

Robotics Programmer

2232 **Mechanical Engineering Technologists and Technicians**

robotics technologist
robotics servicing technician
robotics systems installer and repairer
robotics technician

2232 Mechanical Engineering Technologists and Technicians

Mechanical engineering technologists and technicians may work independently or provide technical support and services in mechanical engineering fields such as the design, development, maintenance and testing of machines, components, tools, heating and ventilating systems, power generation and power conversion plants, and manufacturing plants and equipment.

Common Job Titles

Aeronautical Technologist
Heating Designer
Mechanical Engineering Technician
Mechanical Engineering Technologist
Mould Designer
Thermal Station Technician

Typical Employers

architectural, engineering and other scientific companies
motor vehicle manufacturers
electric power companies
machinery and equipment manufacturers
motor vehicle parts manufacturers
aircraft and parts manufacturers
plumbing, heating and air conditioning construction firms
hardware, tool and cutlery manufacturers

Selected Main Duties

Mechanical engineering technologists perform some or all of the following duties focused on measurement and analysis, design supervision of field installations and quality control:

- Prepare engineering designs, drawings and specifications for machines and components, power transmission systems, process piping, heating, ventilating and air-conditioning systems;
- Prepare cost and material estimates, project schedules and reports;
- Conduct tests and analyses of machines, components and materials to determine their performance, strength, response to stress and other characteristics;
- Design moulds, tools, dies, jigs and fixtures for use in manufacturing process;
- Inspect mechanical installations and construction;
- Prepare contract and tender documents;
- Supervise, monitor and inspect mechanical installations and construction projects;

- Prepare standards and schedules and supervise mechanical maintenance programs or operations of mechanical plants.

Mechanical engineering technicians perform similar work that is less complex but highly specialized:

- Assist in preparing engineering design, drawings and specifications;
- Carry out a limited range of mechanical tests and analyses of machines, components and materials;
- Assist in the design of moulds, tools, dies, jigs and fixtures for use in manufacturing process;
- Assist in inspection of mechanical installations and construction projects;
- Participate in the installation, repair and maintenance of machinery and equipment.

Most engineering technicians and technologists work a standard workweek in a laboratory, office, electronics shop, industrial plant or construction site depending on the nature of the work. Potential work hazards include such things as electrical shocks or sharp machinery objects.

Education/Training

Completion of a three-year or equivalent program for mechanical engineering technologists or a two-year or an equivalent program for mechanical engineering technicians is usually required. Several different educational backgrounds can provide entrance to an occupation within this classification. Certification in mechanical engineering technology or in a related field is available through provincial associations of engineering and applied science. In Ontario, the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) certifies mechanical engineering technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination.

Employment Prospect

Over the next five years: Average

Employment for this occupation is expected to grow about as fast as the average for all occupations through the year 2009. More than half of these technologists and technicians work in the manufacturing sector, which continues to undergo modernization. However, the growing use of advanced technologies, such as computer-aided design and drafting and computer simulation, will continue to moderate employment growth.

People in these occupations should plan for continuous retraining and professional development to keep up with the rapidly changing technology in their field.

Characteristics of Occupation

Estimated Employment in 2004	3900
-------------------------------------	------

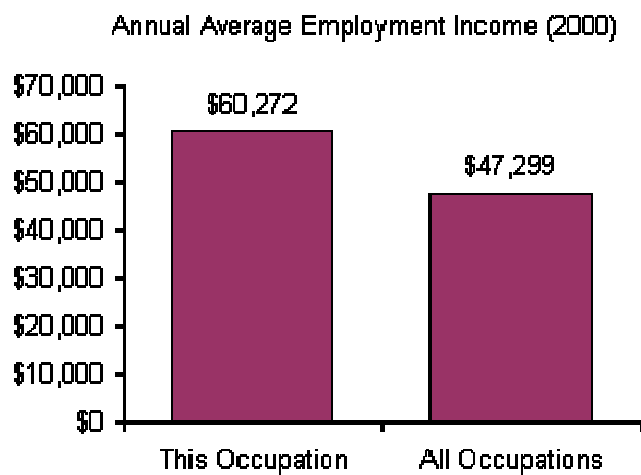
General Characteristics	(%)
Male	91
Female	8
Full-Time	96
Part-Time	3
Self Employed	6
Employees	93
Usual place of work	87
Worked at home	3
No fixed workplace address	7
Worked outside Canada	1

Main Industries of Employment	(%)
Machinery manufacturing	18
Professional scientific and technical services	14
Transportation equipment manufacturing	13
Trade contracting	7
Fabricated metal product manufacturing	5
Utilities	3
Computer and electronic product manufacturing	3
Plastics and rubber products manufacturing	3
Primary metal manufacturing	3
Machinery equipment and supplies wholesaler-distributors	2
Miscellaneous manufacturing	2
All Other Industries	20

Employment by Region	(%) This Occupation	(%) All Occupations
-----------------------------	---------------------	---------------------

Ottawa	7	10
Kingston - Pembroke	3	3
Muskoka - Kawarthas	2	2
Toronto	33	44
Kitchener - Waterloo - Barrie	10	9
Hamilton - Niagara Peninsula	15	10
London	6	5
Windsor - Sarnia	14	5
Stratford - Bruce Peninsula	2	2
Northeast	2	4
Northwest	1	1

Income



Additional Information Sources

Additional information about this occupation can be obtain from the following web sites:

- [Council for Automotive Human Resources](#)
- [Ontario Association of Certified Engineering Technicians and Technologists](#)
- [Canadian Council of Technicians and Technologists](#)
- [Canadian Technology Human Resources Board](#)
- [ASME International](#)