

COMPETENCY PROFILE

MACHINE FUNDAMENTALS - A

BTC: MACH 119 (5 credits)

This lab course provides students with an introductory experience using pedestal grinders, lathes, hand-tools, mills and material identification. This course is taken in conjunction with MACH 101 (theory) and provides students an opportunity to practice entry level machining skills.



Upon completion of high school courses equivalent to the following competencies:

- Demonstrate shop safety practices.
- Sharpen drills to cut an accurate hole.
- Form and sharpen turning tools.
- Demonstrate basic operation of the metal cutting lathe.
- Demonstrate correct procedures for drilling and tapping threads.
- Turn taper using compound rest.
- Demonstrate filing and finishing of surfaces.
- Demonstrate center drilling techniques.
- Demonstrate knurling, turning, & facing techniques.
- Demonstrate turning to accurate sizes +/- .0002
- Polish to #16 finish.
- Use Machinery's Handbook for Industry Standards.

College Textbooks:

Machine Tool and Manufacturing Technology

Machinery's Handbook

Lab Assignments/Assessment:

1. Sharpen drills.
2. Form and sharpen lathe tools.
3. Turn and form (ball peen) hammer.
4. Manufacture C-clamp and parallel clamp.
5. Other projects: *to be determined by high school instructor*

NOTE: the content & competencies indicated above represent ½ of the regular college course MACH 119 & 120 (10 credits total). Upon enrolling at the college, students will need to complete 120 for 5 credits.

This document is to certify that this student has completed the required coursework as defined by the Whatcom County Tech Prep Articulation Agreement and has demonstrated mastery for college credit. Further information about any aspect of this program may be obtained by contacting the school and instructor named on this profile.