

## AutoCAD 2017/2016/2015 3D, getting started



BPC-173 2 Days (14 Hours)

### Description

This course will allow you to master the 3D drawing functions and techniques of AutoCAD 2016/2015. You will learn to model and edit 3D projects and create animations and computer-generated images renderings.

### Who is this training for ?

#### For whom

Managers, architects, engineers, technicians, draftsmen, drawing designers in design offices involved in the production and modification of 3D plans.

#### Prerequisites

Aucune

### Training objectives

- Discover the 3D working environment of AutoCAD
- Understand the 3D drawing functions of AutoCAD
- Modeling mechanical parts in 3DDesign views
- Create and modify 3D projects

### Training program

Introduction

- Getting started with the AutoCAD 3D environment.
- General Coordinate System: SCG.
- User Coordinate System: SCU.
- The Gizmos (Local Coordinate System).
- Define a new 3-point UCS.
- Adapt the UCS to a non-orthogonal plane.
- Object tracking and polar tracking.
- Dynamic User Coordinate System: SCUD.
- Practical work Demonstration of AutoCAD 2016/2015 functionalities.

### La visualisation

- Predefined views.
- Creating and manipulating views.
- Multiwindowing.
- Orbit, free orbit and continuous orbit.
- Panoramics, navigation, movement.
- Practical work Design of a view.

### La modélisation

- 3D wire objects.
- Creation and assembly of 3D solids.
- 3D primitives.
- Polysolid.
- Creating solids and surfaces from lines or curves.
- Extrude, Sweep, Revolve and Smooth.
- Creating 3D mesh.
- Work the faces, edges and vertices.
- Smooth and refine the mesh.
- Creating a cutting plane.
- Generate 2D to from a 3D model.
- Creation of a section.
- Practical work Modeling a 3D mechanical part.

### Modifications d'objets 2D et 3D

- 3D surface editing and modification.
- 3D solid editing and modification.
- 3D mesh editing and modification.
- 3D moving , 3D rotation and 3D symmetry.
- Extrude faces, move, offset faces, erase and copy faces, rotate, taper and color faces.
- 3D rectangular array and array 3D polar.
- Gizmo: moving, rotating and 3D scaling.
- Boolean operations: union, subtraction, intersection, interference.
- Practical work Creation of a steam engine connecting rod.

### Les styles visuels

- 2D Wireframe, Conceptual, Shaded with Edges, Masked, and Realistic visual style.
- Export a new visual style.
- Bring out details in designs with enhancements such as line fading.
- Rendering quality.
- Ray tracing.
- Saving the rendering.
- Jobs practical Construction of a studio in 3D.
- Modeling a sofa and a table with chairs.