

PRE-APPRENTICESHIP - GENERAL MACHINIST, TOOL AND DIE MAKER, AND MOULD MAKER

Program: PAGM

Credential: Recognition of Achievement

Delivery: Full-time

Work Integrated Learning: 1 Work Placement

Length: 2 Semesters

Duration: 1 Year

Effective: Summer 2026

Location: Barrie

Description

This is a 24-week fully-funded pre-apprenticeship program, providing learners with the technical knowledge and practical experience required to pursue apprenticeships, as General Machinists, Tool and Die Makers, or Mould Makers. It combines 12-weeks of in-class training and 12-weeks of paid work placement.

Learners complete Level 1 of the in-school curriculum for the Precision Machining and Tooling apprenticeship. They participate in theoretical and hands on training involving interpreting blueprints and engineering drawings, using manual and CNC equipment to machine components, and validating the quality of their work using quality control methods. They also acquire the required safety training, applied math, and job search skills to be successful in pursuing their careers.

Career Opportunities

Career path options include CNC Programmers, Tool and Die Makers, Mould Makers, Millwrights and General Machinists, as well as many other precision manufacturing opportunities.

Program Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. complete all work in compliance with health and safety legislation and prescribed organizational practices and procedures to ensure safety of self and others;
2. use foundational mathematical principles to perform trade#specific calculations and tasks, including the application of relevant formulas and reference resources;
3. apply foundational sketching techniques used in trade#specific operations;
4. describe metal characteristics and properties and the forms and surface features of standard stock materials;
5. apply foundational dimensional measurement principles using direct and indirect linear measuring instruments;
6. perform basic technical measurements using appropriate tools;

7. employ foundational benchworking techniques to fit and assemble components using appropriate tools;

8. use job search strategies and communication skills to explore careers in the trades;

9. set up and safely operate common trade machinery to perform foundational cutting, drilling, turning, milling, and surface grinding operations.

Admission Requirements

Applicants must meet the following criteria:

- Ontario Secondary School Diploma (OSSD), or equivalent
- Be at least 16 years old
- Not currently registered as an apprentice in Ontario
- Be a Canadian citizen or permanent resident of Canada

Selection Process

Applicants must meet the following admission requirements:

- Submit an OSSD transcript and a current resume
- Attend an interview
- Demonstrate a commitment to working in the precision machining and tooling trades

Graduation Requirements

5 Program Courses

11 Apprenticeship Courses

1 Work Placement

Graduation Eligibility

Students must successfully complete all required courses as noted below. Further details, if applicable, are noted under "Additional Information" above.

Program Tracking

Program Courses		Hours
MATC 0007	Trades Math Preparation	24
TECH 0578	Job Search Skills	36
TECH 0290	Forklift Operator	9
TECH 0551	Working At Heights	8.5
TECH 0604	First Aid / CPR / AED Level C	16
Level 1 Precision Machining and Tooling Apprenticeship Courses		
GMTD 1003	Applied Trade Safety Practices	6
GMTD 1007	Metal Cutting Saw Technology	6
GMTD 1012	Applied Trade Calculations, Charts, and Tables	42
GMTD 1013	Engineering Drawings/CAD Data/Layout Processes	42
GMTD 1014	Metallurgy	12
GMTD 1015	Metrology (Measuring and Checking)	24
GMTD 1016	Benchworking Techniques	12
GMTD 1017	Drilling Technology	12
GMTD 1018	Turning Technology	36
GMTD 1019	Vertical Milling Technology	36
GMTD 1020	Surface Grinding Technology	12
Work Placement		

PAMT 0007	Pre-Apprenticeship Work Placement General Machinist	240
	Hours	573.5
	Total Hours	573.5