

Autodesk 3ds Max Design 2010 Fundamentals

Table of Contents

Module 1: Introduction to Autodesk 3ds Max Design

Section 1: Overview

Overview

Visualization Workflow

Section 2: The Autodesk 3ds Max Design Interface

Menus and Toolbars

Status Bar

The Command Panel

Setting the Project Folder and Configuring User Paths

Viewport Configuration and Navigation

Object Selection Methods

Section 3: Basic Functions

Modeling with Primitives

Applying Transforms

Sub-Object Mode

Reference Coordinate Systems and Transform Centers

Cloning and Grouping

Poly Modeling with Graphite Tools

Statistics in Viewport

Module 2: Starting a Visualization Project

Section 1: Autodesk 3ds Max Design 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
Importing Models from Revit
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
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
Using the mental ray Multi/Sub-Map Shader
Creating a Decal Texture

Section 3: Mapping Coordinates and Scale

Mapping Coordinates
Mapping Scale
Spline Mapping

Module 4: Introduction to 3ds Max Design Lighting

Section 1: Autodesk 3ds Max Design Lighting Overview

Local vs. Global Illumination
Choosing a Lighting Strategy

Section 2: Standard and Photometric Lighting

Fundamentals of Standard Lighting
Types of Standard Lights
Shadow Types
Photometric Light Objects
Exposure Control
Daylight Lighting
Soft Shadows and Ambient Occlusion

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

Section 2: Animation

Animation Controls
Walkthrough Animation
Animation Output

Appendix

Getting Help with Autodesk 3ds Max Design

Object Substitution

Completing the Interior Scene

Camera Matching

Lighting Analysis

Creating a Shadow Study Animation

Creating Hierarchies

Animating Visibility

Creating an Assembly Animation