

# CNC PROGRAMMER/OPERATOR/ SETUP CERTIFICATE PROGRAM OUTLINE

## PROGRAM DETAILS

The CNC Certificate Program at the **Institute of Machine Tool Technology (IMTT)** provides students with the **technical knowledge** needed to succeed in the field of **modern machining**. This **career-focused program** covers essential topics such as **precision measurement tools, data sheet analysis, and manufacturing optimization**.

Through **training** in a **safe and controlled environment**, students develop the skills required to **create and troubleshoot CNC programs**. Whether entering the workforce or upgrading your current skills, this program equips you with the tools **employers look for** in today's **competitive manufacturing industry**.

## 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

Professionals in CNC Machining **play an essential role in the manufacturing process across a wide range of industries**. Their **responsibilities, shaped by their training and experience, combine technical, operational, and precision-based tasks aimed at producing high-quality components**. **Key duties involve** interpreting job orders and blueprints **to plan machining operations**, setting up and operating tools **for tasks such as milling, drilling, and turning, and ensuring accurate results using** precision measuring instruments **like micrometres and callipers**. They **perform** routine equipment maintenance **and may enter** CNC programming codes **to define the speed, feed, and cutting paths required for efficient machine operation**.

## CAREER OPPORTUNITIES

Graduates are qualified for a range of entry-level to mid-level positions in precision manufacturing and CNC machining, such as:

- **CNC Mill and Lathe Operator**
- **CNC Setup Technician (Mill & Lathe)**
- **Automotive Machinist**
- **Aerospace / Aviation Machinist**
- **Machining Tool Operator**
- **CNC Programmer**

Annual Salary	\$41,000 - \$75,000
Hourly Rate	\$20/hr - \$36/hr

*\*Source: Job Bank Canada (NOC 72100)*

## PROGRAM DURATION

Total Program Hours	690 Hours
Total Program Length	23 Weeks

## PROGRAM FOCUS

The **CNC Certificate Program** at the **Institute of Machine Tool Technology (IMTT)** is designed to equip students with the comprehensive skills and practical knowledge required to succeed in today's competitive manufacturing environment.

Here are the program's core focus areas:

- Safety Training (WHMIS)
- Blueprint Reading
- Precision Turning
- Precision Milling
- Mastercam Design & Toolpath
- SolidWorks

Gain valuable experience and industry-ready skills with our CNC Programmer/Operator/Setup Certificate Program at IMTT. This program prepares you for success in the manufacturing sector, equipping you with the knowledge and expertise to program, set up, and operate CNC Mills and Lathes across a wide range of industries.

## PROGRAM SUMMARY

This table will display a summary of total Instructional hours and percentage weight for every type of learning entered in the List of Subjects. The Ministry, Career College and any subject or education assessors may refer to this section for a general understanding of the components of the program.

Type of Learning	Total Instruction Hours	% Weight
Theory	420	61
Computer Lab	270	39
<b>Total Program Hours</b>	<b>690</b>	<b>100</b>

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## List of subjects with the time allocation for each

#	Subject	Instruction Hours
<b>Delivery Format – Hybrid</b>		
1	WHMIS, CNC workshop safety	30.00
2	Blueprint Reading, GD&T, SPC, and CNC related math	60.00
3	Cutting, Tool Wear and Technical Data	30.00
4	Coordinate Systems	30.00
5	Cutting Tool Functions and Program Configuration	30.00
6	Precision Turning	120.00
7	Precision Milling	120.00
8	SolidWorks	90.00
9	Mastercam Design and Tool Path (mill)	180.00
	<b>Total Hours</b>	<b>690.00</b>

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*\*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) 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.