Course Description

Introduces students to the fundamental concepts of computerized 3D model building and visualizations. Lecture 2 hours per week. Laboratory 4 hours per week. Total 6 hours per week.

General Course Purpose

To acquaint students with the general concepts of creating and editing virtual 3D environments. To introduce them to theories and technologies shared by most 3D graphics applications, and give them hands on experience. To allow and help students compile a digital portfolio.

Course Prerequisites/Corequisites

Prerequisite: ART 283 or instructor’s permission

Course Objectives

Upon completion of this course, the student will be able to:

- Extrude and lathe 2D shapes into 3D volumes
- Edit polygonal objects
- Link objects using hierarchies intended for animation purposes (forward kinematics)
- Apply maps and procedural textures to objects as well as compose original textures
- Choreograph and render a scene with lights, atmosphere and use of a variety of views for its final output from orthogonal to camera views
- Prepare spline motion paths for anything intended to be animated linearly
- Render the scene to disc using Video for Windows .AVI format
- Render selected still images taken from a given scene