

# Skilled Trades & Technologies 2019/2020



"Without my experience  
with Skills Manitoba I  
wouldn't have known  
what I'm capable of."

**Christiana Louise  
Masalunga**

**Pastry Chef**

"I've worked as a carpenter  
for 9 years and I'm currently  
the crew leader  
and the onsite  
supervisor."

**Jordon Enns**

**Carpenter**



**Great jobs...**

**Great future!**

# Manitoba Trades & Technologies

Being my own boss had always been a dream of mine. The confidence and belief in myself that Skills Manitoba instilled, helped turn that dream into reality. My advice to anyone would be to do your research.

There are many different career paths that you can take within the skilled trades and technology sector. Find your passion.

## Ingrid Wieler

**Skills Manitoba  
Board Director and  
co-founder/president  
of the Skills Manitoba  
Alumni Association,  
serving as the Manitoba  
Lead on the National  
Alumni Committee.**



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# Partnerships & Sponsors

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United Steel Workers Local 6166

# North End Trades Discovery Initiatives



Students in elementary and high school in Winnipeg's North End neighbourhood will learn more about careers in the skilled trades through an innovative new program. The North End Trades Discovery Initiative is a partnership between Skills Canada Manitoba, the Community Education Development Association (CEDA), the Winnipeg School Division and the Manitoba government. The initiative will co-ordinate a range of programs and activities for students to learn about the skilled trades and gain first-hand experience.

The North End Trades Discovery Initiative has several levels of learning opportunities including:

- trades awareness experiences for Grade 5 and 6 students at David Livingstone, Niji Mahkwa and William Whyte schools with in-school projects and summer camp programs
- opportunities for some Grade 7 and 8 students at Niji Mahkwa involved in the CEDA Pathways to Education Program to go on industry tours and experience an after-school trade activity
- trades awareness experiences for Grades 9 to 12 students involved in the CEDA Pathways to Education Program



## Proudly Sponsored By:



BUILDING TO A  
HIGHER STANDARD

## Contributing Partners



# WELCOME, Executive Director

When you think of the skilled trades, what comes to mind? Do you think boring? Dirty? Low paying? Think again! Try challenging, technologically advanced and financially rewarding. The **Manitoba Trades Booklet** is here to dispel the myths and replace them with an encouraging set of facts.

Consider this booklet as a companion on the road to making an informed career decision, or in discussion with your child or student(s). If you have any questions, or would like more information, please contact **Skills Canada Manitoba** by phone at (204)927-0250 or visit the website, [www.skillsmanitoba.ca](http://www.skillsmanitoba.ca).

Manitoba's continuing competitiveness in the global marketplace depends on attracting and retaining qualified workers in the skilled trades. With the projected number of people leaving the skilled workforce exceeding the expected number of new entrants, the challenge has escalated to a crisis.

**Skills Canada Manitoba** is committed to letting young people know the facts about the exciting opportunities that exist in the skilled trades and technologies field. Please use this booklet as a source of information about viable first choice career options. In some cases, you may not have realized the opportunities that existed.

**Skills Canada Manitoba** is reaching new heights. We build awareness with youth through our programs such as the **In-School Program<sup>®</sup>**, **Northern In-School Program**, **the Cardboard Boat Race**, **Extreme Sledding**, **a Model Wind Turbine Competition**, **a Skilled Trades and Technology Showcase**, **Young Women's Conferences**, **Youth in Manufacturing**, **Skills Manitoba Competition**, **Northern Programs** and equip them with the tools to succeed. We combine our efforts with partnerships in education, industry and government and the outcomes are remarkable; youth advocating the benefits of apprenticeships; educators experiencing growth in apprenticeship programs; employers seeking skilled apprentices and Government committing to vibrancy in Manitoba's future.

