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**Course Title:** AutoCAD 3D

**Course Code:** ACAD-4

**Duration:** 2 Days

## Courseware Description

This courseware provides a basic understanding of how to design and modify 3D models using AutoCAD® software. Creating 3D models helps users better visualize and present designs that are created with CAD.

This courseware introduces students to the fundamental concepts and workflows for creating 3D models with AutoCAD. Students explore how to create and modify both solid and surface models. Students learn how to present their designs while they are still being created, using visualization tools such as visual styles, model walk and fly throughs, materials, and lighting. Students also learn how to output 3D models from the CAD system to either paper or a distributable, electronic version. The concepts and practices taught will help students take their AutoCAD designs to the next dimension – 3D!

Hands-on exercises throughout the courseware demonstrate the modeling process using techniques that can be applied to the mainstream drafting industries. The exercises printed in the book are also provided in an on-screen format that can be viewed next to AutoCAD.

## Objectives

The primary objectives of this courseware are to teach students how to:

- Represent a design by creating solid primitives, solid or surface models from cross-sectional geometry, or composite models from multiple solid models.
- Complete a solid model design by adding the necessary features to detail, duplicate, and position 3D models.
- Convert 2D objects to 3D objects.
- Document a 3D design by creating 2D drawings for production and visualization.
- Communicate design ideas using visual styles, lights, model walk-through tools, and renderings.

## Who Should Attend

This courseware is designed for AutoCAD users who are proficient in working with 2D objects and have a need to create 3D models of their designs.

## Prerequisites

It is recommended that students have a working knowledge of:

- Completion of [ACAD-1](#) course or equivalent working knowledge of the content of either course.
- The current or a previous release of AutoCAD, and should have experience with creating and editing basic AutoCAD objects and creating and working with layouts..
- Microsoft® Windows® XP or Microsoft® Windows® 2000

## Course Outline

### 3D Modeling

- Introduction to 3D
- Creating Solid Primitives
- Creating Models from 2D Profiles
- Creating Composite Solids
- Working in 3D
- Creating Models from Cross Sections

### Editing Models

- Adding Detail to Your Solid Models
- Converting Objects
- Editing Solid Models
- Extracting Geometry from Solid Models
- Changing the Model Position
- Duplicating the Model
- Getting Information from 3D Objects

### Working Drawings and 3D Objects

- Sectioning a Solid Model and Generating 2D Geometry
- Creating Drawings from 3D Models

### Visualization Tools

- Using Visual Styles
- Using Cameras and Views
- Navigating the Model
- Using the Sun
- Using Lights
- Using Materials
- Managing Materials