Advance Diploma CAD for 2D+3D Visualization & Animation

CCE offers many job oriented computer courses."Advance Diploma CAD for 2D+3D Visualization & Animation" is one of the CCE approved course.The detailed contents of this course is in the attachment.

COURSE CODE :   CCE-D1

ELIGIBILITY   : 10th

DURATION :   1 Year

SYLLABUS

Semester-I

Introduction To AutoCAD

 Navigating the working environment , Working with files , Displaying Elements

Creating Basic Drawings

 Inputting Data , Creating Basic Objects , Using Object Snaps , Using Polar Tracking and Polar Snap , Using Object Snap Tracking , Working with units , Using function Keys

Manuplating Objects

Selecting Objects , Changing an object position , Creating a new objects from existing objects , Changing the Angle of an object's position , Changing part of an object shape , Creating a mirror image of Existing objects , Creating Object Patterns , Changing an object 's Size , Using Blocks

Drawing Organization and Inquiry Commands

Using Layers , Object Properties , Matching Object Properties , Using the Properties Palette , Using Linetypes , Using Inquiry Commands

Altering Objects

Trimming and Extending objects , Creating Parallel and Offset Geometry , Joining Objects , Using Grips

Annotation Drawings

Creating Multiline Text , Creating Single Line Text , Using Text Styles , Editing Text , Hatching , Editing Hatch Objects , Creating Dimensions , Using Dimension Styles , Editing Dimension

Layouts and plotting

Using Layouts , Using Pagesetups , Using ViewPorts , Plotting Drawings

Semester-II

3D Modeling
Introduction to 3D

Overview : Types of 3D Models , Navigating and Displaying 3D Models , Orbiting Your 3D Model , Changing the Model Display , Setting Viewport Display

Creating Solid Primitives

Overview : About Solid Primitive , Creating a Solid Box , Creating a Solid Sphere , Creating a Solid Cylinder , Creating a Solid Cone , Creating a Solid Wedge , Creating a Solid Torus , Creating a Solid Pyramid

Creating Models from 2D Profiles

Overview : About Models from 2D Profiles , About the Right-Hand Rule of Rotation , Choosing a Model Creation Method , Creating a Model Using the Planar Surface Command , Creating a Model Using the Polysolid Command , Creating a Model Using the Extrude Command , Creating a Model Using the Presspull Command , Creating a Model Using the Revolve Command , Creating a Helical Path , Creating a Model Using the Sweep Command , Creating a Model Using the Loft Command

Creating Composite Solids

Overview: About Composite Solids , Creating Solids Using Union , Creating Solids Using Subtract , Creating Solids Using Intersect , Checking Interference

Working in 3D

Overview : About the Cartesian Coordinate System , Changing the Coordinate System , Changing the UCS Icon Display , Changing the Coordinate System Dynamically , Acquiring Points in 3D Space

Editing Models

Adding Detail to Your Solid Models

Overview, Filleting Solid Models , Chamfering Solid Models , Slicing a Solid Model

Converting Objects

Overview , About Converting 2D Objects to Solids or Surfaces , Converting to Surfaces ,. Converting to Solids , About Thickening Surfaces into Solids , Thickening Surfaces to Solids

Editing Solid Models

Overview , About Solid History and Editing Methods , About Grip Editing Solid Models , Extruding Faces , Moving Faces , Offsetting Faces , Deleting Faces , Rotating Faces , Tapering Faces , Creating a Shell , Imprinting Edges , Separating Solids

Extracting Geometry from Solid Models

Overview , Copying Faces , Copying Edges , Extracting All Model Edges , Exploding 3D Models

Changing the Model Position

Overview, Moving in 3D , Aligning in 3D , Rotating in 3D

Duplicating the Model

Overview , Mirroring in 3D , Arraying in 3D

Getting Information from 3D Objects

Overview , Checking Solid Model Integrity , Viewing Mass Properties , Changing Face Color , Changing Edge Color

Sectioning a Model and Creating Drawings

Section a Solid Model and Generate 2D Geometry : Overview : About Flattened Views , Displaying 2D Geometry from a Model View , Creating Section Planes , Manipulating Section Planes , Generating 2D/3D Sections

Creating Drawings from 3D Models

Overview , Types of Views from 3D Models , Shaded and Hidden Views , Creating Views from Flatshots and Sectionplanes

Visualization

Using Visual Styles : Overview , About Visual Styles , Using the Visual Styles Manager , Using the Visual Styles Control Panel , Exporting Visual Styles

Using Lights

Overview , About Lighting , Adding Lights to a Scene , Editing Lights in a Scene

Using Materials

Overview , About Materials , Working with Predefined Materials , Creating and Editing Materials

Using the Sun

Overview , About the Sun , About the Light Control Panel and Sun Settings , Specifying Your Scene's Geographic Location , About the Sun Properties Palette

Rendering

Overview , About the Rendering Environment and Render Presets , Rendering Views, Cropped Regions, and Selected Objects , About the Render Window and Image Information , Controlling Render Output Size and Format , Advanced Rendering

Navigating the Model

Overview , Walking and Flying Through a Model , Recording an Animation , Using Animation Paths

Using Cameras and Views

Overview , About Cameras , Creating Cameras and Views , Activating and Managing Camera Views