

Rhinoceros®

Version 5 TechGems

Foundation Course in Rhinoceros

Aims of the "3D Design" courses

The Metallo Nobile school organises a series of computer graphics courses for three-dimensional modelling, rendering and prototyping, starting from Rhinoceros V5.

The aim of these courses is to train professionals with an adequate degree of competence in the design and modelling of complex forms in the field of jewellery design, so as to boost their chances of satisfactory integration in the professional world.

The **courses are organised by ascending level of specialisation** and by argument, so as to satisfy all types of training requirement, perfectly tailored to the needs of each individual pupil.

Foundation module

The **Foundation Course in Rhino (32 hours a month - 8 hours a week)** is aimed at students who have never used the programme or have only a rudimentary knowledge of it.

The purpose of the course is to teach the students how to use the 2D and 3D software tools so that they can acquire a certain familiarity with the graphic interface. In this way, once they have completed the foundation course **they will be able to use the software to continue learning independently.**

Theoretical and practical concepts for producing technical drawings in 2D are taught, and for jewellery modelling of surfaces and solids designed for the construction of 3D digital models.

The course is focused on jewellery design, also dealing with topics such as pure geometry, descriptive geometry and jewellery construction (components, combination and mechanics) as well as methods and techniques for transforming the idea into a model ready for prototyping.

The course ends with the process of **rapid prototyping (3D printing)**, through the creation of a previously designed object.

Main topics of the course

- Introduction: Foundations of Rhino – Description and features of the software - Interface – Viewports - Navigation
- Customisation of Rhino
- Creation of geometries: two-dimensional forms; points and curves – surfaces – degree; precision modelling – aids for modelling – object edition – points editing.
- Transformations - Gumball
- Cplane – use and changes – management of viewports – use of background images
- Layers - Blocks - Groups
- 3D modelling and editing: solids and polysurfaces – creating deformable shapes – modelling of solids – importing and exporting of models – organisation of dimensions libraries
- The meshes – print management
- Computer-assisted jewellery modelling with TechGems: Interface – composition and modelling commands
- Customisation of workspaces and toolbars: Rhino settings – customisation of toolbars – management
- Identification of problems of a geometric nature – solutions
- Management of 3D printing (rapid prototyping)
- Introduction to rendering