GRA 2765C

3D Computer Animation 3

4 credits

GENERAL INFORMATION	
Course Prefix/Number: GRA2765C	Course Title: 3D Computer Animation 3
Number of Credits: 4	
Degree Type	☐ B.A. ☐ B.S. ☐ B.A.S ☒ A.A. ☐ A.S. ☐ A.A.S. ☐ C.C.C. ☐ A.T.C. ☐ V.C.C
Date Submitted: 04/12/2007	Effective Year/Term: Fall 2007-1
X New Course Competency ☐ Revised Course Competency	
Course Description (limit to 50 words or less): This is an advanced course in which students will define their skills in animating 3D computer generated models for Film, TV, and Video Gaming applications, using the MAYA animation software. Students will learn to implement basic compositing effects along with creating photo realistic renderings. Lab fee. Prerequisite(s): GRA2169C.	
Prerequisite(s): GRA2169C	Corequisite(s): None

Competency 1: The student will demonstrate proficiency in techniques for creating a simple skeleton for a human character by:

- Creating joints for a character.
- Naming joints in the Hypergraph.
- Using symmetry when creating a character.
- Parenting joints into an existing skeleton.
- Using Inverse Kinematics (IK) techniques to pose a skeleton.

Competency 2: The student will demonstrate proficiency in the process of binding the 3D surfaces to the skeleton so that they move together by:

- Binding a skeleton using a smooth bind technique.
- Viewing and modifying skin weights using the Skin Weights Tool.
- Using influence objects to enhance the skin deformation of a character.

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Competency 3: The student will demonstrate proficiency in the use of the Blend Shape tool by:

- Selecting CVs in a region and creating a cluster deformer.
- Creating a Blend Shape deformer to control the blending between target shapes.
- Animating a face from a neutral pose to a smile.

Competency 4: The student will demonstrate knowledge of basic features related to skeleton hierarchies, IK, and parent constraints by:

- Creating and using hierarchies to define logical relationships between animatable objects.
- Constructing a skeleton for use with IK.
- Creating and controlling objects to manipulate the IK system.
- Posing and setting key-frames for the IK system.
- Animating an object by constraining its motion to two or more objects.
- Animating using pose-to-pose technique.
- Animating a walk cycle.
- Simulating real world weight by animating characters pushing, pulling and lifting heavy objects.

Competency 5: The student will demonstrate proficiency in the basic animation post production process by:

- Creating photo realistic renderings.
- Compositing 3d elements rendered separately using Adobe After Effects.

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