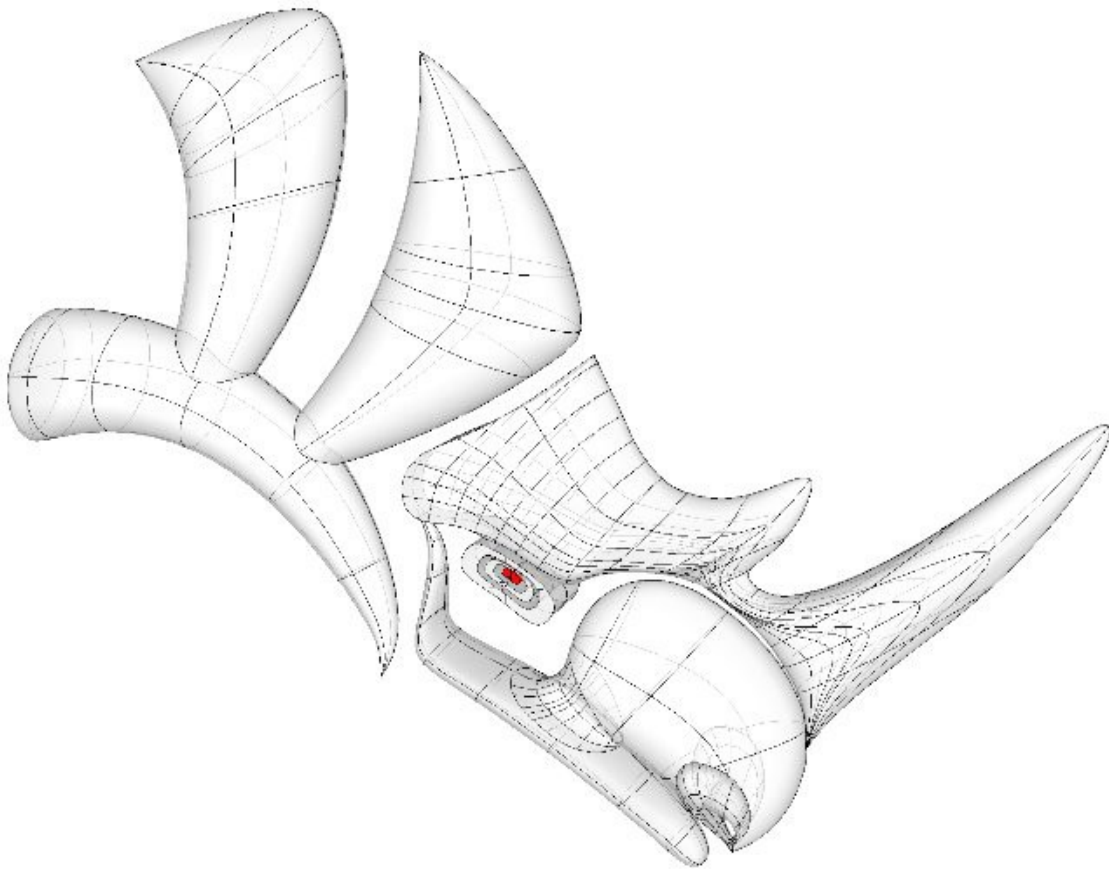


Rhinoceros®

NURBS modeling for Windows



3DTechnics

Rhino Level 2 Two-Day Intensive Course Curriculum

Level 2: Advanced Nurbs modeling with Rhino

Course Outline

- This course is geared to individuals who will be using and/or supporting Rhino. The course explores advanced techniques in modeling to help participants better understand how to apply Rhino's modeling tools in practical situations.

In class you will receive information at an accelerated pace. For best results, practice at a Rhino workstation between class sessions and consult your Rhino reference manual for additional information.

Target Audience

- This course is for the design professional who wants to efficiently learn the concepts and features of the Rhinoceros modeling software at an accelerated pace in an instructor-lead environment.

Prerequisites

- Completion of Level 1 training, plus three months experience using Rhino.

Curriculum

Day 1: Productivity Tools and NURBS Concepts

- Rhino's customized tools make it easy to create and modify toolbars and buttons. Adding to the flexibility is the ability to combine commands into macros to accomplish more complex tasks. In addition to toolbar customization, it is possible to set up command aliases and shortcut keys to accomplish tasks in Rhino.
 - Customize toolbars and toolbar collections
 - Create simple macros
 - Load and run scripts
 - Load plug-ins

Day 1: NURBS Structure Overview

- Gaining an understanding of NURBS structure is useful in deciding which strategies to use when creating or editing geometry.
 - NURBS topology
 - Continuity
 - Using curvature graphs



Day 1: Surface Continuity

- The continuity characteristics for curves can also be applied to surfaces. Rhino takes advantage of the OpenGL display capability to create false color displays for checking curvature and continuity within and between surfaces. Surface continuity concepts will be covered as follows:
 - Use of a range of strategies to build surfaces
 - Rebuilding surfaces and curves
 - Controlling surface curvature continuity
 - Analyzing surface continuity

Day 2: Advanced Surfacing

- A general approach to modeling with focus on the following topics:
 - Create surfaces and features using custom construction planes
 - Group objects
 - Visualize, evaluate, and analyze models using shading features
 - Making surfaces with a crease
 - Making surfaces with gradual transitions

Day 2: Using 2D Drawings and Images, Sculpting Surfaces,

- The requirement for creating a 3-D design from an existing 2-D design is common. In this part of the session the following techniques will be discussed:
 - Place text around an object or on a surface
 - Map planar curves to a surface

Day 2: Meshing, Troubleshooting

- In this part of the session, making simplified surfaces and sculpting techniques will be discussed.
 - Troubleshooting
 - Meshing Techniques

Day 2: Rendering

- In this last session we will discuss rendering with both of the internal rendering applications (Rhino Render and Treefrog) and the Flamingo plug-in
 - Lighting
 - Making and editing materials
 - Adding decals and textures
 - Adjusting colors, transparency, and ambient light
 - Special effects

