Course Prefix and Number:  WEL 145  Credits:  3

Course Title:  Welding Metallurgy

Course Description (including lecture hours, lab hours, total contacts)

Studies steel classifications, heat treatment procedures, properties of ferrous and non-ferrous metals. Discusses techniques and practices of testing welded joints and destructive/nondestructive, visual magnetic and fluorescent testing. Lecture 3 hours per week.

General Course Purpose

A required course for the Welding Career Studies Certificate program

Course Prerequisites/Corequisites (Entry-level competencies required for enrollment)

None

Course Objectives (Each item should complete the following sentence.)

Upon completing the course, the student will be able to:
  a. Develop a basic understanding of the types of metals and their classification
  b. Identify the more commonly used metals
  c. Display an understanding of heat treating and hardening processes
  d. Display an understanding of basic testing procedures used in welding
  e. Display an understanding of the effects of heat on various metals.

Major Topics to be Included

  a. Classification of metals
  b. Properties of metals
  c. Identification of metals
  d. Heat treatment
  e. Hardening processes
  f. Testing procedures

Effective Date of Course Content Summary (Month, Date Year):  2/12/09