I hope that you find this book informative and helpful as you consider career opportunities in the skilled trades and technologies. We hope to share these opportunities with as many young people throughout Manitoba as possible. Please feel free to provide your feedback to [mariapa@skillscanada.com](mailto:mariapa@skillscanada.com).

With warmest regards,

**Maria Pacella**

Executive Director





# electrical *trades*



## IBEW Code of Excellence Training Center



If you like to work with both your mind and your hands and enjoy calculations and precision work, then we can help you gain the skills and experience you need for a rewarding career as an electrician.

**Construction Electrician Pre-employment** introduces you to a variety of career opportunities in the electrical trades.

Whether your interest is electrical installation or maintenance, residential or commercial wiring, machine repair or some other aspect of the electrical industry, our cooperative vocational education program leads to Level One electrician accreditation which is a great start towards employment as an apprentice.

We provide a combination of technical training and real world experience so that potential employers need not worry about your level of experience - you will come to them prepared to work. Employment opportunities are many, varied and well-paying. There is no limit to how far you can go!

For more information, to register or to arrange an interview, please contact:

### CHRIS TARAN

Director of Apprenticeship & Training/Vice President  
204-957-0036  
[ctaran@ibewtraining.com](mailto:ctaran@ibewtraining.com)



Tutoring classes  
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550 Notre Dame Avenue  
Winnipeg, MB R3B 1S4



# BUILDING YOUR FUTURE TODAY



*For more information  
please contact:*

**Steve Ducharme** G.S.C.

PITC Training Director

Tel: (204) 956-7365

E-mail: [steve@pipingindustrytechnicalcollege.ca](mailto:steve@pipingindustrytechnicalcollege.ca)



**PITC**  
PIPING INDUSTRY TECHNICAL COLLEGE

**Skills Canada Manitoba** hosts many events throughout the year. Following are brief outlines of the **Winnipeg and surrounding area programs.**

## **PROGRAMS WE OFFER**



### **In-School Program**

An in-school presentation program for grades 5 to 12 that provides young people from across the province with information about the vast career opportunities in the skilled trades and technologies.



### **Northern Manitoba Programs**

A series of skills trades and technology programs for Northern Manitoba; the Northern In-School Program, Young Women's Conferences, Skills Trades and Technology Showcases (Boys), the Extreme Sledding Competition and Trade and Technology Olympics



### **Skilled Trade and Technology Showcase**

A one day program for grade 8 students, spent at a host school, where they have the opportunity to try hands on activities and to learn about different careers in trade and technology. The showcase is designed to educate students on a variety of occupations and opportunities that exist in Manitoba in trades and technology. The day is a combination of hands on learning, demonstrations and presentations from individuals working in different Manitoba industries.



### **Cardboard Boat Race**

This program demonstrates the importance of studying science, math and technology in a fun, practical and interactive manner. It's amazing to witness a team of grades 9 to 12 students build a boat with cardboard, glue, duct tape and string and watch as they race their boat across a pool of water to the finish line.



### **Young Women's Conference**

A one day conference for young women to learn about trade and technology careers available in today's employment market. The conference highlights different vocations in trades and technology, introduces young women to women mentors working in the trades or technology field and provides employment and career planning information.



## Model Wind Turbine Competition

Grades 9 & 10 students across Manitoba have an opportunity to use their knowledge, skills, leadership, teamwork and ingenuity to design and build a working model wind turbine in this one day competition.



## Extreme Sledding

Grades 7 students, in teams of four will design and construct a sled and then participate in a race through a motor-cross style course.



## Youth in Manufacturing

Grades 9 & 10 students will be exposed to the manufacturing processes from design to the building and assembling of a product and ultimately the marketing and sales process.



## North End Trades Discovery Initiative

A partnership between Skills Canada Manitoba, the Community Education Development Association (CEDA), the Winnipeg School Division and the Manitoba government. The initiative will co-ordinate a range of programs and activities for students to learn about the skilled trades and gain first-hand experience.



