

# Technical Education Services



## AutoCAD® 3D Drawing & Modeling

### Course Length: 3 days

AutoCAD 3D Drawing and Modeling introduces students who are proficient with the 2D commands in the AutoCAD® software to the concepts and methods of 3D modeling. The training course provides a thorough grounding in the fundamentals of 3D and explores the main features of the advanced 3D Modeling workspace in the AutoCAD software.

The major topics covered in the training course are:

- 3D viewing techniques
- Working with simple and composite solids
- Creating complex solids and surfaces
- Modifying objects in 3D space
- Editing solids
- Creating sections, camera perspectives, and animations
- Converting 3D objects
- Setting up a rendering with materials and lights
- Creating 2D drawings from 3D models
- Working with the User Coordinate System

### Prerequisites:

Before taking this course, students need to have a good working skill level in the AutoCAD software. A minimum of 80 hours of work experience with the AutoCAD software is recommended.

Course description shown for Autodesk AutoCAD 2015. Topics, curriculum, and/or prerequisites may change depending on software version.



Value Added Services  
Authorized Training Center

[imaginit.com/training](http://imaginit.com/training)

# Technical Education Services



## Table of Contents

### Chapter 1 3D Foundations

- 1.1 Why Use 3D
- 1.2 Introduction to the 3D Modeling Workspace
- 1.3 Basic 3D Viewing Tools
- 1.4 3D Navigation Tools
- 1.5 Introduction to the User Coordinate System

### Chapter 2 Simple Solids

- 2.1 Working with Solid Primitives
- 2.2 Solid Primitive Types
- 2.3 Working with Composite Solids
- 2.4 Working with Mesh Models

### Chapter 3 Working with the User Coordinate System

- 3.1 UCS Basics
- 3.2 UCS X, Y, and Z Commands
- 3.3 UCS Multifunctional Grips
- 3.4 Saving a UCS by Name

### Chapter 4 Creating Solids & Surfaces from 2D Objects

- 4.1 Complex 3D Geometry
- 4.2 Extruded Solids and Surfaces
- 4.3 Swept Solids and Surfaces
- 4.4 Revolved Solids and Surfaces
- 4.5 Lofted Solids and Surfaces
- 4.6 NURBS Surfaces

### Chapter 5 Modifying in 3D Space

- 5.1 3D Gizmo Tools
- 5.2 Aligning Objects in 3D Space
- 5.3 3D Modify Commands

### Chapter 6 Advanced Solid Editing

- 6.1 Editing Components of Solids
- 6.2 Editing Faces of Solids
- 6.3 Fillets and Chamfers on Solids

*Course description shown for Autodesk AutoCAD 2015. Topics, curriculum, and/or prerequisites may change depending on software version.*



# Technical Education Services



## Chapter 7 Additional Editing Tools

- 7.1 Creating a Shell
- 7.2 Imprinting Edges of Solids
- 7.3 Slicing a Solid along a Plane
- 7.4 Interference Checking
- 7.5 Converting Objects to Surfaces
- 7.6 Converting Objects to Solids

## Chapter 8 Refining the View

- 8.1 Working with Sections
- 8.2 Working with Cameras
- 8.3 Managing Views in 3D
- 8.4 Animating with ShowMotion
- 8.5 Creating ShowMotion Shots
- 8.6 Creating Animations

## Chapter 9 Visualization

- 9.1 Creating Visual Styles
- 9.2 Working with Materials
- 9.3 Specifying Light Sources
- 9.4 Rendering Concepts

## Chapter 10 Working Drawings from 3D Models

- 10.1 Creating Multiple Viewports
- 10.2 2D Views from 3D Solids
- 10.3 Creating Technical Drawings with Flatshot
- 10.4 3D Model Import
- 10.5 Automatic Model Documentation

## Appendix A Skills Assessment

- A.1 Skills Assessment

*Course description shown for Autodesk AutoCAD 2015. Topics, curriculum, and/or prerequisites may change depending on software version.*





# Technical Education Services



## Cancellation Policy

The following cancellation policy shall apply to all training engagements, Live Online, Consulting Services and Dedicated/ Custom Training:

- Company reserves the right to reschedule or cancel the date, time and location of its class at any time. In the event that a Training Class is cancelled by Company, Customer is entitled to a full refund. Company shall not be responsible for any other loss incurred by Customer as a result of a cancellation or reschedule.
- For Customer cancellations when written notice is received (i) at least ten (10) business days in advance of the class, the Customer is entitled to a full refund of its payment or reschedule enrollment, (ii) less than ten (10) business days, Customer shall not be entitled to a refund, but shall receive a class credit to be used within three (3) months of the date of the original class.
- Student substitutions are acceptable with at least two (2) days prior notice to the class, provided substitution meets course prerequisites and is approved by Company's Training Coordinator ([trainingcoordinator@rand.com](mailto:trainingcoordinator@rand.com))
- For all Training orders, cancellation notices must be submitted to [trainingcoordinator@rand.com](mailto:trainingcoordinator@rand.com). Company is not responsible for any error in the delivery of the email notice. In the event of any reschedule of Consulting Services and/or Dedicated/Custom Training by Customer, Company will invoice Customer for all non-cancellable travel expenses.

For full terms and conditions, go to [imaginit.com/TrainingTC](http://imaginit.com/TrainingTC).

To request more information or to see training locations, visit [imaginit.com/contact](http://imaginit.com/contact).

