



Curriculum Of Ansys

INTRODUCTION

- About ANSYS
- ANSYS Basics
- Mechanics
- What is FEA?
- History of FEM
- Need of FEM, Future of FEM

BASICS OF FEM

- Fem Procedure (Theoretical)
- Steps in FEM
- Theories of Failure
- Different Types of Analysis
- FEA Design Intent

GETTING STARTED WITH ANSYS APDL

- ANSYS Workbench Environment
- Understanding GUI
- Manipulating Model
- Standard Toolbar
- ANSYS Toolbar
- File Types
- The Database & Files

CAD MODELING USING ANSYS

- Work Plane
- Co -Ordinates System & Units
- Different Types of Modelling
- Methods of Solid Modelling
- Component & Assembly Management

IMPORTING GEOMETRY FROM OTHER CAD PACKAGES

- Understanding Different Import Formats
- Working with IGES Files

MESHING (BASIC)

- Introduction
- Classifications of Elements
- Use of Meshes, Types of Meshes



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MESHING (ADVANCE) & TECHNIQUE

- Mesh Generation
- Different Techniques Involved in Meshes
- Manual Meshing

FINALIZING FE MODEL FOR ANALYSIS

- Element Quality Area
- Quality Check Is Mesh
- Material
- Conditions for Boundary

ADVANCE BOUNDARY CONDITIONS

- Application of Mass Elements
- Application of Rigid Elements
- Simulating Bolted Joint
- Simulating Leakage
- Mesh Generation

ADVANCE BOUNDARY CONDITIONS

- ANSYS Workbench Interface
- Getting Started with ANSYS Workbench
- Project Page and File Management

DESIGN MODELER

- Why Design Modeler?
- Graphical User Interface
- Design Principles
- Parameters in Design Modeler
- Concept Modeling
- Advanced Modeling Features
- Importing
- Work Plane

SIMULATION BASICS

- Graphical User Interface
- Idealization
- Material Parameters
- Discretization, Mesh Control, Mesh
- Study, Mesh Quality.



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- Boundary Conditions.
- Analysis Settings
- Post -Processing
- Switching Analysis
- Structural and Thermal Analysis (On Ansys Workbench)

HANDLING PROJECTS

- Steps in FEA
- Integrative and Dead-end FEA

PROJECT SKILLS

- Possible Errors
- Report Generator

PROJECTS

- Power Transmissions Tower
- Bicycle Frame