

# MACH 51A Credit By Exam Study Guide

Based on Fall 2019 Course Outline

- 1) Trace the development of the history and methods of machine tool Technology.
- 2) Identify and use common shop safety practices and equipment to prevent shop safety hazards.
- 3) Demonstrate knowledge of the theory of machining as applied to machine tool techniques.
- 4) Recognize and predict changes in the properties of metal when exposed to machine tool techniques.
- 5) Identify and describe applications of common mechanical hardware and hand tools found in the machine shop.
- 6) Read and interpret common detail drawings found in a machine shop.
- 7) Calculate and set appropriate angles for grinding a tool bit.
- 8) Describe set-up, operation, and safety procedures for the pedestal grinder.
- 9) Select the correct feeds and speeds for commonly used materials.
- 10) Describe the tools and methods of metrology/dimensional measurement.
- 11) Identify and describe the important components, controls, and functions of vertical and horizontal milling machines.
- 12) Compare and contrast three basic drill press types and explain their differences and primary uses.
- 13) Classify types of saws and describe their uses.
- 14) Calculate cutting speeds and feeds for a variety of machining processes.
- 15) Identify common methods of measurement conversions.
- 16) Identify the most important parts of the lathe, drill, and mill and describe the function of each relative to producing parts on manually operated machines.
- 17) Identify realistic career objectives in machine tool technology.