



Course Outline

2026-2027 Catalog

MSP 45 - 3-D Computer Modeling and Animation

Catalog Description

Transfer Status: CSU/UC

Unit(s): 3.00

Lecture: 34.00 Contact hours/68.00 Out of class hours/102.00 Total hours/2.00 Unit(s)

Lab: 51.00 Contact hours/0.00 Out of class hours/51.00 Total hours/1.00 Unit(s)

Total: 85.00 Contact hours/68.00 Out of class hours/153.00 Total hours/3.00 Unit(s)

Course Description: This course introduces students to the use of software techniques to create and animate three-dimensional environments and objects. Students will learn to create photo-realistic models and scenes enhanced by lighting, shadows, reflection, and textures, and will learn to produce camera fly-throughs and basic character animation sequences.

Objectives

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

1. Demonstrate skills in 3D model construction, texture and color, environmental construction, lighting point of view (camera placement), and movement sequencing.
2. Create a portfolio of 3D models and animations suitable for potential employers.
3. Identify employment opportunities in the 3D design industry.

Course Content

Topic Titles / Suggested Time Topic

Lecture

<u>Topics</u>	<u>Lec Hrs</u>
Orientation and fundamentals	4.00
Basic modeling, object construction	8.00
Creation of environment	4.00
Textures and color	4.00
Lighting and reflection	2.00
Point of view: camera placement, angles	2.00
Animations: camera movement, character movement	4.00
Portfolio development	6.00
Total Hours:	34.00

Lab

<u>Topics</u>	<u>Lab Hrs</u>
Orientation and fundamentals	6.00
Basic modeling, object construction	12.00
Creation of environment	6.00
Textures and color	6.00
Lighting and reflection	3.00
Point of view: camera placement, angles	3.00
Animations: camera movement, character movement	6.00
Portfolio development	9.00
Total Hours:	51.00

Methods of Instruction

- A. Homework: Students are required to complete two hours of outside-of-class homework for each hour of lecture
- B. Lecture/Lab demonstration
 - Presentations of 3-D examples
 - Group and individual critiques

Methods of Evaluation

- A. Quizzes
- B. Portfolios

- C. Projects
- D. Class Discussion
- E. Critique

Examples of Assignments

Reading Assignments

1. Research a 3D industry professional or design studio that focuses on 3D, and read a profile or interview about the individual or company. Be prepared to share the information with the class through an oral report.
2. Read an article related to the 3D modeling and animation industry and share with the class.

Writing Assignments

1. Develop an interactive story board and write a script that relates to the 3D design process.
2. Write a one-page description of the process used to create an interactive project.

Out-of-Class Assignments

1. Research new technologies and software for the 3D modeling and animation industry. Share with the class.
2. Use a camera to capture still images for background textures and implement the texture into a 3D project. Print out hardcopy of project for review.

Recommended Materials of Instruction

Other Learning Materials

Tutorials
Examples
Internet sites

Minimum Qualifications

Art (Masters Required)
Computer Science (Masters Required)
Graphic Arts
Office Technologies

Created/Revised by: Donnelly, Daniel

Date: 02/04/2013