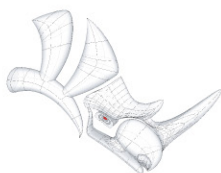




Rhino Level 1 Jewellery Design Outline & Objectives



RhinoCeros
NURBS modeling for Windows

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Rhino Level 1 - Jewellery Design Certified and Official 3 x Day Training Class

Course Outline

This course is intended for those who currently work professionally or who wish to work professionally in fine jewellery design, but who are relatively new to Rhino NURBS modelling software in a jewellery design context. This includes both absolute beginners to CAD design as well as those already familiar with the basics of 3D computer-based design using other software.

The course contains most of the same concepts as the official McNeel Level 1 Rhino certification. However, the emphasis in this course has been reoriented towards working with jewellery design for 3D printing, so the exercises and emphasis on choice of tools and problem-solving strategies have been adjusted accordingly.

Although the class follows a clearly defined structure there will be scope for trainees to discuss individual work projects of their own.

Structure

This comprehensive three-day class starts with an introduction to the Rhino interface before moving on to the fundamentals of 2D curve construction and their use in creating cross sections for solid modelling. We then introduce the key tools of solid creation in Rhino one by one in the context of common jewellery forms—solitaire rings, eternity rings, bezel settings, claw settings, rubover settings, rex settings, pearl settings, and pinched shanks. Throughout these exercises, we will discuss important tolerance considerations for 3D printing models to use in precious metals casting. We will also discuss creating STL files for rapid prototyping (such as 3D printing). Various presentation and rendering processes will also be considered. Courses run from 10 – 5 each day, with multiple breaks.

Prerequisites

Trainees should already possess some bench jewellery skills as well as some confidence with using PCs. Some jewellery making knowledge essential for trainees to get the most out of this training.

No actual prior experience with CAD software is required.

Curriculum

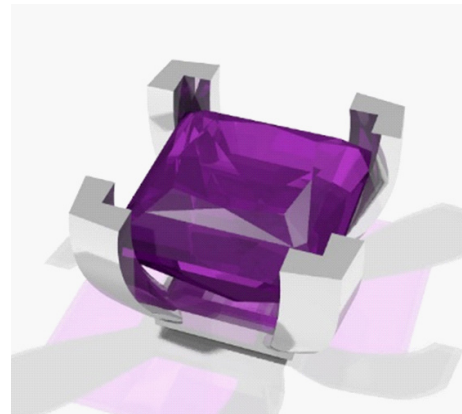
Section 1

- 1 Introductions / Explanation of CAD and CAM
- 2 The Rhino Interface
- 3 Building objects with curves,
including:
Explode, Join, Rebuild, Split, Trim,
Fillet and Offset
- 4 Organizing models with Layers
- 5 Precision modelling with Snaps and Osnaps
- 6 Basic transformation commands.
including:
Move, Rotate, Scale, and Mirror



Section 2

- 1 Basic Ring Construction
Band Rings
Solitaire Rings
Eternity Bands
- 2 Basics of Solid modelling, including
Booleans
Key methods for building solids based
on curves. (the "Key Rhino Commands")
3. Creating Gemstones
- 4 Using precision values and measurements
in modelling
5. Preparing a file for Rapid Prototyping
6. Basic Tolerances for Rapid Prototyping
7. The Loft Command



Section 3

- 1 Building your own claw settings
Rex Setting
Prong Setting
Square Setting
Rex Setting
- 2 Building more complex rings
- 3 Introduction to Surface Modelling,
including closing open surfaces
- 4 Universal Deformation Tools (UDT)
and their application
- 5 Basic Hollowing out methods
- 6 Building a Bombe Ring
- 7 Pave Stones and Bead Settings on a Surface