## Young Women in Technology Conference

A one day conference geared for young women in Grades 6-8 to learn about technology careers available in today's employment market. The conference will highlight different areas of technology, including Civil Engineering, Computers, Electronics and Robotics. The conference aims to give youth the message that math, science and technology skills are increasingly more valuable, fun and financially rewarding.



## Skills Manitoba Competition

Our cornerstone event, is a one day event that provides young Manitobans the opportunity to showcase their talents in an Olympic style, province wide contest. Students compete in over 40 different hands on contests at the secondary and post secondary level that are designed (and judged) by industry professionals and educators. Winners of the provincial competition may form team Manitoba and compete against their peers at the Canadian Skills Competition, leading to the possibility of competing in the World Skills Competition.

# ESSENTIAL SKILLS



## TECHNICAL SKILLS

Technical skills, sometimes also referred to as “hard skills”, relate to expertise someone possesses that assist in the completion of a job or task. In general, these are abilities acquired through practice and learning. Most skilled trades require the hands-on ability to apply math, science and/or trade-specific expertise to a particular problem or challenge. Tradespeople not only need to be able to diagnose and understand the scope of a problem, but also apply practical, mechanical or technical skills to its solution, using the tools of trade to carry out tangible work.



## NUMERACY

Numeracy refers to the workers’ use of numbers and their capability to think in quantitative terms. We use this skill when doing numerical estimating, money math, scheduling or budgeting math and analyzing measurements or data.



## CONTINUOUS LEARNING

We use this skill when we learn as part of regular work or from co-workers and when we access training in the workplace or off-site. All workers must continue learning to keep or to grow with their jobs.



## THINKING

Thinking is the ability to engage in the process of evaluating ideas or information to reach a rational decision. Thinking differentiates between six different types of interconnected cognitive functions: problem solving, decision making, critical thinking, job task planning and organizing, significant use of memory and finding information.



## ORAL COMMUNICATION

Oral communication pertains primarily to the use of speech to give and exchange thoughts and information by workers in an occupational group. We use this skill to greet people, take messages, reassure, persuade, seek information and resolve conflicts.



## WORKING WITH OTHERS

Examines the extent to which employees work with others to carry out their tasks. We use this skill when we work as a member of a team or jointly with a partner, and when we engage in supervisory or leadership activities.

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## READING TEXT

Reading refers to the ability to understand reading material in the form of sentences or paragraphs. We use this skill to scan for information, skim overall meaning, evaluate what we read and integrate information from multiple sources: forms and labels if they contain at least one paragraph; print and non-print media (for example, text on computer screens and microfiche); and paragraph-length text in charts, tables and graphs.

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## DOCUMENT USE

Document Use involves a variety of information displays in which words, numbers, icons, and other visual characteristics (eg. line, colour, shape) are given meaning by their spatial arrangement. We use this skill when we read and interpret graphs, charts, lists, tables, blueprints, schematics, drawings, signs, and labels.

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## WRITING

The ability to write text and documents; it also includes non paper-based writing such as typing on a computer. We use this skill when we organize, record, document, provide information to persuade, request information from others and justify a request such as writing texts and writing in documents (for example, filling in forms) and/or non-paper-based writing (for example, typing on a computer).

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## DIGITAL

Digital skills are those needed to understand and process information from digital sources, use digital systems, technical tools, and applications. Digital sources and/or devices include cash registers, word processing software, and computers to send emails and create and modify spreadsheets.

# INDUSTRIAL TRADES

"I first started thinking about skilled trades as a career in my last year of high school. I never thought it would lead me down the path it has. I've had my entire education paid for through bursaries from generous companies, I've traveled the world to compete against the best in my trade, and I've landed a great job!"

