

**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 and Co-requisites:

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; and
- 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