

Using Creator Course Syllabus

Session duration: Classroom 4 days

Main Objective

In this course, you will learn how to create models/databases using Creator. The most widely used features in Creator are covered.

Upon completion of this course, you will understand how to use the various tools and wizards of Creator to build different models and subcomponents, to create a synthetic environment into which to place the models, and to articulate, shade, and texture the models.

Target Audience

This is an ideal course for a new Creator user, regardless of your database creation experience, as it completely familiarizes you with Creator's capabilities.

Prerequisites

This course assumes basic PC knowledge.

Format

This Instructor-led course is taught through a series of lectures and hands-on exercises in which you learn how to use all of the components of the tool.

Topics Covered

- Getting started in modeling with Creator
- Creating and editing a well-structured database
- Modeling a building
- Putting and planting
- Lighting and shading
- Materials
- Light points
- Applying textures to geometry
- Wizards and special tools
- The Interior wizard
- Booleans just make some things easier
- Levels of Detail and Switching
- Degrees of Freedom
- Instancing and external references
- Producing CDB compliant models

Daily Outline for Classroom “Using Creator” Course

Day 1

- Lesson 1: Getting started in modeling with Creator
- Lesson 2: Creating and editing a well-structured database
- Lesson 3: Modeling a building

Day 2

- Lesson 4: Putting and planting
- Lesson 5: Lighting and shading
- Lesson 6: Materials
- Lesson 7: Light points
- Lesson 8: Applying textures to geometry

Day 3

- Lesson 9: Wizards and special tools
- Lesson 10: The Interior Wizard
- Lesson 11: Booleans just make some things easier
- Lesson 12: Levels of Detail and Switching

Day 4

- Lesson 13: Degrees of Freedom
- Lesson 14: Instancing and external references
- Lesson 15: Producing CDB compliant models
- Recap of the 15 lessons
- Questions and Answers specific from trainees
- Closing the course

Detailed Description

Lesson 1: Getting started in modeling with Creator

- Objectives
- Direct hands-on approach
- EXERCISE 1_1: Making the UN building
- EXERCISE 1_2: Making the Eiffel tower
- How is visual simulation authoring different?
- Creator in the work flow
- Getting Started
- The New Interface of Creator (from version 13)
- EXERCISE 1_3: Opening a file and looking at it
- Saving database files
- Window Tour
- Moving around in your 3D world
- EXERCISE 1_4: Let's play with the view
- Fine selection
- EXERCISE 1_5: Creating a custom ribbon
- Creating your first Creator model
- EXERCISE 1_6: Creating a simple object
- Handy shortcuts
- Best Practices for Runtime modeling

Lesson 2: Creating and editing a well-structured database

- Structure is essential
- The art of structuring
- The Hierarchal View
- Modifying the database structure
- EXERCISE 2-1: Open a file and modify the hierarchy
- Node attributes
- Ordering and Z buffer
- EXERCISE 2-2: Fix list ordering

Lesson 3: Modeling a building

- Construct a city building
- EXERCISE 3-1: Making a building
- Place Model
- EXERCISE 3-2: Place Model on the building
- EXERCISE 3-3: Place models around the building
- How are these models different?

Lesson 4: Putting and planting

- Introduction
- EXERCISE 4-1: Use Put tool for the pediment
- EXERCISE 4-2: Use Plant tool for the statues

Lesson 5: Lighting and shading

- Introduction
- Shading modes
- EXERCISE 5-1: Shading model
- Working with normals and angles
- EXERCISE 5-2: Effect of lighting
- Use triangle area weighting
- EXERCISE 5-3: Effect of Area Weighting
- Modify vector

Lesson 6: Materials

- Introduction
- EXERCISE 6-1: Applying material
- EXERCISE 6-2: Searching for material

Lesson 7: Light points

- Light points
- EXERCISE 7-1: Create light points entries
- Creating simple light points
- EXERCISE 7-2: Creating single light points
- Light Point properties
- EXERCISE 7-3: Compare direction of light points
- Light point direction options
- Level of Detail parameters
- Light point animations

Lesson 8: Applying textures to geometry

- The Texture Palette
- EXERCISE 8-1: Loading textures
- Displaying model textures
- Texture Resolution
- EXERCISE 8-2: Looking at texture resolution
- How to use the calculator
- Applying textures to geometry by hand
- EXERCISE 8-3: Put texture
- Applying a texture with perspective correction
- EXERCISE 8-3: 4 Point Put texture
- Applying textures to many faces
- Special texturing mode
- Post-mapping alignment tools

Lesson 9: Wizards and special tools

- Tools for road
- EXERCISE 9-1: Making a road on Turf_island
- The Building Wizard
- EXERCISE 9-2: Building Wizard
- Trees
- Billboard Wizard
- EXERCISE 9-3: Billboard Wizard
- Tree Wizard
- EXERCISE 9-4: Tree Wizard
- The Bridge Wizard
- EXERCISE 9-5: Bridge Wizard
- Runway Wizard
- EXERCISE 9-6: Runway Wizard
- Airport taxiway Sign Wizard
- EXERCISE 9-7: Sign Wizard
- EXERCISE 9-8: Curbs and planters
- Shapes and volumes

Lesson 10: The interior wizard

- Choosing the building type
- EXERCISE 10-1: Creating a building with interior from scratch
- EXERCISE 10-2: Creating a building from a floor plan
- Collision and Navigation models

Lesson 11: Booleans just make some things easier

- Booleans, carving your models into shape
- EXERCISE 11_1: Holes in the Eiffel tower

Lesson 12: Levels of Detail and Switching

- Levels of Detail
- Designing for LOD efficiency
- EXERCISE 12-1: Creating LODs by hand
- EXERCISE 12-2: Automated LOD generation
- Generate Imposter
- EXERCISE 12-3: Making an imposter
- EXERCISE 12-4: Using Visualize LOD
- Switch nodes
- EXERCISE 12-5: Creating a switch

Lesson 13: Degrees of Freedom

- Degree of Freedom tools
- EXERCISE 13-1: Creating a DOF
- DOF Attributes window
- EXERCISE 13-2: Landing gear
- EXERCISE 13-3: Use the DOF Viewer
- EXERCISE 13_4: Setting DOF for a tank

Lesson 14: Instancing and external references

- Instances
- EXERCISE 14-1: Scatter and Populate
- External references
- EXERCISE 14-2: Create an external reference
- Qualities of external references

Lesson 15: Producing CDB compliant models

- Workflow using Terra Vista to produce the CDB
- CDB models
- Naming Convention
- EXERCISE 15-1: Change Model light Appearance Palette
- EXERCISE 15-2: Runway Light Point with ICAO code
- EXERCISE 15-3: Create a Zone for a DOF
- Feature Data Dictionary (FDD)
- CDB Material
- Convert to GIS Source for sites
- Level Of Detail (LODs)
- Buildings miscellaneous