## **Silas Meeches**

**NC Programmer,  
Magellan Aerospace**



**Great jobs...**  
**Great future!**



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
CNC Machinist		•	7231	
Electric Motor System Technician	•	•	7333	
Industrial Electrician	•	•	7242	*
Instrumentation and Control Technician	•	•	2243	
Machinist	•	•	7231	
Power Electrician			7243	
Rig Technician		•	8232	
Tool & Die Maker	•	•	7232	
Water and Wastewater Technician	•		9243	
Welder	•	•	7237	

**HSAP** – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10.

**Red Seal** – The Red Seal program is Canada's standard of excellence for skilled trades. Obtaining a Red Seal endorsement on a Certificate of Qualification acknowledges a journeyperson's competence and quality workmanship and ensures recognition of his/her certification across Canada.

(Journeyman status is obtained when Provincial/Red Seal endorsed certification in that trade is achieved.)

**NOC** – National Occupational Classification code system

\* Compulsory Certification - To legally work in these trades, you must be an apprentice or hold a Certificate of Qualification issued by the Province of Manitoba.

**NOTE: Wages are based on a variety of government and industry sources and are meant as a GUIDELINE ONLY.**



# CNC Machinist

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HSAP	
Red Seal	•
NOC Code	7231
Cert. Req'd.	

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## What do they do?

A CNC machinist is someone who programs, sets up and operates metal-cutting computer numerical control machines. Machinists are employed in machine shops, rail companies and by metal product, and farm machinery manufacturing and the aerospace industries.

You can also train to be a CNC machinist after you complete either your machinist or tool and die certification.

## Potential Employers

- Canadian Manufacturers and Exporters (Manitoba)
- Canadian Tooling and Machining Association
- Machinist and Aerospace Workers International

## What kind of education, training, requirements and experience are needed?

- You need 2 levels of Machinist before they can go into tool and die, they can only get 1 level upon high school graduation.

## For more information

<http://www.manitoba.ca/tradecareers>

# Electric Motor System Technician

HSAP	•
Red Seal	•
NOC Code	7333
Cert. Req'd.	

## What do they do?

Service electric motors, transformers, switchgears, generators and other equipment used to power machinery.

## Potential Employers

- Electrical repair shops
- Manufacturing plants

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including recommended courses in pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

**Electrical Apparatus Service Association, Western Canada Chapter**

<http://www.easa.com>

# Industrial Electrician

HSAP	•
Red Seal	•
NOC Code	7242
Cert. Req'd.	•

## What do they do?

Install, maintain, test, troubleshoot and repair industrial electrical equipment.

## Potential Employers

- Electrical contractors
- Government
- Maintenance departments of buildings and other establishments

## What kind of education, training, requirements and experience are needed?

- Completion of Grade 12 is required including recommended courses in pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

### Canadian Electrical Contractors Association

41 Maple Street, Uxbridge ON L9P 1C8

<http://www.ceca.org> (416) 491-2414

### Construction Association of Rural Manitoba

950 10th Street, Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### Construction Labour Relations Association of Manitoba

701-161 Portage Avenue East, Winnipeg, MB R3B 0Y4

<http://www.clram.ca> (204) 775-0441

# Instrumentation and Control Technician

HSAP	•
Red Seal	•
NOC Code	2243
Cert. Req'd.	

## What do they do?

Repair, maintain, calibrate, adjust and install industrial measuring and controlling instruments.

## Potential Employers

- Water sewage treatment plants
- Mining companies
- Large manufacturing companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Hydro

360 Portage Ave., Winnipeg, MB R3C 0G8

<http://www.hydro.mb.ca> (204) 360-7282

### VALE

Box 5000, Thompson, MB R8N 1P3

<http://www.vale.com/canada/EN/Pages/default.aspx> (204) 778-2211

# Machinist

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<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7231</b>
<b>Cert. Req'd.</b>	

## What do they do?

Operate a variety of computer controlled equipment, machine tools and drills to make precisely sized metal products.

