

3ds Max Essentials

Course Summary

The main topics covered in this course include:

- Introduction to Autodesk 3ds Max
- Autodesk 3ds Max Interface and Workflow
- Autodesk 3ds Max Project Configuration
- Assembling Files – File Link and Import
- 3D Modeling from 2D Objects
- Materials
- Introduction to Autodesk 3ds Max Lighting
- Lighting with Autodesk 3ds Max mental ray
- Rendering
- Animation for Visualisation

The practices in this course are geared toward real-world tasks encountered by the primary users of Autodesk 3ds Max: professionals in the Architectural, Interior Design, Civil Engineering, Mechanical Engineering, and Product Design industries.

Module 1: Introduction to Autodesk 3ds Max

Section 1: Overview

- Overview
- Visualisation Workflow

Section 2: The Autodesk 3ds Max Interface

- Menus and Toolbars
- Status Bar
- The Command Panel
- Setting the Project Folder and Configuring User Paths
- Viewport Configuration and Navigation
- Object Selection

Section 3: Basic Functions

- Modeling with Primitives
- Applying Transforms
- Sub-Object Mode
- Reference Coordinate Systems and Transform Centres
- Cloning and Grouping
- Box Modeling (Optional)
- Statistics in Viewport

Module 2: Starting a Visualisation Project

Section 1: Autodesk 3ds Max Configuration

- Video Modes
- Preferences
- Configure Paths
- Units Setup
- Customizing the User Interface

Section 2: Assembling Project Files

- Data Linking and Importing
- DWG Link and Import Options
- Layer and Object Properties

Section 3: 3D Modeling from 2D Objects

- Drawing 2D Lines
- The Lathe Modifier
- 2D Booleans
- Terrain Objects
- The Extrude Modifier
- Boolean Operations
- The Sweep Modifier (Optional)
- Loft Objects (Optional)
- Using Snaps for Precision

Module 3: Materials

Section 1: Introduction to Materials

- How Materials Work
- Understanding Maps and Materials
- Materials and Material Libraries
- Managing Materials

Section 2: Material Types and Parameters

- Standard Materials
- Architectural Materials (Optional)
- Multi/Sub-Object Materials
- Opacity, Bump, and Reflection Mapping
- mental ray Shaders and Materials
- Arch & Design Materials
- ProMaterials
- Other Material Types
- Creating a Decal Texture

Section 3: Mapping Coordinates and Scale

- Mapping Coordinates
- Mapping Scale
- Spline Mapping

Module 4: Introduction to 3ds Max Lighting

Section 1: Autodesk 3ds Max Lighting Overview

- Local vs. Global Illumination
- Choosing a Lighting Strategy

Section 2: Standard Lighting

- Fundamentals of Standard Lighting
- Types of Standard Lights
- Shadow Types
- Photometric Light Objects
- Exposure Control
- Daylight Lighting

Module 5: Lighting and Rendering using mental ray

Section 1: Scene Preparation for mental ray

- Fundamentals of mental ray

Section 2: Rendering with mental ray

- mental ray Interior Rendering
- Controlling mental ray Quality
- mental ray Proxies

Module 6: Rendering and Animation

Section 1: Rendering

- Iterative Rendering
- Single vs. Double-Sided Rendering
- Camera Parameters
- Background Images
- The Print Size Wizard
- Selected Rendering Options
- Rendering Presets



Johannesburg

Tel: +27 11 804 2425 | Fax: +27 11 804 2430 | Email: info@cadplan.co.za | www.cadplan.co.za
PO Box 2022, Gallo Manor, Johannesburg, 2052 | 69 Satara Avenue, Gallo Manor, Johannesburg

Section 2: Animation

- Animation Controls
- Walkthrough Animation
- Animation Output

Note

The suggested course duration is a guideline. Course topics and duration may be modified by the instructor based upon the knowledge and skill level of the course participants.