



## 3D Design

This course offers extensive coverage of using a 3D application (3ds Max or Lightwave 3D) to model, texture, light, animate and render scenes for various purposes such as architecture, product design, interior design, exterior design, character design, animation etc...

*You do not require any prior software experience in order to enrol for this course. However, a working knowledge of Photoshop would be helpful.*

*You should be able to use a computer at a basic level.*



[mike@sheerdesigntraining.co.za](mailto:mike@sheerdesigntraining.co.za)  
[082 953 6757](tel:0829536757)

## Course Outline:

### Intro

- Quick Start Introduction to 3D.
- Navigating and controlling the 3D Space.
- Customising viewports and Preferences.
- Project setup.
- Managing files and assets: best practises.

### Modeling

- Learning the basics of Polygonal Modeling.
- Advanced Polygonal Modeling Tools and Techniques.
- Sub-Patching / Nurms / Organic Modeling.
- Spline Modeling.
- Other Modeling techniques.

### Scene Setup

- Aligning, duplicating and arranging objects in 3D space.
- Transforming objects in 3D space.
- Creating sets and environments: best practises.

### Materials and Textures

- Setting up surface ID's.
- Understanding the science of materials, surfaces and textures.
- Understanding the basics of editing and creating materials and textures using procedural and image maps.
- Bump, Specular and other maps.
- UV Mapping objects.
- UV Unwrapping objects.
- Advanced texturing.

### Lighting

- Understanding the science of 3D lighting workflows.
- Intro to types of lights.
- Understanding light settings and setting up lighting rigs.
- Lighting best practices.

### Cameras

- Understanding camera terminology and mechanics.
- Setting up and controlling camera settings.

### Rendering

- Understanding render terminology and techniques.
- Controlling renders using settings.
- Render best practises for optimal render times and quality.

### Animation

- Basic principles of effective animation.
- Understanding keyframing and controlling animation and timing.
- Advanced animation techniques: Dope Sheets and Graph Editors.
- Rendering animations: best practises.

### Advanced Systems

- Working with Particle Systems.
- Environments & Effects.
- Basic character rigging and IK.
- Advanced motion mixing and morphing.
- Dynamic systems.
- Hair and Fur.
- etc...

### Post Production

- Quick intro to using Adobe Photoshop to clean-up, colour correct and finish your renders.
- Quick intro to using Adobe After Effects to composite rendered animations and images into video projects.

### Note:

- Learners will receive comprehensive "take-home" PDF notes and course material.
- A Certificate of Completion will be issued upon the successful completion and submission of a post-course assignment.