

Machine Shop Technology Program Level Student Learning Outcomes

Students completing the Machine Shop Technology program will be able to:

1. Demonstrate shop safety associated with operation of machine tool equipment, metal cutting equipment, and use of personal protective equipment found in industrial environments.
2. Interpret blueprints of mechanical parts and assemblies.
3. Interpret a blueprint, draw a part using CAD/CAM software, run tool paths, generate a program, input a program, set-up the machine and produce the part to the specifications on the given job sheet.
4. Create blueprints and working drawings of mechanical parts and assemblies and using Computer Aided Design software
5. Program, setup and operate CNC machining centers using manual or computer assisted programming.
6. Program, setup, and operate turning centers using manual or computer assisted programming.
7. Operate a lathe in accordance with industry standards.
8. Operate a milling machine in accordance with industry standards.
9. Operate a drill press in accordance with industry standards
10. Operate sawing machines in accordance with industry standards
11. Solve machining problems requiring mathematical operations using accepted mathematical applications.
12. Write a simple program for a CNC machining center and a turning center to produce a piece part that is within blueprint specifications.