

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

**Course Prefix and Number:** ARC 222

**Credits:** 3

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

**Course Description:** Uses advanced features of architectural CAD software to teach students to develop working drawings and details that adhere to the practices and techniques of architectural drawing principles. Prerequisite: ARC 221. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**General Course Purpose:** The primary purpose of this course will be to expand and enhance the student's knowledge base of the fundamentals of Building Information Modeling. The course serves as a requirement for the Architectural and Engineering Technology AAS, Contemporary Technology for Design Specialization and an elective for the Building Construction Management Specialization.

**Course Prerequisites and Co-requisites:**

Prerequisite: ARC 221

**Course Objectives:**

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

- a. Create topological models for building sites;
- b. Execute space planning via the BIM model;
- c. Execute detailed building sections that define structural systems; and
- d. Produce detailed rendered "walkthroughs" and animations.

**Major Topics to be Included:**

- a. Project "callouts"
- b. Pad, wall, and roof elements
- c. Spilt regions
- d. Adding "details" to sheets
- e. Defining camera views
- f. Rendering using ray tracing and cloud services
- g. BIM customization

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