DMAD A281: 3D COMPUTER GRAPHICS ANIMATION

Item	Value
Curriculum Committee Approval Date	09/23/2020
Top Code	061440 - Animation
Units	3 Total Units
Hours	90 Total Hours (Lecture Hours 36; Lab Hours 54)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Grading Policy	Standard Letter (S)

Course Description

Investigation into the practice of 3-D temporal image handling utilizing computer graphics technology. Students will explore artistic applications in various fields. Instruction is offered at beginning and advanced levels. ADVISORY: DMAD A181 or FILM A110. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate proficiency in the basic skills of 3D Computer Animation, including but not limited to: modeling, mapping, shading, lighting and rendering.
2. Identify various prominent 3D animation studios/individuals including, but not limited to: Disney-Pixar, John Lasseter, Brad Bird, Dreamworks.
3. Create and display a storyboard presentation for a project.

Course Objectives

- 1. Demonstrate skills in the use of hardware and software in motion graphics applications.
- 2. Explain types of motion graphics applications.
- 3. Explain applications of motion graphics software.
- 4. Create a strategy for working with clients.
- 5. Explain camera animation techniques.
- 6. Explain applications for camera animation techniques
- 7. Develop a finished portfolio piece within a specific applications area.
- 8. Develop skills in 3D picture editing, temporal sequencing and production.
- 9. Apply graphics animation skills in interpreting a clients needs.

Lecture Content

Introduction to software basics Cartesian Coordinate System Left hand rule Lathed objects Extrusion The 3D Sculptor (introduction to modeling) Surfaces Textures Mapping Shading Gouraud Phong Ray tracing Lighting Scripting Picture editing temporal sequencing Camera Rendering Camera animation Animation techniques Production Preproduction Post production Working with a client

Method(s) of Instruction

- Lecture (02)
- DE Live Online Lecture (02S)
- DE Online Lecture (02X)
- Lab (04)
- DE Live Online Lab (04S)
- DE Online Lab (04X)

Instructional Techniques

Slide and video presentations, CD Rom demonstrations, field trips to labs, student critiques, guest lectures.

Reading Assignments

Students will spend 1-2 hours per week on: Readings from required text Reading from assigned online resources

Writing Assignments

Students will spend 1-2 hours per week on: Self-Reflections Analysis of Elements and Principles of Design Written Reports of Attended Events and/or Materials Read

Out-of-class Assignments

Students will spend 1-2 hours per week on: Design projects using appropriate software Attend on campus student art shows Sketching and conceptualizing drawing

Demonstration of Critical Thinking

Tests, CD Rom demonstrations, field trips, guest lectures, student critiques, skills demonstration

Required Writing, Problem Solving, Skills Demonstration

Written reports and critiques of work seen outside class. Group critiques of student work.

Eligible Disciplines

Commercial art (sign making, lettering, packaging, rendering): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience. Graphic arts (desktop publishing): Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience. Multimedia: Any bachelors degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Wiley, J.. Mastering Autodesk Maya 2016: , ed. Autodesk Official Press, 2016

Other Resources

1. Textbook changes annually or biannually. Selected handout materials to be provided and distributed by the instructor.