BEGINNING 3D 2020-21 SYLLABUS

Free Preparatory Class

- Overview of Maya interface, navigation, viewports
- Basic tools: Move, Rotate, Scale
- Anatomy of polygon objects; difference between object and sub-object modes
- Extrude Tool, Split Ring Tool.
- Construction of a chair and table
- Intro to animation

Lesson 1: Review of Transform Tools—1 Week (Move, Rotate, Scale; Building Log Cabin)

- Using the Channel Box for accuracy
- Sculpt Geometry Tool for making landscapes

Lesson 2: Color —1 Week (Coloring Cabin Scene)

- Differences between materials; Introduction to color
- Attributes of materials
- Applying to Objects and Faces

Lesson 3: Texture Maps—1 Week (3 Spheres)

- Importing Textures
- Creating Coordinates for planar, cylindrical and spherical objects
- Creating textures from scratch

Lesson 4: Lighting and Rendering—1 Week (Continuation of 3 Spheres)

- Theory of lighting; Three point light rig
- Light types and effects; attributes of each
- Shadows and attributes
- Placing lights, viewing results
- Basic rendering and attributes
- Using ray tracing

Lesson 5: Intro to Basic Rotation Keyframe Animation—2 Weeks (Creating the Solar System)

- Intro to parenting
- Creating glow
- Creating an image plane
- Setting pivot points
- Review of spherical mapping

Lesson 6: Intro to Linear Keyframe Animation—1 Week (Creating a Space Ship)

- Review of extruding
- Review of coloring and applying colors to objects and faces
- Review of image planes

Lesson 7: Polygon Modeling and Creating Booleans—2 Weeks (Building Cheese Wedge and Dog House)

- Creating layers: how to hide, lock etc.
- Review of texture mapping
- Intro to combining and separating

Lesson 8: Polygon Modeling More Complex Objects—1 Weeks (Building a Clock)
- Other tools for better models
- Booleans: face count and shape
- Smoothing and optimization

Lesson 9: Nurbs Modeling—1 Weeks (Vase)
- Curve tools and preferences
- Revolve tool modeling and editing
- Converting Nurbs to Polygons

Lesson 10: Continuation of Nurbs Modeling—1 Weeks (Coffee Cup)
- Working with Nurbs shapes
- Making objects snap using V and C
- Extrude Tool modeling and editing
- Snapping to grid

Lesson 11: Review of Creating Custom Textures—2 Weeks (Building a Portrait Frame Picture of Yourself)
- Importing a photo and turning into a texture map
- Review of making texture coordinates
- Review of Nurbs when building picture frame

Lesson 12: Cameras—1 Weeks (Roman Pillars)
- Creating various types of cameras
- Viewing through camera: background color, focal length
- Safe frame
- Animating camera

Lesson 13: Lighting & Rendering—2 Weeks (Creating Animated Scene w/ Cup, Vase, Clock, and Portrait)
- Importing and combining models in one scene
- Review of Render settings
- Intro to batch rendering

Lesson 14: Continuation of Nurbs Modeling—2 Weeks (Mountain Scene)
- Loft tool modeling and editing
- Review of vertex and face editing tools
- Creating background planes

Lesson 15: Creating Bump and Opacity Maps—1 Week (Making a Treasure Chest)
- Review of applying texture coordinates

Lesson 16: Opacity Maps—1 Week (Creating a Fern in a Pot and a Fish Bowl)
- Bending objects
- Changing pivot points
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Lesson 17: Basic Paint Effects—2 Weeks
(Creating Bottom Environment of Fish Bowl w/ Gravel, Plants, Water, & the Treasure Chest)

Lesson 18: Intro to Character Creation—2 Weeks (Building a 3D Fish)
- Review of extruding, smoothing, coloring
- Creating simple joint skeleton and skin binding