## Potential Employers

- Machine shops
- Railways
- Metal products and farm machinery manufacturers
- Aerospace industry

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including recommended courses in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.
- Once you obtain your Interprovincial Certification as a Machinist, you are eligible to also train for your Provincial Certification as a CNC Machinist.

## For more information

### **Unifor**

113 - 1376 Grant Avenue, 2nd Floor, Winnipeg, MB R3M 3Y4

<http://www.unifor.org> (204) 489-0355

### **Canadian Manufacturers and Exporters – Manitoba Chapter**

67B Scurfield Blvd., Winnipeg, MB R3Y 1G4

<http://www.cme-mec.ca> (204) 949-1454

### **Machinist and Aerospace Workers International**

<http://www.iamaw.ca> (204) 988-3111

# Power Electrician

HSAP	•
Red Seal	
NOC Code	7243
Cert. Req'd.	

## What do they do?

Install, maintain and repair power generators, converters and transformers.

## Potential Employers

- Electrical utility companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including recommended courses in applied or pre-calculus math and physics.
- A strong background in mechanical aptitude, mathematics and science and/or a college diploma in electrical or electronic technology is required to enter apprenticeship with Manitoba Hydro.
- Completion of a four-year apprenticeship program is required.
- Employment with Manitoba Hydro is required to be an apprentice.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

### Canadian Union of Public Employees (CUPE) – Local 500

702-275 Broadway Avenue, Winnipeg, MB R3C 4M6

<http://www.cupe500.mb.ca> (204) 942-1001

### International Brotherhood of Electrical Workers 2085

556 Notre Dame Avenue R3B 1S4

<http://www.ibew2085.com> (204) 982-2085

### Manitoba Hydro

360 Portage Ave., Winnipeg, MB R3C 0G8

<http://www.hydro.mb.ca> (204) 360-7282

# Rig Technician

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HSAP	
Red Seal	•
NOC Code	8232
Cert. Req'd.	

## What do they do?

Operates oil and gas drilling rigs.

## Potential Employers

- Drilling contractors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course(s) in Science.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

**The Canadian Association of Oilwell Drilling Contractors**

[www.caodc.ca](http://www.caodc.ca) (403) 264-4311



# Tool & Die Maker

HSAP	•
Red Seal	•
NOC Code	7232
Cert. Req'd.	

## What do they do?

Make prototypes or special tools, dies, jigs, fixtures and gauges.

## Potential Employers

- Aircraft, machinery and farm equipment manufacturers
- Machine shops
- Metal fabrication shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including recommended courses in applied or pre-calculus math and physics.
- Completion of a four-year apprenticeship program is required.
- Once you obtain your Interprovincial Certification as a Tool & Die Maker you are also eligible to train for your Provincial Certification as a CNC Machinist.

## For more information

### **Manitoba Aerospace Association Incorporated**

1000 Waverley Street, Winnipeg, MB, R3T 0P3

<http://www.mbaerospace.ca> (204) 272-2957

### **Canadian Tooling & Machining Assoc. (CTMA)**

Unit 3-140 McGovern Dr. Cambridge Ont. N3H 4R7

<http://www.ctma.com>

# Water and Wastewater Technician

HSAP	•
Red Seal	
NOC Code	9243
Cert. Req'd.	

## What do they do?

Operates and maintains public and private water treatment plants, water distribution systems, wastewater treatment plants and wastewater collection systems.

## Potential Employers

- Municipal water and wastewater facilities
- Environmental departments in mines
- Solid waste management facilities
- Government

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Science.
- Completion of a four-year apprenticeship program is required.
- Provincial certification is available in each of the four sub-component trades, which each require a one-year apprenticeship including; Water Distribution Operator, Water Treatment Operator, Wastewater Collection Operator, Wastewater Treatment Operator.

## For more information

### Manitoba Water and Wastewater Association

[www.mwwa.net](http://www.mwwa.net) (204) 239-6868

### Canadian Water and Wastewater Association

[www.cwwa.ca](http://www.cwwa.ca) (613) 747-0524

# Welder

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<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7237</b>
<b>Cert. Req'd.</b>	

## What do they do?

Use manual or semi-automatic welding equipment to shape metal or to join metal pieces together.

