

# Autodesk 3ds Max 2017 Fundamentals

Course Length: 3 days (24 hours)

## Objectives

The objective of the Autodesk 3ds Max 2017 Fundamentals is to help the new users of the software make the most of this sophisticated application, as well as broaden the horizons of existing, self-taught users.

## Who Should Attend

This course is intended for design professionals who wish to learn how to render and produce animations using Autodesk 3ds Max.

## Prerequisites

It is recommended that students have experience with 3D modeling and Microsoft Windows 7 or 8.

## Notes

The indicated course length is a guideline. Topics and duration may be modified by the instructor based upon the knowledge and skill level of the participants.

## Course Description

The Autodesk 3ds Max software practices professionals in the Architecture, Interior Design, Civil Engineering, and Product Design industries in producing renderings and animations. Also, the course teaches the students how to create and edit 3D models and scenes, understand and apply lighting and materials for realism, and perform an advanced walkthrough animation.

## Course Outline

### Introduction to Autodesk 3ds Max

- Overview
- Visualization Workflow
- The Autodesk 3DS Max Interface
- Preferences
- Setting the Project Folder
- Configure Paths
- Display Drivers
- Viewport Display and Labels

### Autodesk 3ds Max Configuration

- Viewport Navigation
- Viewport Configuration
- Object Selection Methods
- Units Setup
- Layer and Object Properties

### Assembling Project Files

- Data Linking and Importing
- Linking Files
- References

### Basic Modeling Techniques

- Model with Primitives
- Modifiers and Transforms
- Sub-Object Mode
- Reference Coordinate Systems and Transform Centers
- Cloning and Grouping
- Polygon Modeling Tools in the Ribbon
- Statistics in the Viewport

### Modeling From 2D Objects

- 3D Modeling from 2D Objects
- The Lathe Modifier
- 2D Booleans
- The Extrude Modifier
- Boolean Operations
- Using Snaps for Precision
- The Sweep Modifier

### Materials

- Understanding Maps and Materials
- Managing Materials
- Standard Materials
- Materials Shaders
- Assigning Maps to Materials
- Opacity, Bump, and Reflection Mapping
- Mental Ray Materials
- The Material Explorer

### Mapping Coordinates and Scale

- Mapping Coordinates
- Mapping Scale
- Spline Mapping

### Introduction to Lighting

- Local vs. Global Illumination
- Standard Lighting
- Types of Standard Lights
- Shadow Types

### Lighting and Rendering

- Photometric Light Objects
- Exposure Control
- Daytime Lighting

### Mental Ray Rendering

- Fundamentals of Mental Ray

- Mental Ray Interior Rendering
- Mental Ray Proxies

### Rendering and Cameras

- Rendering Options
- Single vs. Double-sided Rendering
- State Sets
- Cameras
- Background Images
- The Print Size Wizard

### Animation

- Animation and Time Controls
- Walkthrough Animation
- Animation Output