

Rhino 101: Modeling Essentials

Rhino 5 is a premiere NURBs-based 3D modeling package that gives you the tools you need to create amazing content. This course provides a fundamental understanding of how to use Rhino to create true volumetric models and advanced surfaces for the purpose of all 3D development work. Any form is possible and applicable for professional use from advanced renders to 3D fabrication.

At the end of this course, students will understand advanced surfacing tools, volume development and the full production output of Rhino. They will also have a clear understanding of project development, project resources and will be able to produce models and images/drawings from the Rhino program.

Upon completion, you will be able to:

- Draw curves and model simple surfaces
- Create 3D solids
- Transform and edit your simple model to create more complex models
- Create a simple 3D set and props

Prerequisites

- Basic level computer skills recommended.
- Previous drafting and modeling experience helpful but not required.
- A familiarity with the terminology of Rhino – Completion of the Rhino Intro class recommended

Software and Hardware Requirements

- The class will be presented on Rhino 5
- To download Rhino 90 day Trial version: Click [HERE](#)
- For reference only:
- Operating system requirements: Mac OS X 10.8.5 or Microsoft Windows 7, 8 or 8.1
- Hardware: 64-bit Intel or AMD multi-core processor, 1 GB of RAM (8GB recommended), 600 MB disk
- free disk space for install and a three button mouse. OpenGL 2 capable video card recommended.

Questions?

Please call us at 800-336-3375.

Course Outline

Day 1: Introduction

Overview

- Objectives
- Concept
- Object types

The Rhino Interface

- Layout
- The Mouse
- Entering Commands
- Help
- Panels
- Navigation
- Move/Copy Objects
- Viewports/Views
- Zoom/Panning/Reset Views

Create Geometry

- Lines
- Free-form Curves
- Modeling aids
- Saving your Work
- Layers
- Selecting Objects

Day 2: Exploration

Precision Modeling

- Coordinate entry
- Distance and angle constraint entry
- Object Snaps
- Additional Modeling aids
- Viewports and construction planes
- Analysis commands

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- Drawing with precision
- Ellipses and polygons
- Helix and spiral

Editing Geometry

- Fillet
- Blend
- Chamfer
- Move
- Copy
- Undo and Redo
- Rotate
- Group
- Mirror
- Join
- Scale
- Editing with the Gumball
- Trim
- Split
- Extend
- Offset
- Array

Point editing

- Control points
- Edit points
- Knots
- Nudge Controls

Day 3: Advanced

Creating Surfaces

- Simple surfaces
- Lofted Surfaces
- Revolved Surfaces
- Rail Revolve

- Sweeps and curve networks

Creating Deformable Shapes

- “Rubber Ducky”
- Cage edit
- Slicing

Connecting Surfaces

- Edge
- Tangency
- Curvature
- Average

Modeling Solids

- “Soap bar”
- Making an air-tight object
- Logic/problem solving

Importing and Exporting

- AutoCAD
- Revit
- SketchUp
- Lumion

Rendering

- Apply materials
- Add lights
- Add textures
- Use a ground plane

Annotating your model

- Dimensions
- Making a 2D drawing from a 3D model

Printing and Layouts

- Page set up
- Placing camera and angle
- Sections
- Scale