## Potential Employers

- Boiler and heavy machinery manufacturers
- Metal fabrication shops
- Aerospace industry
- Transportation companies
- Welding shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in science.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Aerospace Association Incorporated**

1000 Waverley Street, Winnipeg, MB, R3T 0P3

<http://www.mbaerospace.ca> (204) 272-2957

### **Canadian Welding Association / Association Canadienne de Soudage**

<http://www.cwa-acs.org/>

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

# TRANSPORTATION TRADES



“My focus in skilled trades, specifically autobody repair, started in grade 10 and I quickly realized how much I loved it. This led to 2 Provincial Golds, 2 National Golds, competition in Australia, and eventually, participation in the World Skills Competition in Abu Dhabi!

Being able to see the finished product and the customer’s reaction is my favorite part of this career. I get to take something damaged or old and make it look brand new again, like day one. That is the most rewarding feeling.”

## **Ashley Weber**

**Motor Vehicle Body Repairer,  
Urban Autobody**



**Great jobs...**

**Great future!**

Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Agricultural Equipment Technician	•	•	7312	
Aircraft Maintenance Journeyperson	•		7315	
Automotive Painter	•	•	7322	
Automotive Service Technician	•	•	7321	
Diesel Engine Mechanic			7312	
Gas Turbine Repair and Overhaul Technician				
Heavy Duty Equipment Technician	•	•	7312	
Marine & Outdoor Power Equipment Technician	•			
Motor Vehicle Body Repairer (Metal & Paint)	•	•	7322	
Railway Car Technician				
Recreation Vehicle Service Technician	•	•	7384	
Transport Trailer Technician	•	•	7321	
Truck and Transport Mechanic	•	•	7321	

**HSAP** – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10.

**Red Seal** – The Red Seal program is Canada's standard of excellence for skilled trades. Obtaining a Red Seal endorsement on a Certificate of Qualification acknowledges a journeyperson's competence and quality workmanship and ensures recognition of his/her certification across Canada.

(Journeyperson status is obtained when Provincial/Red Seal endorsed certification in that trade is achieved.)

**NOC** – National Occupational Classification code system

\* Compulsory Certification - To legally work in these trades, you must be an apprentice or hold a Certificate of Qualification issued by the Province of Manitoba.

**NOTE: Wages are based on a variety of government and industry sources and are meant as a GUIDELINE ONLY.**

# Agricultural Equipment Technician

HSAP	•
Red Seal	•
NOC Code	7312
Cert. Req'd.	

## What do they do?

Installs, maintains, repairs and overhauls engines, hydraulic and mechanical systems in agricultural equipment.

## Potential Employers

- Farm machinery industry
- Service shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Canada West Equipment Dealers Assoc.

2435 Pegasus Rd. N.E. Calgary, AB T2E 8C3

<https://www.westerneda.com> (403) 250-7581

### Manitoba Federation of Labour

303-275 Broadway Ave. Winnipeg, MB R3C 4M6

<http://www.mfl.ca> (204) 947-1400

# Aircraft Maintenance Journeyperson

HSAP	•
Red Seal	
NOC Code	7315
Cert. Req'd.	

## What do they do?

Service and maintain fixed-wing and rotary-wing aircraft. Federal licensing required to be Category M.

## Potential Employers

- Passenger and aircraft carriers
- Specialty repair shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including recommended courses in Applied or Pre-Calculus Math and Physics.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.
- Aircraft mechanics and inspectors who sign maintenance releases and certify airworthiness require an additional Aircraft Maintenance Engineer's (AME) license issued by Transport Canada.

