University of Arkansas – Fort Smith
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General Syllabus

CGT 2674 - Digital Layout Level I

Credit Hours: 4 **Lecture Hours:** 2 **Lab Hours:** 4
Prerequisite: CGT 1644 3D Visualization
Effective Semester: Summer I 2013

I. Course Information

A. Catalog Description

This course provides students new techniques for modeling, texturing, and lighting scenes in a 3D environment.

B. Additional Course Information

Students will build on modeling techniques using more advanced techniques in 3ds Max and be introduced the modules of Character Studio which include Biped and Physique. Student will create biped characters which are two-legged figures: Humans, animals, or imaginary. Once the biped is created, the student will learn the controls necessary to create realistic – looking movement. Students will also be introduced to Particle Flow and its editor, how to create environmental effects and UVW Mapping.

II. Student Learning Outcomes

A. Subject Matter

Upon completion of this course, the student will be able to generate complex animations incorporating the following disciplines:

1. Create Environmental effects
2. Create event-based particle systems using Particle-Flow
3. Setup a virtual Studio for character/object modeling
4. Create material maps using UVW Map and Unwrap UVW
5. Parametric Modeling and Poly-Modeling
6. Introduction to Biped
7. Create/edit footstep animation
8. Save and load biped figures files
9. Save and load motion files
10. Create links/Wiring Parameters
11. Learn to use the Physique and Skin Modifiers
12. Fit the biped to mesh

B. University Learning Outcomes

Communication Skills
Students will develop animations leading to a full video production. Students will apply specialized information when they produce and display the video.

Technological Skills
Students will use software applications to transfer technical principles, ideas, and theories to new situations. Students will create examples, apply principles, and/or demonstrate an ability or skill of video creation using available software.

Quantitative Reasoning
Students will arrange and combine information into new video publications. Students will generate a plan to create a video clip.

III. Major Course Topics

A. Professional Knowledge

1. Advanced Parametric and Poly-Modeling techniques.
2. Setting up a virtual studio for character and complex object modeling.
3. Material editing and UVW Mapping.
4. Creating Environmental effects.
5. Create event-based particle systems using Particle-Flow

B. Visualization Skills

1. Participate in small group projects based on animation skill levels.
2. Describe various types of animations.
3. Generate rendered images for a variety of media formats.