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
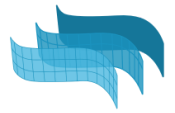- Selection, visibility and lock options

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
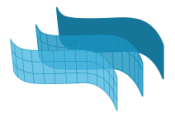- Extrusions
- Polysurfaces

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 VisualARQ

(3 modules)

Module 1. Interface and modeling with BIM objects
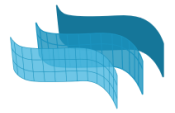
1.1 VisualARQ Overview:

- Presentation overview
- Toolbars
- Display modes
- Project set up
  - Templates
  - Styles library
  - Layers
- Help and Learning material

1.2 Navigation tools

- Level Manager
- Section Manager
- Section attributes

1.3. Modelling an architectural project

- Document preparation
- Set Levels
- Work with architectural objects:
  - Slabs
    - from curves
    - control points
    - Subtract solid
  - Walls.
    - Control points
    - Wall styles and joints.
    - Wall commands: from curves, from solids, split, extend...
    - Attributes by styles. By Parent, by Layer,...
  - Curtain wall
    - Control points
    - From curves
    - Style properties
  - Doors and Windows,
    - System Doors and windows
    - From curve and from custom profile
    - From blocks
    - From Grasshopper definitions

- ○ Columns (from custom profile)
  - ○ Stairs
    - ■ Styles, rules, and flight edit options
  - ○ Beams
  - ○ Railings
  - ○ Furniture & Element objects
- Edit options

Module 2: Documentation tools

2.1 Page layout settings:

- Section attributes
- Details, Scales, Layers
- Align views to viewports/details
- Vector Output

2.2 2D Section and Plan Views

2.3 Drafting tools

- Annotations and styles
- Dimensions

2.4 Spaces

- Styles
- Label customization

2.5. Data management

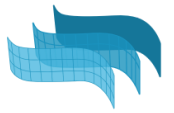- Custom Parameters
- Tables for quantity take-offs

2.6 More documentation tools

- Opening Elevations
- Tags

Module 3: IFC and Integration with Grasshopper

3.1 Grasshopper Styles

- Examples

3.2 Grasshopper Components:

- Overview.
- Getting started examples
- Useful cases

3.3 IFC:

- Ifc Export and options
- Ifc Import and options
- Ifc Tag
- Custom Parameters as ifc Properties
- From VA to Revit. How are the objects exported?

3.4 Team collaboration

- .val exchange
- External references support