

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

**Course Prefix and Number:** ARC 221

**Credits:** 3

**Course Title:** Architectural CAD Applications Software I

**Course Description:** Teaches the principles and techniques of architectural drawing practices through the use of architecture specific CAD software. Utilizes the commands and features of the software to generate drawings that emphasize architectural design and structural systems. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**General Course Purpose:** The primary purpose of this course will be to provide students with a foundation in the use and applications of contemporary architectural design software also known as “building information modeling.” This courses serves as a requirement for the Architectural and Engineering Technology AAS, Contemporary Technology for Design and Building Construction Management Specializations.

**Course Prerequisites and Co-requisites:**

None

**Course Objectives:**

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

- a. Recognize the role of BIM software in current architectural practice;
- b. Evaluate the capabilities of a BIM model to generate conventional working drawings;
- c. Develop the building model for creating presentation images with shade and shadowing; and
- d. Create and modify architectural “mass” elements.

**Major Topics to Be Included:**

- a. Navigating the BIM interface
- b. Creation of the conceptual model
- c. Addition of doors, windows, and fenestration
- d. Conversion of Autocad drawings into BIM models
- e. Application of materials to the model
- f. Creation of schedules

**Effective Date of Course Content Summary:** October 16, 2015