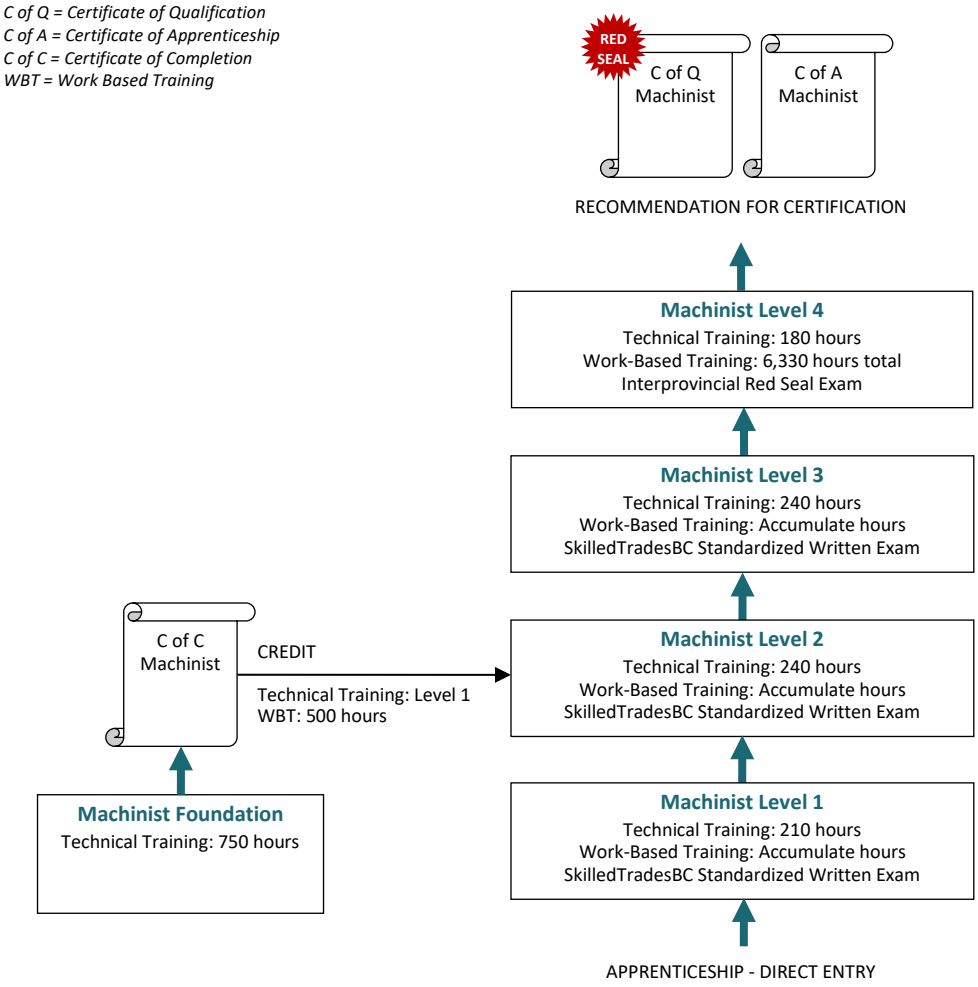
Program Credentialing Model

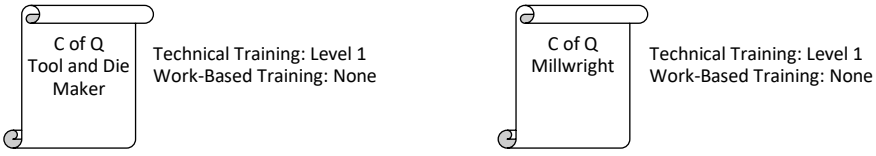
Apprenticeship Pathway

This graphic provides an overview of the Machinist apprenticeship pathway.



