

ENGINE LATHE OPERATIONS I

Pierce County Careers Connection Dual Credit Articulation Agreement

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

Lathe

- ☐ Apply safe work habits.
- ☐ Check lathe to determine all safety devices are in place and use machine safely.
- ☐ Identify machine components.
- ☐ Plan the sequence of operations and machine round work mounted between lathe centers.
- ☐ Plan the sequence of operations and machine round work mounted in a lathe chuck.
- ☐ Plan the sequence of operations and machine flat work pieces.
- ☐ Identify and state purpose of the main operative parts of the lathe.
- ☐ Set the lathe to run at any required speed.
- ☐ Set the proper feed for the cut required.
- ☐ Measure using micrometers with .0005 inch.
- ☐ Measure using calipers within .005 inch.
- ☐ Machine outside diameter and inside diameter within $\pm .002$ inch.
- ☐ Sharpen High Speed Steel right and left-hand cutting tools.
- ☐ Perform knurling operations.
- ☐ Mount and machine work in a three-jaw chuck.
- ☐ Mount and machine work in a four-jaw chuck.
- ☐ Face, groove, and cut off work held in a chuck.
- ☐ Drill small and large diameters holes in a lathe.
- ☐ Ream holes to an accurate size and good surface finish.
- ☐ Use a tap to produce an internal thread that is concentric with the outside diameter.
- ☐ Machine threads to correct size and finish.
- ☐ Identify and state purpose of self-holding and self-releasing tapers.
- ☐ Cut short, steep tapers using the compound.
- ☐ Calculate and cut tapers on work between centers by offsetting the tailstock.
- ☐ Calculate and machine tapers with a taper attachment.
- ☐ Recognize and state the purposes of six common thread forms.
- ☐ Set up a lathe to cut inch external Unified threads.
- ☐ Set up an inch lathe to cut metric threads.
- ☐ Explain how to set up a lathe and cut external Acme threads.
- ☐ Complete a class project that demonstrates the skills listed above.

A student earning a “B” grade or better may earn college credit at one of the following colleges:

<u>College</u>	<u>Course</u>	<u>Credits</u>
Bates Technical College	MACH 114	4
Clover Park Technical College	MCH 117	6
	CIP Code: 48.0501	