



INSTITUTE OF MACHINE TOOL TECHNOLOGY

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, **basic G and M codes for MDI functions**, **tooling setup and 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**, 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**

Hourly Rate	\$20/hr - \$27/hr
Annual Salary	\$41k - \$56k

*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 Operation Safety
- Machine Anatomy
- FANUC control panel operations
- Basic G and M codes use in MDI mode for milling and turning controllers
- Tool setup, offsets, and compensation adjustments
- Instructor guided program simulation for mill and lathe

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

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, Operation and start-up
3	FANUC Control Basics (Mill Focus)
4	Basic G and M-codes for operating the MDI function on Fanuc milling Controllers
5	Tool Setup & Offset Management
6	Maintenance and checking of lubricants and coolants
CNC Lathe Operation with FANUC Controls	
Delivery Format: In-Person Workshop	
1	Introduction to CNC Turning
2	Lathe Anatomy, Operation and start-up
3	Basic G and M-codes for operating the MDI function on Fanuc lathe Controllers
4	Tool Setup & Offset Management
5	Maintenance and checking of lubricants and coolants

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

Please Note:

- a)** Course order may differ from the sequence shown in this outline.
- b)** The program is delivered in class with instructor support.
- c)** 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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