

MFG 110 : MANUFACTURING PROCESSES I

Transcript title

Manufacturing Processes I

presentations, and demonstrations of manual skills acquisition as needed to confirm achievement of the course outcomes.

Credits

4

Grade mode

Standard letter grades

Contact hours total

80

Other hours

80

Recommended preparation

MFG 100.

Description

Introduces material removal operations emphasizing safe operational practices. Includes basic part layout, hand tools, drill press, bandsaw, manual milling, and manual lathe processes with an emphasis on production speeds and feeds.

Learning outcomes

1. Demonstrate safe practices in the MATC machine tool lab.
2. Demonstrate basic manual machining processes, setups and strategies to machine metal parts while applying industry standard feeds and speeds .
3. Use precision measuring instruments to machine and inspect assigned metal projects.
4. Fabricate a project to blueprint specifications using basic layout tools, drill press, bandsaw, and hand tools.
5. Demonstrate basic manual milling machine operations to face mill, end mill, side mill, drill, ream, and chamfer an assigned project to blueprint specifications.
6. Demonstrate basic engine lathe operations to drill, face, turn, groove, taper and file an assigned project to blueprint specifications.

Content outline

Workplace Skills and Safety
Measurement
Offhand Grinding/Hand Tools
Engine Lathe
Manual Mill

Required materials

This class requires the purchase of safety equipment, reference books, measurement equipment, and tools.

Grading methods

Assessment for this course may include, either online or in person, written assignments, homework, timed tests, take home tests, oral