

Course Objectives/Course Outline
Spokane Community College

Course Title: Materials Science

Prefix and Course Number: MACH 163

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Explain the AISI metal classification system
- Understand the basic heat treating principles
- Explain mechanical properties of metals
- Have a working knowledge of composites
- Identify different types of materials

Course Outline:

- I. Metallurgy
 - A. Selection and Identification of Steels
 - B. Selection and Identification of Nonferrous Metals
 - C. Hardening, Case Hardening, and Tempering
 - D. Annealing, Normalizing, and Stress Relieving
 - E. Rockwell and Brinell Hardness Testers
- II. Composites
 - A. Identify different types of composite materials
 - B. Identify different composite manufacturing processes
 - C. Perform basic VIP process