



# Professional Certificate in Interior Designing

**DURATION: 300 Hours**

**TOTAL CREDITS: 10**

## **COURSE SYLLABUS**

## Objective

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Provides qualities and skills needed to become an interior designer. Gives a balanced inside view of the interior design. The course is designed as to develop the creative skills among the students and to become a pro in architectural and interior designing

## Exit Profile

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- Interior designing
- 2D & 3D drawing of building

## Career Path

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- Interior designer
- Draftsman

# Course Outline

Course Name:	Professional Certificate in Interior Designing	Duration:	300 H
Module	Topic	Duration	Total Duration
<b>Module -1</b>	Introduction to AutoCAD 2D	3	50 H
	Design features in AutoCAD	2	
	2D Drafting tool	15	
	Modifying tools	10	
	Layers, Arrays	5	
	Dimensioning	3	
	Object Properties, Hatching	2	
	Layout, Publish	2	
	Exercises	8	
<b>Module -2</b>	Introduction to AutoCAD 3D	2	50 H
	3D Modelling	8	
	Editing in 3D Modelling	6	
	Surface Modelling	8	
	Mesh Modelling	6	
	Section, Layout	2	
	Material, Camera, Light, Render	8	
	Exercises	10	

<b>Module -3</b>	Introduction to 3ds Max	2	50 H
	Viewing and Navigation	3	
	Object Properties	3	
	Geometry	2	
	Selecting, Scaling objects	2	
	Copies, Arrays	2	
	Surface Modelling	6	
	Animation	6	
	Material, Camera, Lighting	6	
	Rendering	8	
	Exercises	10	
<b>Module -4</b>	Introduction to Photoshop	8	50 H
	CMYK	4	
	Painting in Photoshop	8	
	Blurring, sharpening, smudging an image	6	
	Converting and Text into path	4	
	Working with fonts	4	
	Layers	6	
	Exercises	10	
<b>Module -5</b>	Introduction to Interior designing	5	50 H
	Designing interiors	5	
	Building elements- Walls, floors, roof etc	5	
	Fixtures for Interiors	5	
	Space planning	5	
	Color, Texture, Light	5	
	Estimation and Costing	5	
	Exercises	15	
<b>Module -6</b>	Interior Design Projects	50	50 H

# Course In Detail

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## **MODULE - 1:**

### **INTRODUCTION TO AUTO CAD 2D**

- Introduction to Auto cad 2D,
- Understanding the basic terminology in Auto cad.
- Exploring User Interface system
- Co-ordinate systems
- Display control
- File Management
- Unit, Limit

### **DESIGN FEATURES IN AUTO CAD:**

- Drafting Settings
- Polar, Ortho, Grid, Snap
- Dynamic, Input
- Quick Properties.
- Selection Cycling

### **2D DRAFTING TOOLS:**

- Line, Circle, Rectangle, Polygon, Arc, Ellipse
- Polyline, Donut, Point
- Pline, Multiline, Spline

### **MODIFYING TOOLS:**

- Move, Copy, Mirror, Offset
- Rotate, Scale, Stretch, Lengthen
- Trim, Explode, Extend, Break
- Chamfer, Fillet
- Align, Join

## **LAYERS, ARRAYS**

- Layer Properties Manager
- Layers and Layer Properties
- Performance analysis
- Layer State Manage
- Arrays – Rectangular, Polar and Path arrays

## **DIMENSIONING**

- Dimension style manager
- Dimension- Linear, Aligned, Radial, Angular, Arc length
- Dimension Style, Baseline and continued dimension
- Quick dimension
- Ordinate Dimension

## **OBJECT PROPERTIES, HATCH**

- Property window
- Color command
- Line types, Line weight
- Match properties
- Hatch- Edit, gradient, Pattern

## **LAYOUT, PUBLISH**

- PAGESETUP
- MSPACE
- PLOT
- PUBLISH
- Arrays – Rectangular, Polar and Path arrays
- Plot style

