

Course Outline

First Level: (30 Hour)

- Basics
 - Interface overview (main window, menus, menu set, shelves, quick layout buttons, layer editor, toolbox and tool setting).
 - View ports.
 - Marking menus.
 - Selection.
 - Viewing the scene.
 - Transforming Objects (Move – Rotate – Scale).
 - Hotkeys (standard and user defined).
 - Help.
- Modeling
 - Polygons, nurbs, subdivision surfaces.
 - Introduction to basic polygon operations (Boolean operations, extrude ... etc).
 - Introduction to curves.
 - Basic curve operations (attach, reverse curve direction ... etc).
 - Basic operations using curves (revolve-loft-planner-extrude-bevel-bevel plus).
 - Basic nurbs operations.
 - Hyper graph (Groups, parent, child ... etc).
 - Duplicate.
 - Multilister
 - Different material types.
 - Material attributes (color, transparency, diffuse, ambient color, bump mapping ...etc).
 - Introduction to texturing.
- Animation:
 - Setting keys (at current time, prompt).
 - Auto key.
 - Time line basics.
 - Copy, cut and delete key frames.
- Lighting:
 - Types of lights (directional light, ambient light, spot light, point light, area light ... etc).
- Camera:
 - Basic camera types (camera, camera with aim, camera with aim and up)
- Rendering:
 - Introduction to rendering.
 - Output file types.
 - Render Setting.
 - Introduction to adobe premiere.

Second Level: (30 Hour)

- Modeling
 - Advanced modeling operations.

- Hyper shading.
- Texturing:
 - Advanced texturing operations.
 - How to create realistic materials (gold, snow, glass, ice ... etc).
- Animation:
 - Animation along a curve.
 - precurve keying.
 - postcurve keying.
 - Using non linear deformers.
- Lighting:
 - Light linking.
 - Visual effects using lights.
- Visual effects:
 - Lightning.
 - Shatter.
 - Smoke.
 - Fire works.
- Dynamics:
 - Introduction to fields.
 - Field types (gravity, uniform, radial, turbulence ... etc)
 - Introduction to soft bodies.
 - Introduction to active rigid bodies.
 - Introduction to passive rigid bodies.
 - Dynamic relationships.
 - Creating a real bowling environment.
 - Discussion about MEL.
- Misc:
 - Killer tips
 - How to create a real TV inside a 3d scene.
 - How to put your self inside a 3d scene.
 - How to use Maya help.
 - How to search or tutorials using the internet.
 - How to search for models using the internet.
 - Problems during the conversion between 3d file types.
 - Learning how to use DEEP EXPLORATION.
 - Using pre-modeled character.
 - Introduction to POSER.
 - How to move character using Poser to get a static position.
 - Exporting models from Poser to Maya.
- Project:
 - Discussion about project ideas
 - How to make a story board for your project.

Third Level: (30 Hour)

- Modeling
 - Using mental ray materials.
 - Architecture (indoor and outdoor).
 - How to use an AutoCAD file inside Maya.
 - Modeling a character (little boy).

- Texturing:
 - Texturing a character.
- Animation:
 - Advanced Deformers.
 - Ghosting.
 - Motion trails.
 - Creating a skeleton.
 - Adjusting skeleton.
 - Animation constrains.
 - Rigging a character
 - Smooth bind.
 - Rigid bind.
 - Introduction to character animation.
 - Character animation deep inside.
- Dynamics:
 - Collision events.
 - How to create an expression.
 - Instancer.
 - Creating curve flow.
 - Creating surface flow.
 - Goals
 - Goal weights.
 - Dynamic constrains.
 - Advanced springs
 - Solvers
 - Memory caching.
 - MEL.
- Rendering:
 - Advanced rendering techniques (final gathering ... etc).
 - MEL.
- Misc:
 - Common mistakes using cameras.
 - Introduction to car modeling.
 - Creating a Terrain.
 - Main idea about Hair.
 - Main idea about Live.
- Project:
 - Solving problems during projects.
 - Finalizing the projects.