

**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. Use local prerequisites. 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 is also a requirement of the Computer-Aided Design Specialist CSC.

**Course Prerequisites and Co-requisites:**

Prerequisite: ARC 221

**Student Learning Outcomes:**

Upon completing the course, the student will be able to

- Manipulate topological models for building sites;
- Execute space planning via the BIM model;
- Create custom building elements; and
- Produce detailed rendered images and animations.

**Major Topics to Be Included:**

- Create compound walls with detailed features
- Manipulate graphic display options
- Create In-Place Conceptual Mass elements
- Mass modeling converted to building components
- Curtain wall styles, panels, doors and windows
- Family creation
- Component grouping
- Custom schedules
- Phasing and design options
- Adding views to sheets
- Work sets and collaborating with other disciplines
- Rendering
- Interference checking, monitoring changes, working with error messages.

**Effective Date/Updated:** January 21, 2019