



IFS ACADEMY

Training For The Future!!

Advanced Diploma in CAD/CAE

(Duration: 3 Months)

(With 100% Placement Assistance)

Course Curriculum

➤ ***Basics of Engineering Design***

Applied Mechanics, Strength of Materials, Machine Design, Theory of Machines, Physical Metallurgy, Finite Element Analysis, Thermal Engineering, Fluid Dynamics, Vibrations,

➤ ***Basics of Engineering Drawing***

Engineering Graphics, Machine Drawing, Limits, Fits & Tolerances, Drawing Reading, Standards, Manufacturing Processes, Machining Operations.

➤ ***Computer Aided Design using Pro/E WF OR Catia OR SolidWorks***

(Choose any two)

Pro/E WF: Introduction to CAD/CAM/CAE, About PTC, PTC Products, GUI of ProE WF, Sketching, Part Modeling, Advanced Part Modeling, Assembly, Drafting, Sheet Metal, Introduction to Pro Mechanism, Project Work.

Catia: Introduction to CAD/CAM/CAE, About Dassault Systems, Dassault Products, GUI of Catia, Sketching, Part Modeling, Advanced Part Modeling, Assembly, Drafting, Wire Frame and Surfacing, Generative Shape Design, Project Work.

SolidWorks: Introduction to CAD/CAM/CAE, About SolidWorks, SolidWorks Products, GUI of SolidWorks, Sketching, Part Modeling, Advanced Part Modeling, Assembly, Drafting, Sheet Metal, Surfacing, Introduction to PhotoWorks, Project Work.

➤ ***Finite Element Modeling using Hypermesh (Optional)***

(Note: You can choose any one CAD package instead of two as mentioned above along with Hypermesh.)

Introduction to Finite Element Modeling, Quality Parameters, GUI, Geometry creation and clean up, Mid Surface extraction, Element Offset, Plane, Cone Torus, Quality Index and Optimising quality. Organise element, Split Element, Replace. Tool page. Mask element, Translate-Reflect-Scale-Count-Number-Renumber. Check Element, Edges, faces. Features, Normal, 1D Bar, Rigid, Spot weld, Rbe3, Spring, FE joints. Drag, Spin, Line Drag, Element offset, Loading & BC's. Exporting FE data to various solvers.

➤ ***Finite Element Analysis using ANSYS Mechanical APDL***

Introduction to FEA, Elements Study, About ANSYS Inc., ANSYS Products, Selection Logic, Solid Modeling, Meshing, Material Properties, Loading and Boundary Conditions, Solvers, Post Processing, Static Structural, Thermal and Modal Analysis, Introduction to Non Linear Analysis, Tips & Tricks, Project Work.

➤ ***Finite Element Analysis using ANSYS Workbench***

Introduction to ANSYS Workbench, GUI, Procedure, Static Structural, Thermal and Modal Analysis, Introduction to Non Linear Analysis and Contact, Project Work.

➤ ***Soft Skills Training***

Résumé writing, Aptitude Test, Technical Test, Group Discussion Techniques, Interview techniques, Communication & Presentation Skills, Personality Development.