



Manufacturing Engineering Technician

School of Advanced Manufacturing, Science and Transportation

Program Code - MEN1

This program has been permanently suspended.

Document of Recognition

Ontario College Diploma

Program Type/Credential

Diploma

If a career in the manufacturing sector excites you and you're looking for an opportunity to gain hands-on experience while studying, the Manufacturing Engineering Technician (Co-op) program is for you. Your technical skills will be put to the test, learning and enhancing your skill-set for the modern manufacturing sector.

Students begin the CNC machine operator course by examining the finer points of numerically controlled machine programming, tool design, production planning, statistical process control, value engineering, advanced machining and maintenance engineering throughout the manufacturing industry. You'll be trained on cutting-edge numerically controlled CNC and CAD/CAM equipment, giving you an advantage in the workforce once you graduate. In the pursuit of your manufacturing technician certification, you'll also be trained to evolve your skills alongside the always-changing manufacturing sector – an opportunity for lifelong learning.

The program consists of four academic levels and eight months of co-op working in industry. The program prepares graduates for employment in areas such as numerically controlled machines programming, tool design, production planning, statistical process control, value engineering, advanced machining and maintenance engineering throughout the manufacturing industry. Modern numerically controlled CNC and CAD/CAM equipment is utilized in this program.

Learning Outcomes

The graduate has reliably demonstrated the ability to:

1. analyze and solve routine technical problems* related to manufacturing environments through the application of engineering principles.*
2. conduct routine analysis* of components, processes, and systems through the application of engineering principles* and practices.*



3. interpret and prepare graphics* and other technical documents* to appropriate engineering standards.
4. use computer hardware and software to support the engineering environment.
5. apply knowledge of manufacturing materials, operations, and processes to support the production of components.
6. apply knowledge of machinery, tools and other equipment to manufacture and assemble components.
7. conduct quality control and quality assurance procedures as required.
8. recognize the environmental, economic, legal, safety, and ethical implications of manufacturing projects.
9. use and maintain documentation, inventory, and records systems.
10. contribute to the implementation of a manufacturing project.
11. develop strategies and plans to improve job performance and work relationships.

Career Opportunities

The Manufacturing Engineering Technician program offers a cooperative education component, which provides students the opportunity to gain invaluable first-hand workplace experience in their chosen field. Here are some co-op jobs that have kick-started the careers of Manufacturing Engineering Technician students before even graduating!

Team Member

Contribute to continuous improvement and cost-reduction activities; load, unload and monitor production equipment.

Project Coordinator

Provide coordination and support to various aspects of operations to ensure the efficient and profitable execution of the installation of underground utility infrastructure.

Engineering Technologist

Build prototype parts, loading parts into fixtures, running robot weld jobs, manage inventory, handle raw and finished goods and packaging.



For more information regarding co-op, please check out our co-op site or contact the Co-op Office at coop@fanshawec.ca to connect with a consultant.

Career Information

Graduates of Fanshawe's Manufacturing Engineering Technician program will have the fundamental skills and knowledge to work as a junior analyst in numerical control programming, tool design, basic production tooling and process planning, manage statistical process control methods, undertake cost reduction studies, provide value analysis assistance, work on production equipment maintenance methods and many other careers in the manufacturing industry.

Did you know Fanshawe consistently ranks high in graduation employment rates among large colleges in Ontario?

Here are some examples of career opportunities for graduates of Fanshawe's Manufacturing Engineering Technician (Co-op) program:

Manufacturing Technician

Design, develop, install, manage, and maintain equipment to limit production downtime.

Junior Programmer Analyst

Apply your knowledge on programming to design technology solutions to meet the evolving needs of the organization.

Process Technician

Run, maintain and monitor equipment and record changes occurring in the manufacturing process.

Admission Requirements

Ontario Secondary School Diploma (OSSD), or equivalent, or a mature applicant with the following course:

- Grade 11 Math (U or M) or Grade 12 Math (C or U) - MCT4C is preferred

Students who do not meet the admission requirements are recommended for academic upgrading. A conditional offer may be possible with proof of enrolment. Alternatively, applicants



may choose to do the one-year Trade Fundamentals preparatory program that provides all the admission requirements for this program.

