

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

**Course Prefix and Number:** ARC 132

**Credits:** 3

**Course Title:** Materials and Methods of Construction II

**Course Description**

Studies masonry and concrete materials related to the construction industry: materials, mixtures, handling and placing, finishing and curing and protection of concrete work. Includes brick and cementitious materials, mortar, and workmanship, and iron, steel and aluminum as used in construction. Lecture 3 hours per week.

**General Course Purpose**

To give the student a comprehensive understanding of concrete and masonry construction systems as one of the primary components used in architectural design projects with a particular emphasis on commercial scope construction. In addition, an overview of the fundamentals of steel and metal construction is conducted toward the conclusion of the course.

**Course Prerequisites/Co requisites** (Entry-level competencies **required** for enrollment)

None

**Course Objectives**

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

- a. Identify the nature of these materials and how and where they are used.
- b. Develop an appreciation for the work of the craftsman, technician, and designer in the appropriate materials.
- c. Estimate materials such as concrete, brick, and block for job requirements.
- d. Identify where and how concrete and masonry products can and should be used in construction projects.

**Major Topics to be Included**

- a. Concrete - foundation systems, slabs on grade, deck systems
- b. Masonry - block, brick, mortars
- c. Stucco - terrazzo, ceramic tile
- d. Iron and steel systems

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