

BUTTE COLLEGE

COURSE OUTLINE

I. CATALOG DESCRIPTION

MSP 45 - 3-D Computer Modeling and Animation

3 Unit(s)

Prerequisite(s): NONE

Recommended Prep: Reading Level IV; English Level III

Transfer Status: CSU/UC

34 hours Lecture

51 hours Lab

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.

II. OBJECTIVES

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

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

III. COURSE CONTENT

A. Unit Titles/Suggested Time Schedule

Lecture

<u>Topics</u>	<u>Hours</u>
1. Orientation and fundamentals	4.00
2. Basic modeling, object construction	8.00
3. Creation of environment	4.00
4. Textures and color	4.00
5. Lighting and reflection	2.00
6. Point of view: camera placement, angles	2.00
7. Animations: camera movement, character movement	4.00
8. Portfolio development	6.00
Total Hours	34.00

Lab

<u>Topics</u>	<u>Hours</u>
1. Orientation and fundamentals	6.00
2. Basic modeling, object construction	12.00
3. Creation of environment	6.00
4. Textures and color	6.00
5. Lighting and reflection	3.00
6. Point of view: camera placement, angles	3.00
7. Animations: camera movement, character movement	6.00

8. Portfolio development	9.00
Total Hours	51.00

IV. 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
- C. Presentations of 3-D examples
- D. Group and individual critiques

V. METHODS OF EVALUATION

- A. Quizzes
- B. Portfolios
- C. Projects
- D. Class Discussion
- E. Critique

VI. EXAMPLES OF ASSIGNMENTS

- A. 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.
- B. 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.
- C. 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.

VII. RECOMMENDED MATERIALS OF INSTRUCTION

Materials Other Than Textbooks:

- A. Tutorials
- B. Examples
- C. Internet sites

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