

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 Computer-Aided Design (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 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

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

Major Topics to Be Included:

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

Date Created/Updated (Month, Day, and Year): January 21, 2019