CROSS-PROGRAM CREDITS

Individuals who hold the credentials listed below are entitled to receive partial credit toward the completion requirements of this program



Training Topics and Suggested Time Allocation

Training Topics and Suggested Time Allocation shows the proportionate representation of general areas of competency (GACs) at each program level, the suggested proportion of time spent on each GAC, and percentage of time spent on theory versus practical application.

MACHINIST – LEVEL 1

			% of Time Allocated to:		
		% of Time	Theory	Practical	Total
Line A	**PERFORM SAFETY RELATED TASKS**	**11%**	**80%**	**20%**	**100%**
A1	Describe Occupational Health and Safety Regulations		✓		
A2	Describe WHMIS and Hazardous Materials Safety (HAZMAT)		✓		
A3	Apply safety practices for shop areas		✓	✓	
A4	Use lifting equipment		✓	✓	
Line B	**PERFORM HAND PROCESSES**	**9%**	**40%**	**60%**	**100%**
B1	Use and maintain hand tools		✓	✓	
B2	Use layout tools		✓	✓	
B3	Use and maintain handheld power tools		✓	✓	
B4	Mark material and workpiece for identification		✓	✓	
Line C	**USE APPLIED MATHEMATICS**	**11%**	**100%**	**0%**	**100%**
C1	Solve problems involving formulas		✓		
C2	Perform metric/imperial conversions		✓		
C3	Solve problems involving geometry		✓		
C4	Solve problems involving mass, area and volume		✓		
C5	Solve problems involving trigonometry		✓		
Line D	**USE MEASURING TOOLS**	**9%**	**40%**	**60%**	**100%**
D1	Use linear and Vernier scales		✓	✓	
D2	Use micrometers		✓	✓	
D3	Use calipers and gauges		✓	✓	
D4	Use dial indicators and digital readouts		✓	✓	
D5	Use optical measuring equipment		✓		
Line E	**INTERPRET DRAWINGS AND REFERENCE MATERIALS**	**8%**	**80%**	**20%**	**100%**
E1	Interpret information found on drawings		✓		
E2	Determine project requirements		✓		
E3	Sketch machined parts		✓	✓	
E4	Use Machinery's Handbook and other reference materials		✓		
E5	Describe fits and tolerances		✓	✓	
Line F	**SELECT MATERIALS**	**8%**	**100%**	**0%**	**100%**
F1	Describe principles of metallurgy		✓		
F2	Describe characteristics of ferrous metals		✓		
F7	Describe the use and maintenance of fuel gas equipment		✓		

			% of Time Allocated to:		
		% of Time	Theory	Practical	Total
Line G	**REFURBISH COMPONENTS**	**3%**	**100%**	**0%**	**100%**
G1	Identify fasteners		✓		
G2	Identify lubricants and sealants		✓		
Line H	**USE DRILLING MACHINES**	**9%**	**40%**	**60%**	**100%**
H1	Describe drilling machines		✓		
H2	Select and maintain cutting tools		✓	✓	
H3	Operate and maintain drilling machines		✓	✓	
Line I	**USE POWER SAWS**	**3%**	**40%**	**60%**	**100%**
I1	Describe power saws		✓		
I2	Select and maintain band saw blades		✓	✓	
I3	Operate and maintain band saws		✓	✓	
I4	Operate and maintain other saws		✓	✓	
Line J	**USE LATHES**	**20%**	**40%**	**60%**	**100%**
J1	Describe lathes		✓		
J2	Describe cutting tools and holders		✓		
J3	Operate and maintain lathes		✓	✓	
J4	Cut tapers		✓	✓	
Line K	**USE MILLING MACHINES**	**3%**	**100%**	**0%**	**100%**
K1	Describe milling machines		✓		
K2	Describe cutting tools and holders		✓		
Line L	**USE SUPPORT MACHINES**	**6%**	**50%**	**50%**	**100%**
L1	Operate and maintain pedestal grinders		✓	✓	
L2	Operate and maintain arbour and hydraulic presses		✓	✓	
L3	Operate and maintain hones and lapping machines		✓		
	Total Percentage for Machinist Level 1	**100%**			