**ARCHICAD BESPOKE AND GDL - COURSE OUTLINE**

**Bespoke Courses**

We are able to offer training courses tailored to your specific requirements. This is aimed at intermediate or advanced users and is not suitable for new users. We would require a list of topics that trainees would like to cover at least one week prior to the training course. ARCHICAD clinic sessions can be arranged for users who have already been trained to pick up on any issues they would like to recap on.

We also offer tailored consultancy days to look at an organisation’s use of ARCHICAD and BIM in general and suggest ways in which usage and productivity can be improved. If you would like to discuss any of these options please contact us.

**GDL Courses**

**Why Train?**  
GDL is the parametric, geometry-based language, used to create .gsm parametric objects for use in ARCHICAD. It derived from BASIC, using written commands to describe shapes and forms in terms of size and location in X, Y, Z co-ordinates. Forms can be altered according to input by the user along with the ability to turn elements on and off and control loops. GDL can be used for to create 2D symbols for plan or elevation or full 3D objects including building elements such as windows, doors and lights.

**Who is it for?**  
It has been designed by experts in the field to get you on your way to scripting any kind of object.

**Course Duration**  
This is a 2 day course for anyone new to GDL

**Course Outlines**  
*Introduction to GDL*  
Introduction to the scripting interface and programming organisation  
Introduction to parameter types  
Understanding subtypes  
Basic 2D and 3D commands and “cursor” movement  
Creating a non-parametric object  
Using the preview window  
Adding comments and URL

*Using the 2D Script*  
Creating a basic 2D symbol (fragment, project)  
Creating a parametric 2D object  
Attributes (fill patterns, lines and pens)  
2D polylines and masking  
Creating a stretchy object with hotspots  
Text and labelling  
Dimensioning
The 3D Object

- 3D polylines, prisms and masking
- Slabs
- Shadow and model commands
- Attributes (materials, textures, section fills and pens)
- Subroutines
- If statements
- For/Next loops
- 3D Hotspots

Parameter Control and Display

- Cascading and indenting
- Pop-down menus and value lists
- Hiding and locking parameters
- Idiot-proofing
- Using the last modified parameter command

Curved 3D Objects

- Tubular structures (tubes, cylinders and elbows)
- Using trigonometry
- Bprism, extrude and tube commands
- Controlling curve resolution
- Revolve and curved prism commands

The Advanced 3D Object

- Putting and getting
- Parameter Arrays

Ruled, sweep and pyramid commands
- Mesh, mass and coons commands
- Texture Mapping
- Macros and object variation

Creating Lamps, Windows and Doors

- Using the lamp and opening subtypes
- Attributes (materials)
- Light commands
- Lightworks compatibility
- Wallhole command
- Global variables

3D Cutting, Addition and Subtraction

- Cutting planes
- Cutting shapes
- Scripting solid element operations

User Interface

- Pixels and Margins
- Infield and outfield text
- Infield text with arrays [if Advanced 3D undertaken]
- Hiding, locking and if statements in the UI
- Multiple page interfaces
- Groupboxes and separators
- Images
- Pictorial value lists