

## Appendix A

**WORK PROCESS SCHEDULE  
PRECISION MACHINIST (MACHINIST)  
O\*NET-SOC CODE: 51-4041.00  
RAPIDS CODE: 0296**

This schedule is attached to and a part of these Standards for the above identified occupation.

**1. TERM OF APPRENTICESHIP**

The term of the occupation shall be 8,000 with an OJL attainment of four (4) years supplemented by the required hours of related instruction.

**2. RATIO OF APPRENTICES TO JOURNEYWORKERS**

One (1) apprentice may be employed in each shop department, and/or jobsite employing a qualified journeyworker.

**3. APPRENTICE WAGE SCHEDULE**

Apprentices shall be paid a progressively increasing schedule of wages based on a percentage of the current journeyworker wage rate.

**4 Year Term Example:**

1 <sup>st</sup>	6 months + hours = ____	2 <sup>nd</sup>	6 months + hours = ____
3 <sup>rd</sup>	6 months + hours = ____	4 <sup>th</sup>	6 months + hours = ____
5 <sup>th</sup>	6 months + hours = ____	6 <sup>th</sup>	6 months + hours = ____
7 <sup>th</sup>	6 months + hours = ____	8 <sup>th</sup>	6 months + hours = ____

**4. SCHEDULE OF WORK EXPERIENCE (See attached Work Process Schedule)**

The Sponsor may modify the work processes to meet local needs prior to submitting these Standards to the appropriate Registration Agency for approval.

**5. SCHEDULE OF RELATED INSTRUCTION (See attached Related Instruction Outline)**

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	<b>APPROXIMATE HOURS</b>
<b>A. <u>TOOL CRIB</u></b>	<b>500</b>
Learning names of raw materials and names and use of tools, jigs, fixtures and gauges.	
<b>B. <u>DRILLS</u></b>	<b>500</b>
Power and radial drilling, tapping, ream-lapping, counterboring and countersinking, grinding drills, lubricants, cutting, speeds and feeds, safety.	
<b>C. <u>LATHE - ENGINE</u></b>	<b>1500</b>
Chucking, use of face plate, mandrel, steady rest and follow rest, centering, straight turning, facing taper, turning with taper attachment, offset tail stock and compound, drilling, reaming.	
<b>D. <u>MILLING MACHINE</u></b>	<b>1000</b>
Plain, vertical and universal. Selection of cutters, methods of holding work, vise, clamps, dividing head, circular table - plain or slab, milling, sawing, boring, fly cutter milling, vertical head, keyway cutting, slotting, spline milling, rack cutting, cutter milling, gear cutting, gang milling, form milling, speeds and feed, lubricants, safety.	
<b>E. <u>SHAPER AND PLANER</u></b>	<b>500</b>
Methods of holding work, vise, clamps, dividing head, surface and angle cutting, keyway cutting, squaring, dovetailing, speeds and feeds, grinding tools, safety.	
<b>F. <u>SURFACE GRINDER</u></b>	<b>300</b>
Safety, selection of grinding wheels, speeds and feeds, mounting wheels, magnetic chuck, dressing wheels, plain or surface grinding, angle grinding, squaring.	
<b>G. <u>UNIVERSAL GRINDER</u></b>	<b>500</b>
Safety, mounting wheels, speeds and feeds, dressing wheels, straight, taper, angle face, form and hole grinding.	
<b>H. <u>CUTTER GRINDER</u></b>	<b>600</b>

Safety, mounting wheels, setting up indexing attachments, clearance angles for various types of cutters and reamers, setting up for these angles, grinding plain, spiral and end mills, reamers, form cutters.

<b>I. <u>HEAT TREATMENT</u></b>	<b>100</b>
Kinds of steel, S.A.E. classification, how to harden, draw, case and pack harden and anneal, use of pyrometer and color chart, hardness tests, quenching baths, and safety.	
<b>J. <u>BENCH WORK</u></b>	<b>500</b>
Filing, scraping, chipping, layout and assembly, use of gauge blocks and dial indicator, vernier height gauge, lapping, tapping and threading, lubricants, inspection, safety.	
<b>K. <u>GENERAL MACHINERY REPAIR</u></b>	<b>2000</b>
Inspection and adjusting, removing and replacing broken and worn parts of machine tools, scraping bearings and ways and rebuilding machines, welding.	
<b><u>TOTAL HOURS</u></b>	<b>8000</b>

**RELATED INSTRUCTION OUTLINE  
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**APPROXIMATE  
HOURS**

**Please reference Appendix (s)**

<b>Apprenticeship Record Book -1- Appendix E</b>	<b>152</b>
<b>Apprenticeship Record Book -2- Appendix F</b>	<b>148</b>
<b>Apprenticeship Record Book -3- Appendix G</b>	<b>150</b>
<b>Apprenticeship Record Book -4- Appendix H</b>	<b>157.5</b>
<b>Total Related Technical Training</b>	<b>607.5</b>