

**J. Sargeant Reynolds Community College
Course Content Summary**

Course Prefix and Number: DRF 238

Credits: 3

Course Title: Computer Aided Modeling and Rendering I

Course Description (including lecture hours, lab hours, and total contacts)

Focuses on training students in the contemporary techniques of 3D modeling, rendering, and animation on the personal computer. Introduces the principles of visualization, sometimes known as photo-realism, which enables the student to create presentation drawings for both architectural and industrial product design. Uses computer animation to produce walk-throughs that will bring the third dimension to architectural designs. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

General Course Purpose

The course introduces the student to the concepts and procedures related to advanced 3D graphics.

Course Prerequisites/Co requisites (Entry-level competencies **required** for enrollment)

Prerequisite: DRF 232

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:

- a. Create 3D designs and realistic CAD presentations.
- b. Apply rules and methods of "scene" composition.
- c. Create computer animations.
- d. Merge photo images with 3D CAD models.

Major Topics to be Included

- a. Principles of 3D modeling and wireframe creation
- b. Material/texture applications
- c. Lighting/shadow control and composition
- d. Animations

Effective Date of Course Content Summary: August, 2008