free Registration – Limited seats

Last Date of Registration: 30th April, 2022

Eligibility: B.Tech. (4th Year Mechanical/ECE/Civil Engineering)
Infrastructure Available: Design and Simulation Center with ANSYS research license
Mode: Offline
Number of Seats: 30



System support
Anurag Chaubey



Co-coordinator
Divyanshu Chauhan

Coordinator
Dr. Anuj Kumar Sharma

Registration Link:

<https://cas.res.in/workshopreg.html>



Contents

- ✓ ANSYS Basics and General FEA Analysis Procedures
- ✓ Different modules of ANSYS
- ✓ Modelling using ANSYS
- ✓ Structure analysis and model analysis using ANSYS
- ✓ Thermal Analysis
- ✓ End Session and Discussion on Problems

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SCHEDULE

Day	Session	
	Forenoon	Afternoon
Day 1	Introduction to the Finite Element Method, What is the Finite Element Method? General Steps of the Finite Element Method, Explanation of 1D, 2D and 3D Elements with examples of ANSYS Elements, Need of FEM, Types of analysis that can be done using ANSYS, Advantages of the Finite Element Method, Limitations of FEA, Types of analysis that can be done with ANSYS.	Solid Modeling, An Overview of Solid Modeling Operations, Working with Boolean operations, Working Plane, Importing of 3D models.
Day 2	Meshing a. Free meshing or Mapped meshing b. Setting Element Attributes c. Selecting Element Type d. Shape Function e. Defining Element Types f. Defining Section Properties g. Assigning Element Attributes before meshing h. Mesh Controls i. The ANSYS Mesh Tool j. Smart sizing k. Meshing l. Free Meshing m. Mapped Meshing n. Hybrid meshing o. Mesh Extrusion p. Volume Sweeping	<i>Problems for hands-on and Discussions</i>
Day 3	Material Properties a. Material Library b. Specifying properties 2 Chapter 6: Boundary Conditions a. Types of Loads b. Applying loads	Solvers a. Types of Solvers b. Solver Setup c. Load Step Options d. Solving Multiple Load Steps, Post-processing. <i>Problems for hands-on and Discussions.</i>
Day 4	ANSYS Workbench a. Introduction to ANSYS Workbench b. Graphical User Interface c. Static Structural Analysis	d. Modal Analysis e. Thermal Analysis f. Contact Recognition and practice problems
Day 5	Sample Modal Analysis and Problems for practice	<i>End Session and Discussion on Problems</i>

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