Note:

This program requires strong math skills. Grade 12 Foundations for College Math may not provide adequate academic preparation for this program. Math tutoring and extra help is offered at the college.

Approximate Costs

Fee details are available at www.fanshawec.ca/fees

Contact

School - Phone number

Campus Codes and Intakes

- Program Code
- Campus Code
- Intakes
- Number of weeks
- Academic Calendars available at www.fanshawec.ca/academicdates

Applicant Selection Criteria

Where the number of eligible applicants exceeds the available spaces in the program, the Applicant Selection Criteria will be:

Preference for Permanent Residents of Ontario

Receipt of Application by February 1st (After this date, Fanshawe College will consider applicants on a first-come, first-served basis until the program is full)

Achievement in the Admission Requirements

Note:

Admission to the Fanshawe College Pre-Technology program does not guarantee admission in a subsequent year to the Manufacturing Engineering Technician (Co-op) program. Successful completion of the Fanshawe College Pre-Technology program, however, does enable the student to be given additional consideration when applying to the Manufacturing Engineering Technician (Co-op) program. The Pre-Technology program is the preferred designated preparatory program for admission to the Manufacturing Engineering Technician (Co-op) program.

English Language Requirements

TOEFL iBT Overall score of 4.5 with no score less than 4 in any band

IELTS Academic Overall score of 6.0 with no score less than 5.5 in any of the four bands



CAEL Overall score of 60 with no score less than 50 in any of the four bands. score of 80 in listening

PTE Academic Minimum score of 53 with no score less than 45 in any of the four bands

Cambridge English Overall score of 169 with no language skill less than 162

ESL4/GAP5 Minimum grade of 80% in Level 8, 75% in Level 9, or 70% in Level 10

Duolingo Overall score of 105, with no score lower than 95

LANGUAGECERT Overall score of 65 with no score less than 60 in any of the four skills

Program Pathways

Program Curriculum

Level 1

Take all of the following Mandatory courses:

WRIT-1039	Reason & Writing 1-Technology	3
LAWS-1038	Law, Ethics & Occupational H&S	3
ENGR-1024	Engineering Graphics	3.5
MATH-1219	Math Fundamentals	4
MACH-1154	Machining 1	2
WELD-1054	Welding	2
COMP-1555	Computer Applications Fundamentals	1.5

Level 2

Take all of the following Mandatory Courses:

PSYC-1027	Human Relations	3
MACH-3056	Machining 2/Intro to CNC Processes	3.5
PHYS-1043	Engineering Fundamentals	4
MATS-1026	Materials Engineering	2.5
ENGR-1025	Engineering Design 1	2.5
METH-1044	Quality Assurance 1	4
COOP-1020	Co-operative Education Employment Prep	1

Level 3

Take all of the following Mandatory Courses:

MGMT-1007	Project Management	3
MECH-1118	Robotics & Automation Fundamentals	2
ENGR-3015	Engineering Design 2	3.5
METH-3023	Quality Assurance 2	3



ELEC-1127 Electrical Devices & Instrumentation 3
MACH-3057 CNC Applications & Intro to CAD/CAM 3.5

Level 4

Gen Ed - Take a 3 credit General Education elective course

Take all of the following Mandatory Courses:

CADD-3032 CAD/CAM Apps & Automated Processes 3.5
ENGR-5012 Engineering Design 3 2.5
MECH-3038 Fluid Power Machine Control 3
MGMT-3101 Capstone Project Technician 2
COMM-3069 Technical Communication for Technicians 3
WELD-5007 Manufacturing Processes & Welding-Adv 2

Gen Ed - Electives

Take 3 General Education Credits - Normally taken in Level 4

Program Residency

Students must complete a minimum of 20 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program

Level 2

Take all of the following Mandatory courses:

COURSE CODE NAME OF COURSE - Credits ##