Course of Rhino

(3 modules)

Module 1. Workspace and Basic commands

1.1 Interface:

- Viewports
- Toolbars and panels
- Display modes

1.2 Object types overview

- Annotation, curves, hatches, surfaces, open/ closed polysurfaces, meshes, subd...

1.3 Modeling aids

- Zoom options
- Osnap options
- The gumball
- Layers
- Construction planes
- Selection, visibility and lock options

Module 2- Modeling accurately in 2D

2.1 2D geometry tools

- Curves (1, 2, 3 degrees)
- Circles, rectangles, ellipses, polygons
- freeform 3D curves

2.2 Generic Edit and Transform tools

- Control points
- Move, copy, rotate, mirror, scale, etc…
- Trim, split, join..

Module 3. Modeling and editing in 3D

3.1 Surface tools

- Planar surfaces
- Free-form surfaces

3.2 Solid tools

- Primitives
- Extrusions
- Polysurfaces

3.3 Generic solid edit tools

- Extrude
- Move face, edge..
- Boolean operation commands

3.4 Blocks and groups

3.5 Materials

3.6 Layouts

- Drafting tools (texts, dimensions, leaders…)
- Details
- Printing options

Course of Lands Design

(3 modules)

Module 1. Interface and terrain modelling tools

1.1 Interface Overview

- Menus, toolbars, options.
- Lands tools: objects, library, documentation.
- Edit Panel, 3D / 2D display modes

1.2 Terrain modelling tools

- Scan and import terrains from the web
- Terrains from DEM files
- Import GIS data
- Generate new terrains from curves or point clouds
    - Elevate curves command from 2D drawing
- Main edit options:
    - Delaunay triangulation and gridded surface.
    - 2D/3D representation
    - Contour curves
    - Input data
    - Material
- Terrain operations:
    - Edit Boundary
    - Cut and fill
    - Path
    - Division
    - Terrain info
    - Terrain list

Module 2. Vegetation and Hardscape

2.1 Plant database

- Search of species using filters
- Plant display types 2D/3D
- Plant technical sheet and edition of species details
- Creation of new species.
- Plant editor and creation of realistic plant files (.arPlantX, .arTree)

2.2 Insert Vegetation elements

- Insert vegetation elements:
  - Insert trees individually, from points, from blocks and in Paint mode.
  - Plant rows
  - Forests
  - Shrubs
  - Groundcovers (horizontal, and vertical position for vertical gardens)
  - Edit options for each vegetation type
- Plant list

2.3 Hardscape Tools

- Urban Furniture blocks and edit options:
  - Insert single unit
  - Insert in rows.
  - Library folder paths
  - Urban furniture list
  - Insert a block from other sources
- Path: design the path profile, edit options and materials
- Fence: edit options and materials
- Stair: edit options and materials.

Module 3. Documentation, irrigation tools and visualization

3.1 Documentation tools

- Zones: edit options and materials
- Lists (plants, zones, etc...) edit list, add items, ...
- Dimensions (ordinate, aligned)
- Tags
- Plant photos
- Project 2D drawings presentation
- Page Layout setup
- Plan view
- Sections
- Printing attributes

3.2 Irrigation tools

- Sprinklers: inserted individually, in array and edit options
- Pipes

3.3 Rendering and Animation tools

- Set Viewpoint command and Named views
- Walk mode
- Render and material tips
  - New material
  - Lights
  - Render basic settings
- Animation panel for recording virtual tours:
  - Camera path and target
  - Sun and wind animation
  - Rendering the scene: season simulation
  - Image filter application