

**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:

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 enable 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. 3-D Studio is the primary software used in this course. Part I of II. Prerequisite: DRF 232. 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. It is required for the Contemporary Technology for Design specialization of the Architectural & Civil Engineering Technology AAS curriculum. Also required for the Computer-Aided Design Specialist CSC track. Can be a technical elective for the Building Construction Management track of the Architectural and Engineering Technology AAS curriculum.

Course Prerequisites and Co-requisites:

Prerequisite: DRF 232

Student Learning Outcomes:

Upon completing the course, the student will be able to

- Create 3D designs and realistic CAD presentations;
- Apply rules and methods of “scene” composition;
- Create computer animations; and
- Merge photo images with 3D CAD models.

Major Topics to Be Included:

- Principles of 3D modeling and wireframe creation
- Material/texture applications
- Lighting/shadow control and composition
- Animations

Effective Date/Updated: January 21, 2019