## **EXERCISES**

- Practice the Exercises related to Mechanical Engineering drawing
- Draw and Design mechanical components

## **MODULE - 2:**

### **Introduction to Auto cad 3D**

- Types of 3D models
- Visual Style manager
- Wireframe, surface, solid models
- UCS, V Cube, Steering wheel

### **3D MODELLING**

- Solid primitives
- Extrude, Press pull
- Loft
- Sweep
- Revolve
- Poly solid

### **EDITING IN 3D MODELLING**

- Union, Subtraction, Intersection
- 3D fillet, 3d chamfer
- Taper face, Extrude face
- Slice, thicken
- Shell
- Imprint

### **SURFACE MODELLING**

- Planar surface
- Network surface
- Surface patch
- Surface offset
- Surface extrude, revolve, sweep
- Surface fillet, trim
- NURBS surfaces

### **MESH MODELLING:**

- Mesh primitives

- Rev surface
- Edge surface
- Rule surface
- Tab surface
- Smooth object
- Extrude mesh surface

### **SECTION, LAYOUT**

- Section plane
- Introduction to layout
- PAGESETUP
- Plot
- Layout1, Layout2
- View Ports

### **MATERIAL, CAMERA, LIGHT, RENDER**

- Material- Mapping, browser,
- Lights- Different types
- Sun status, shadow
- Camera- Properties
- Layout1, Layout2
- View Ports
- Render
- Render destination
- Creating animation

### **EXERCISES**

- Practice the Exercises related to Mechanical Engineering 3d drawing
- Draw and Design mechanical 3d components

## **MODULE - 3:**

### **INTRODUCTION TO 3DS MAX**

- Basics of 3D modeling
- Project work flow
- The 3ds max interface
- Using the asset browser
- The initialization files
- Backing up and archiving scenes
- Crash recovery system

## **VIEWING AND NAVIGATION**

- General viewport concepts
- Setting viewport layout
- Controlling display performance
- View cube
- Steering wheels
- Controlling object display

## **OBJECT PROPERTIES**

- Object properties dialog panel
- Rename object tool
- Custom attributes
- Parameter collector
- Expression techniques

## **GEOMETRY**

- Basics of creating and modifying objects
- Geometric primitives
- Architectural objects
- Mental ray object
- Shapes
- Compound objects
- Systems

## **MOVING ROTATING AND SCALING OBJECTS**

- Using transforms
- Transform commands
- Transform coordinates and coordinate center
- Transform tools
- Using modifiers
- World space modifiers
- Object space modifiers

## **CREATRING COPIES AND ARRAYS**

- Overview of copies, instances and references
- Techniques for cloning objects
- Arraying object
- Mirroring objects

- Using the spacing tool

## **SURFACE MODELLING**

- Working at the sub object level
- Techniques for cloning objects
- Subdivision surfaces
- Soft selection rollout
- Collapse utility
- Graphite modeling tools
- Editable mesh surface
- Editable poly surface
- Patch objects
- NURBS modeling
- Tools for low polygon modelling

## **ANIMATION**

- Animation concepts and methods
- Working with controllers
- Animation controllers
- Animation constraints
- Wire parameters
- Hierarchies and kinematics
- Track view
- Motion mixer
- Saving and loading animation
- Animation utilities

## **LIGHTS, CAMERAS AND MATERIALS**

- Lights
- Lighting analysis assistant
- Cameras
- Designing materials
- Material editor
- Material/map browser
- Type of materials

## **RENDERING**

- Render setup dialog
- Rendered frame window
- R5ender output file dialog
- View image file
- Rendering commands

- Common panel
- Renderers
- Rendering elements separately
- Render to texture
- Rendering previews and grabbing viewports
- Network rendering
- Batch rendering
- Command line rendering Lighting analysis assistant

