

## Mechanical Technician

### An Accelerated Ontario College Diploma Program

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### The Program

The Mechanical Technician – CNC/CAM program provides the student with the necessary knowledge and skills to work in the modern machining environment. In this program, the emphasis will be on using software and equipment to develop programs using computer aided machining software. Graduates will have experience in process planning, machine set-up, programming, troubleshooting, implementing quality control procedures and computer numerical controlled machining. Technicians must also possess good communication skills and work well in a team environment.

### The Content

Students entering this program will be registered in Year 1 in the Mechanical Techniques – CNC Ontario College Certificate program. Upon successful completion, students wishing to obtain advanced programming skills and complete an Ontario College Diploma will be registered in year 2 of the Mechanical Technician – CNC/CAM program. In the first year of the program, the student will receive training in conventional machining through courses such as machine trade theory, machine shop, mechanical blueprint reading and applied mathematics. Since computers play an important role in the profession, the courses offered in the program will include an overview of computer applications, numerical control technology and computer aided design in both 2D and 3D modes.

The program has been designed, in consultation with our industry partners, to develop and reinforce important employability skills.

### The Outcomes

Progressive, technologically modern companies are looking for well-trained operators and programmers. The computer numerical programmer is a vital member of their staff. Graduates can expect to work in production and jobbing shops, aircraft and aerospace, automotive, cabinetmaking, agricultural machinery production, instrumentation and service industries.

### Sample Co-op Progression Chart:

Fall Intake			
	Fall	Winter	Summer
Year 1	Acad. 1 through Acad. 4		
Year 2	Work 1	Work 2	

Winter Intake			
	Winter	Summer	Fall
Year 1	Acad. 1 through Acad. 4		
Year 2	Work 1	Work 2	

## Course Outline

*For the official Degree Audit, please see Registrar's Office*

### Level 1 – Take all of the following Mandatory Courses

Gen Ed. – take one 3-credit Gen. Ed. elective course

DRAF-1056	Blueprint Reading
CADD-1058	Computer Aided Design I
COMP-1336	Computer Literacy
MACH-1130	Conventional Machine Shop I
COMM-1004	Language & Comm Skills I
MECH-1075	Conventional Machining Theory
MATH-1158	Mathematics I

### Level 2 – Take all of the following Mandatory Courses

CADD-3023	Computer Aided Design II
MACH-1131	Computer Numerical Control I
MECH-1077	Geo Dimensioning & Tolerancing I
MACH-1129	Jig & Machine Theory
MATH-3051	Mathematics II
COMM-1075	Workplace Skills I

### Level 3 – Take all of the following Mandatory Courses

Gen Ed – Take a 3 credit Gen. Ed. elective course

CADD-3024	Computer Aided Design III
MACH-3048	Computer Numerical Control II
MECH-1076	Geo Dimensioning & Tolerancing II
MECH-3031	Jig & Fixtures & Machining II
MATH-3053	Mathematics III
COMM-3019	Workplace Skills II
COOP-1020	Co-op Ed Employment Prep

### Level 4 – Take all of the following Mandatory Courses

Gen Ed – Take a 3 credit Gen. Ed. elective course

CADD-1059	Computer Aided Machining
MACH-3049	Computer Numerical Control III
MATH-3056	Mathematics IV
MECH-1004	SPC & Metrology

## Program Requirements:

- Take three 3-credit General Education Elective Courses
- Program Residency

Students must complete a minimum of 18 credits in this program at Fanshawe College to meet the Program Residency requirement and graduate from this program.

## Why Should You Hire a Co-operative Education Student?

Many employers feel today's graduates have no concept of the "real" world of work; we are providing this experience in Co-operative Education. Any job that gives the student related background in your business would be suitable.

Eligible employers can claim a tax credit for each qualifying work placement for up to \$3000.

Co-operative Education students are ultimately looking ahead to careers in businesses such as yours. For this reason they are not expecting to simply put in time on the job, but are eager to get involved and make a worthwhile contribution. Participation in co-operative education also gives the employer the opportunity to try out a student's capabilities without obligation or commitment to permanent employment.

This work oriented educational system integrates classroom study and paid, on-the-job work experience, by alternating periods in College with periods of employment by co-operating organizations. The work terms are spaced out through the academic program and students will be at various academic levels in successive work terms. The working experience will ideally increase in difficulty and responsibility as the student progresses academically. However, the College realizes it is often difficult in practice to do this.

It is essential that the work experience be a normal one; that the student be treated like a regular company employee so that a realistic picture of the working environment in that field may be obtained. Perhaps most important is what students gain from the working experience: an attitude for success and the ability to get along with co-workers at all levels.

