

**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. Created 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