

CNC MILL & LATHE OPERATOR PROGRAM OUTLINE

PROGRAM DETAILS

The **CNC Mill Operator** and **CNC Lathe Operator Certificates** at the Institute of Machine Tool Technology (iMTT) are Vocational programs designed to equip students with the **practical skills** and **technical knowledge** required to operate CNC milling and turning centers using FANUC controls.

This short, hands-on training program focuses on CNC operations, **G-code/M-code programming**, **tooling**, **offsets**, **production monitoring** and **basic troubleshooting**. Students learn through in-person workshops with real CNC machines, ensuring they gain industry-ready **operational expertise**.

Whether preparing for an entry-level CNC role or upgrading current skills, this program provides the foundation employers demand in **precision machining and manufacturing industries**.

ADMISSION REQUIREMENTS

- Grade 12, Diploma or equivalent GED
- Minimum 18 years or older
- English Language Proficiency

Note: For the most accurate and up-to-date admission requirements, we recommend contacting our institute directly or visiting our website.

EMPLOYMENT PROFILE

CNC Mill & Lathe Operators play a vital role in modern manufacturing by combining **technical knowledge** with **precision-based skills**. Their responsibilities include **interpreting blueprints**, **setting up and operating CNC milling machines and lathes**, entering and editing G-code and M-code programs, and verifying accuracy using precision measuring instruments. They also maintain tooling and equipment while **troubleshooting** to ensure consistent production quality.

CAREER OPPORTUNITIES

Graduates are prepared for entry-level CNC operator roles across diverse industries such as aerospace, automotive, medical, and general manufacturing.

Potential job titles include:

- **CNC Mill Operator**
- **CNC Lathe Operator**
- **Machining Tool Operator**
- **Junior CNC Technician**
- **Production Machinist**

Annual Salary	\$41k - \$75k
Hourly Rate	\$20/hr - \$36/hr

**According to jobbank.gc.ca (NOC code 72100)*

PROGRAM DURATION

CNC Mill Operator	39 Hours
CNC Lathe Operator	39 Hours

PROGRAM FOCUS

The **CNC Mill & Lathe Operator Program** at the Institute of Machine Tool Technology (iMTT) is designed to prepare students with the **operational expertise** required to run modern CNC machines confidently and efficiently. This career-focused program emphasizes hands-on training with FANUC-controlled milling and turning centers, ensuring graduates are ready to contribute effectively to **precision manufacturing environments**.

Students gain foundational knowledge of machine operations while developing practical skills in **tooling**, **quality control**, and **troubleshooting**. By the end of the program, graduates will be able to perform machine operations independently, **monitor production processes**, and maintain the **accuracy and safety** standards expected in today's industry.

Here are the program's core focus areas:

- CNC workshop safety and WHMIS training
- Machine anatomy and setup for mills and lathes
- FANUC control panel operations
- G-code and M-code programming for milling and turning
- Tool setup, offsets, and compensation
- Hands-on machining projects for precision parts

PROGRAM SUMMARY

This table will display a summary of total Instructional hours and delivery format. The Ministry, Career College, and any subject or education assessors may refer to this section for a general understanding of the program's components.

Type of Learning	Total Instruction Hours	Mode of Delivery
CNC Mill Operator	39 Hours	In-Person Workshop
CNC Lathe Operator	39 Hours	In-Person Workshop

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List of subjects for each level and delivery format:

CNC Mill Operation with FANUC Controls	
Delivery Format: In-Person Workshop	
1	Introduction to CNC Milling
2	Mill Anatomy & Setup
3	FANUC Control Basics (Mill Focus)
4	G-code & M-code for Milling
5	Manual Programming for Milling
6	Tool Setup & Offset Management
7	Hands-On Milling Projects
8	Advanced Milling Features
9	Troubleshooting & Maintenance
CNC Lathe Operation with FANUC Controls	
Delivery Format: In-Person Workshop	
1	Introduction to CNC Turning
2	Lathe Anatomy & Setup
3	FANUC Control Basics (Lathe Focus)
4	G-code & M-code for Turning
5	Manual Programming for Turning
6	Tool Setup & Offset Management
7	Hands-On Turning Projects
8	Advanced Lathe Features
9	Troubleshooting & Maintenance

Please Note:

- a) Course order may differ from the sequence shown in this outline.
- b) Program fees include all textbooks, supplies, and required certifications.
- c) Some program components may be delivered online, through computer-assisted learning, or a blended format with instructor support.
- d) The College may update program content, schedules, materials, instructors, or technology as needed to support ongoing improvement. Changes take effect upon implementation.

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**The course content may be changed as per industry standards*