

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

**Course Prefix and Number:** ARC 241

**Credits:** 3

**Course Title:** Building Mechanical Systems

**Course Description:** Studies components and design for systems in residential and commercial building. Covers plumbing supply and drainage, including storm drainage and private sewage disposal. Requires calculation of overall heat valances for buildings as basis for design of heating and cooling systems. Prerequisite: ARC 122 or equivalent. Lecture 3 hours per week.

**General Course Purpose:** Course serves as an introduction to mechanical systems and components that are found in contemporary building construction including HVAC, communication, security devices, and plumbing systems.

**Course Prerequisites and Co-requisites:**

Prerequisite: ARC 122 or equivalent

**Course Objectives:**

Upon completing the course, the student will be able to

- a. Acquire knowledge of water supply and drainage systems;
- b. Gain knowledge of sewage system design;
- c. Understand heating and air-conditioning system planning; and
- d. Gain knowledge of architectural design for sound control.

**Major Topics to Be Included:**

- a. Water supply, design, and drainage
- b. Sewage disposal
- c. Heating and air-conditioning systems
- d. Sound control

**Effective Date of Course Content Summary:** August, 2008