

GRA 2160C
3D computer animation 1
4 credits

GENERAL INFORMATION	
Course Prefix/Number: GRA2160C	Course Title: 3D Computer Animation 1
Number of Credits: 4	
Degree Type	<input type="checkbox"/> B.A. <input type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input checked="" type="checkbox"/> A.A. <input type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C
Date Submitted: 04/12/2007	Effective Year/Term: Fall 2007-1
<input checked="" type="checkbox"/> New Course Competency <input type="checkbox"/> Revised Course Competency	
Course Description (limit to 50 words or less): Students will learn fundamentals of building computer based 3D models for Film, TV, and Video Gaming applications. Students will also learn technical and conceptual skills that will enable them to creatively express and develop their personal ideas and feelings. The students will also acquire a fundamental understanding of 3D modeling, texture mapping and lighting from concept to final product. Lab fee. Prerequisite(s) ART2600C or GRA2577C or VIC1202.	
Prerequisite(s): ART2600C or GRA2577C or VIC1202	Corequisite(s): None

Competency 1: The student will demonstrate proficiency in use of the computer animation window interface by:

- Identifying and defining basic window tools and palettes.
- Customizing interface windows and tool preferences.

Competency 2: The student will demonstrate proficiency in creating 3d Polygon models by:

- Constructing 3D models using 2D image planes as a reference.
- Creating more complex 3D models using 3D primitives as the basis.
- Working with the components of a polygon mesh (faces, edges, and vertices).
- Selecting the faces, edges, and vertices of polygonal meshes.
- Combining separate meshes into one mesh.
- Using "Snap to Grid."

Competency 3: The student will demonstrate proficiency in creating 3d Creating Non Uniform Rational B-Spline (NURBS) Models by:

- Creating a NURBS curve using the control vertices (CV) creation technique.
- Determining the start and end points for a NURBS curve and its direction.
- Increasing the surface subdivisions on a NURBS surface.

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- Creating a NURBS surface using the Loft tool.

Competency 4: The student will demonstrate proficiency in creating 3d Subdivision models by:

- Converting a polygon surface to a subdivision surface.
- Splitting subdivision faces to create areas for more detail in a model.
- Changing the Display Level when working in Standard Mode.

Competency 5: The student will demonstrate proficiency in Rendering 3d scenes by:

- Assigning shading materials to surfaces in the scene.
- Editing the color of shading materials.
- Applying basic texturing techniques.
- Manipulating lights, shadows, and camera angles.
- Rendering a scene.

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