

Machinist

The Machinist program is designed to train individuals in the knowledge, skills, and experience necessary to set up and operate precision metal cutting and grinding machines such as lathes, milling machines, drills, shapers, boring mills and grinders. A variety of equipment is used to manufacture, install, operate, adjust and repair machine tools and other machines in common use. Duties of a machinist include: study specifications, charts, drawings or sample parts to determine the machining operation to be performed, calculate dimensions and tolerances, and prepare working sketches if necessary, set up and operate tools, which may be computer numerically controlled, to perform precision machining operations. Work could either be in job shops or production jobs. In job shops, you will make a wide variety of repair parts for different types of machinery and industrial equipment in different situations. In production shops, you will produce parts using mass production methods including CNC machining and other tools. Shops may be noisy, dusty and have materials that are dirty. The work requires standing for long periods of time and sometimes working in a rushed environment. You will probably work a forty hour, five day week but may be required to work overtime during peak times. You should have the ability to estimate and measure sizes and distances accurately, work independently at tasks that require concentration and physical effort, and use your hands skillfully and quickly.

OUTCOMES

1. Demonstrate safe work practices and personal protection.
2. Read and interpret engineering drawings.
3. Select workplace materials.
4. Perform layout operations.
5. Set up, operate and maintain drills.
6. Set up, operate and maintain lathes.

ENTRANCE REQUIREMENTS

Eligibility for admission requires the applicant to meet one of the following academic criteria:

- 1.High School**
High School Graduation
- 2.Comprehensive Arts and Science (CAS) Transition**
Comprehensive Arts and Science (Transition) Certificate
- 3.Adult Basic Education**
Adult Basic Education (Level III) Graduation with General College Profile (or Business Related College Profile or Degree and Technical Profile). It is strongly recommended that courses include the following:
i. Mathematics MA3107A, MA3107B, MA3107C
ii. Science 3101, 3102, 3103
- 4.Mature Student Status**
Applicants who do not meet the educational prerequisites, are 19 years of age or older and have been out of school for at least one year, may be considered on an individual basis under the Mature Student Clause.

EMPLOYMENT OPPORTUNITIES

You will find employment in a variety of occupational settings including: machinery and equipment manufacturers, mining operations, aircraft and parts manufacturers, machine shops. As you gain experience, you may advance to positions such as inspector, foreman or superintendent or CNC machinist and programmer.

CERTIFICATE

- Red Seal Certification
- One year
- September start
- Baie Verte and Placentia Campuses

COURSES

CODE	TITLE	Hrs
Block 1 Entry Level		
TS1510	Occupational Health & Safety	6
TS1520	WHMIS	6
TS1530	Standard First Aid	14
MW1750	Hand Tools and Basic Layout	90
MW1760	Machine Shop Measuring I (Basic Measurement)	30
MW1770	Mechanical Drawings I (Basic)	30
MW1780	Cutting Fluids and Coolants	30
MW1790	Material Selection	8
MW1800	Machine Shop Measuring II (Gauge Blocks and Angular Measurement)	30
MW1820	Power Tools/Grinding	45
MW1830	Heat Treatment	30
MW1840	Rigging	30
MW1850	Drilling Machines	45
MW1860	Lathes and Lathe Accessories	45
MW1870	Lathe Operations	60
MW1880	Lathe Drilling, Boring, Reaming and Tapping	30
MW1900	Taper Turning	30
MW1910	Basic Threading	45
MW1920	Horizontal/Vertical Milling Machines	60
MW1950	Reciprocating Machines	30
MW1960	Carbide Tooling	15
MW1970	Specialty Machinable Materials	6
MW2060	NC/CNC of Machine Tools	15
MW2070	CNC Programming	45
MW2080	Mechanical Fasteners	15
MW2120	Oxy-Fuel Cutting and Welding	45
MA1060	Basic Math	60
CM2150	Workplace Communications	45
MR1220	Customer Service	30
SP2330	Quality Assurance/Quality Control	30
MC1050	Introduction to Computers	30
SD1700	Workplace Skills	30
SD1710	Job Search Techniques	15
SD1720	Entrepreneurial Awareness	15
Block 2 Advanced Level		
MW1810	Mechanical Drawings II (Intermediate)	30
MW1890	Planning and Measuring/Precision Layout	45
MW1930	Horizontal Milling Machine Operation	45
MW1940	Advanced Lathe Operation	105
MW1990	Testing and Inspecting	15
Block 3 Advanced Level		
MW1980	Spur Gears	45
MW2000	Vertical Milling Machine Operation	85
MW2010	Boring Mills	5
MW2020	Abrasives	15
MW2030	Cylindrical Grinders	30
MW2040	Universal Cutter and Tool Grinder	30
MW2100	Surface Grinders	30
Block 4 Advanced Level		
MW2050	Electrical Discharge Machines	5
MW2090	Bevel, Helical and Worm Gears	95
MW2110	Electrical ARC Welding	45
MW2130	Electro-Chemical Machining and Electrolytic Grinding	5
MW2140	Advance CNC Operation (NL Only)	90