## **EXERCISES**

- Exercises related to 3d modelling
- Exercises related to rendering and animation

# **MODULE - 4:**

## **INTRODUCTION TO ADOBE PHOTOSHOP**

- Introduction to Photoshop and image editing
- Exploring the Adobe Photoshop
- Explore the Photoshop Interface
- How to customize the toolbar in Photoshop
- Adobe Photoshop cc 2021 tools
- Understanding the tools
- Foreground and background color in the toolbar
- Customize the Work space Lights
- Lighting analysis assistant
- Cameras
- Designing materials

## **CMYK**

- Importance of CMYK in Printing

## **PAINTING IN PHOTOSHOP**

- Painting in Photoshop
- Using Color/Swatch Palettes, Color Picker and Eyedropper
- Brush, Pencil, Erasers, Pattern Stamp
- Setting Transparency for Painting Tools
- Creating Brushes and Patterns (By Defining Pattern and by Pattern Maker)
- Working with Libraries
- Adjusting brush's properties with Brush Palette

- Changing the color images by using Color Replacing Tool
- Filling Color
- Solid Color
- Working with Gradient
- Gradient Library
- Creating and Editing Gradient
- Transparency

### **BLURRING, SHARPENING, SMUDGING AN IMAGE**

- Creating a New Image
- Understanding Resolution and Pixels
- Understanding Color Modes
- Viewing of Image
- Zooming and Scrolling Images

### **CONVERTING AND TEXT INTO PATH**

- Adding Text
- Differences between Type Tools and Type Mask Tools
- About Point Text and Paragraph Text
- Formatting Text and Paragraph
- Creating Warped Text
- Working with Vector Shapes
- Differentiating Vector and Raster Objects
- Using Shape Tools
- Creating User Defined Vector Objects Using Pen Tool
- Parts of a Vector Object
- Anchor Point
- Path
- Bezier Curve
- Working with Path Palette

### **LAYERS**

- Concept of Layers
- Transforming Layers
- Arranging Layers
- Setting Transparency of Layers
- Selecting Multiple Layer
- Locking and Hiding Layers
- Creating a Blank Layer
- Deleting Layers
- Applying Styles to Layers
- Creating Layer Groups
- Understanding Layer Mask and Vector Mask

## **EXERCISES**

- Exercises related to PHOTOSHOP

# **MODULE - 5:**

## **INTERIOR DESIGNING**

- Fundamentals of Interior Designing
- Introduction to the subject and its importance
- Objectives of Interior designing
- Design – Definition, Importance

## **DESIGNING INTERIORS**

- Structural Design
- Decorative Design
- Designing interiors
- Design themes: Types and Application
- Principles of Design

## **WALLS, FLOORS, CEILING**

- Walls
- Floor
- Ceiling
- Roof
- Windows
- Doors
- Stones and Brick
- Materials- Wood, glass, metals etc
- Services
- Electrical system
- Safety Features
- Electrical Fitting
- Fixtures for interiors
- Plumbing

## **SPACE PLANNING**

- Proportion: Definition, Importance and Space planning
- Definition, ways of achieving and application

- Basic Principles of space planning
- Orientation, Aspect, Prospect, Privacy
- Furniture arrangements
- Furniture types and styles
- Interior Background Materials
- Types, characteristics, use, care and maintenance of materials
- Residential space planning
- Kitchens, bathrooms, living rooms

### **COLOR, TEXTURE, LIGHT**

- Font: Size & shape; characteristics
- Color
- Texture: Types & significance
- Pattern: Types & effects
- Light: Importance, characteristics and application in interiors.
- Types of lighting
- Electrical layouts

### **ESTIMATION AND COSTING**

- Budgeting and cost estimation
- Bill of Quantities (BOQ)
- Vendor and supplier coordination
- Contracts and documentation

## **MODULE – 6:**

### **PROJECTS**

- Interior design projects using above mentioned softwares