DOOR

CAD ENGINEERING

CORPORATE TRAINING AND SERVICE
Design Engineering
And
Project Management

We Are The Corporate Trainers

We Offer ..
- Project Intern
- Career Guidance
- Placement guidance

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OUR STANDARDS

ASCE AMERICAN SOCIETY OF CIVIL ENGINEERS

ASME SETTING THE STANDARD

energy API

API American Petroleum Institute

energy institute

ISA International Society of Automation (ISA)

BSI British Standards

ANSI American National Standards Institute

WRC WELDING RESEARCH COUNCIL

NACE INTERNATIONAL

ASTM INTERNATIONAL

TEMA TUBULAR EXCHANGER MANUFACTURERS ASSOCIATION

We create professionals with a genuine corporate edge.

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Every organisation has distinctive requirements which in turn demands distinctive software support. Regardless of how advanced these software are , it takes well trained individuals or teams to use them to their full potential. We create such professionals. We provide professional training for organisations based on various software requirements. The training programs maintain global standards and are conducted by authoritatively qualified trainers with creditable experience. To make the resultant understanding and expertise of the trainees flawless, the internal training, assessment and certification processes are made thorough and elaborate

Our Discipline

- Concept Design And Development

- Utility Design And Development

- Process Design And Development

- Equipment Design And Analysis

- Detail Design And Development

- Fabrication Planning And Designing

- Shop Fabrication Design And Detailing

- Construction Planning And Design

- Transportation Analysis And Design

- Dynamic Research & Science Engineering

- Tooling Design And Development

- Moulding Design And Development

- Product Design And Development

- Material Science And Engineering

- Nuclear Equipment Design And Development

Our Specialization

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- **Mechanical Design & Engineering**
- **Civil Design & Engineering**
- **Structural Design & Engineering**
- **Chemical Design & Engineering**
- **Instrumentation Design & Engineering**
- **Electrical Design & Engineering**
- **Petrochemical Design & Engineering**
- **Energy Engineering**
- **Aerospace Design & engineering**
- **Oil and gas Design & engineering**
- **Power plant Design & engineering**

CFD Analysis And Stimulation

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- **Basics brush up**
- **an intro to CFD**

  An introduction on the field of fluid dynamics in general and how it evolved computationally so that flow is visualized for practicality

- **flow and characteristics**

  The basics of fluid dynamics; the types of flow and its characteristics, governing equations and its take on CFD

- **HANDS on Meshing**

    1 meshing and how meshing works

    2 Hyper mesh

- **HANDS on Ansys Fluent**

    1 importing and exporting

    2 boundary conditions

    3 characteristics

    4 governing equations

    5 steady and unsteady

    4 thermal

FEA Analysis And Stimulation

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<u>1) Finite Element Analysis</u>
FEA Applications
Mechanical/Aerospace/Civil/Automotive Engineering

1. Structural/Stress Analysis
2. Static/Dynamic
3. Linear/Nonlinear
4. Fluid Flow
5. Heat Transfer
6. Electromagnetic Fields
7. Soil Mechanics
8. Acoustics
9. Biomechanics

Advantages

1. Irregular Boundaries
2. General Loads
3. Different Materials
4. Boundary Conditions
5. Variable Element Size
6. Easy Modification
7. Dynamics
8. Nonlinear Problems (Geometric or Material)

FEM
(FINATE ELEMENT METHOD)

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Application

HyperMesh is used in aviation and aerospace industry for the analysis of local structures and identification and removal of redundant material. It speeds up CAD to Finite Element Modelling (FEM) creation with the help of building tools. It helps in meshing and automated model construction in the automotive industry.

Why hyper mesh

Finite Element Method reduces the degrees of freedom from infinite to finite with the help of discretization or meshing (nodes and elements). One of the purposes of meshing is to actually make the problem solvable using Finite Element. By meshing, you break up the domain into pieces, each piece representing an element.

Modelling and Detailing

1) Catia & Solid works

1. Computer aided three dimensional interactive application
2. V5 release
3. Kenrnell cnext language
4. Developer dasaault system
5. Graphics window - To build the geometry
6. Tool bar
7. Status bar
8. Command bar
9. Menu bar
10. Specification tree
11. Part body
12. Axis system
13. Geometrical set

Drafting And Detail Design Engineering

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1. AutoCAD Basics.
2. Customising AutoCAD.
3. Major toolboxes & its features.
4. Shortcut commands.
5. 2D Engineering (i.e. from isometric to orthographic).
6. Tool palettes.
7. Detailing & Dimensioning.
8. Working with data.
9. 3D Modelling (i.e. from orthographic to isometric).
10. Revision drawings.
11. Layouts & Plots.
12. Reverse Engineering.
13. CNC Nesting plan with wastage calculation.
14. Fabrication drawing
15. Welding map
16. Dimension and annotation
17. Isometric drawing
18. Shop fabrication planning
19. Manufacturing nameplate

Static Equipment Design Engineering

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Course Content:

1. FEED engineering design
2. Detail engineering design
3. Fabrication planning
4. Internal Pressure design
5. Natural Frequency checking
6. Wind Load analysis
7. Earthquake Load analysis
8. Deflection analysis
9. Centre of Gravity
10. Nozzle design
11. MDMT analysis

Application

1. Pressure vessel
2. Heat exchanger
3. Storage tank

Steel Structural Design Engineering

Tekla engineering

- Introduction
- Create a new model
- Add a reference model
- Zoom, pan and rotate the model
- Modify the grid
- Create pad footing
- Create strip footing
- Create wall plans
- Use snap switches
- Use auto connections
- Create views
- Create columns
- Create beams
- Create slabs
- Copy and mirror objects
- Connection topics
- Joints
- Auto defaults
- Auto connections
- Admin topics
- User defined attributes
- Object representation
- Macros
- Interoperability topics
- Export to IFC
- Tekla

Software Package

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- AutoCAD
- Zw-CAD
- Catia
- solidworks
- Navisworks
- Autodesk Revit
- Sketchup
- PV-elite
- CADworx
- PDMS
- E-tank
- Auto plant
- Tekla
- Stad pro
- RAM Structural
- Primavera
- AVEVA
- Siemens NX
- Ansys
- Hyper mesh

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