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# **3ds Max Design Essentials**

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## **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

### **Section 3: Basic Functions**

Modeling with Primitives

Applying Transforms

Sub-Object Mode

Reference Coordinate Systems and Transform Centers

Cloning and Grouping

Box Modeling (Optional)

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

Layer and Object Properties

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## 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 Design Lighting

### Section 1: Autodesk 3ds Max Design Lighting Overview

Local vs. Global Illumination

Choosing a Lighting Strategy

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## 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

### 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

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Animating Visibility

Creating an Assembly Animation