## For more information

### **Manitoba Aerospace Association Incorporated**

1000 Waverley Street, Winnipeg, MB, R3T 0P3

<http://www.mbaerospace.ca> (204) 272-2957

### **Central A.M.E. Association**

PO Box 42055, Ferry Road, Winnipeg, MB R3J 3X7

<http://www.camea.ca>

### **Canadian Council for Aviation and Aerospace**

1785 Alta Vista Drive, Suite 105, Ottawa, ON K1G 3Y6

<http://www.avaerocouncil.ca> (613) 727-8272



# Automotive Painter

HSAP	•
Red Seal	•
NOC Code	7322
Cert. Req'd.	

## What do they do?

Repair and restore the exterior finish of motor vehicles.

## Potential Employers

- Autobody repair shops
- Auto dealerships
- Specialty automobile shops
- Public transit systems

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Automotive Trades Association (Man.) Inc.**

PO Box 28116, 1795 Henderson Hwy, Winnipeg, MB R2G 1P0

<http://www.atamb.ca> (204) 815-5277

### **Manitoba Motor Dealers Association**

112 - 1790 Wellington Avenue, Winnipeg, MB R3H 1B2

<http://www.mmda.mb.ca> (204) 985-4200

### **CARS on DEMAND**

<http://www.carsondemand.com> (855) 813-2101

# Automotive Service Technician

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7321</b>
<b>Cert. Req'd.</b>	

## What do they do?

Diagnose, repair and service mechanical, electrical and electronic systems in cars, vans and light trucks.

## Potential Employers

- Dealerships
- Garages
- Service stations
- Automotive specialty/retail shops
- Manufacturing companies
- Public transit systems

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Automotive Trades Association (Man.) Inc.**

PO Box 28116, 1795 Henderson Hwy, Winnipeg, MB R2G 1P0

<http://www.atamb.ca> (204) 815-5277

### **Manitoba Motor Dealers Association**

112 - 1790 Wellington Avenue, Winnipeg, MB R3H 1B2

<http://www.mmda.mb.ca> (204) 985-4200

### **CARS on DEMAND**

<http://www.carsondemand.com> (855) 813-2101

# Diesel Engine Mechanic

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**HSAP**

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**Red Seal**

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**NOC Code            7312**

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**Cert. Req'd.**

## What do they do?

Diagnose, service, adjust, overhaul and maintain and test engines and related equipment and components as well as related electrical and electronic systems.

Repairs and maintains diesel engines.

## Potential Employers

- Equipment dealers
- Manufacturers
- Diesel equipment repair companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Railway Association of Canada**

99 Bank Street, Suite 901, Ottawa, ON K1P 6B9

<http://www.railcan.ca> (613) 567-8591

# Gas Turbine Repair and Overhaul Technician

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**HSAP**

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**Red Seal**

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**NOC Code**

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**Cert. Req'd.**

## What do they do?

Repairs gas turbine engines.

## Potential Employers

- Aircraft Manufacturing Facilities

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math and Physics
- Completion of a two-year apprenticeship program is required
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Canadian Council for Aviation and Aerospace**

1785 Alta Vista Drive - Suite 105, Ottawa, ON K1G 3Y6

<http://www.avaerocouncil.ca> (613) 727-8272

# Heavy Duty Equipment Technician

HSAP	•
Red Seal	•
NOC Code	7312
Cert. Req'd.	

## What do they do?

Repair and maintain industrial and construction vehicles and heavy duty equipment.

## Potential Employers

- Heavy construction companies
- Railways
- Companies involved in forestry, farming, oil and gas, material handling, landscaping and land clearing

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Canada West Equipment Dealers Assoc.

2435 Pegasus Rd. N.E. Calgary, AB T2E 8C3

<http://www.westerneda.com> (403) 250-7581

### Manitoba Federation of Labour

303-275 Broadway Ave. Winnipeg, MB R3C 4M6

<http://www.mfl.ca> (204) 947-1400

# Marine & Outdoor Power Equipment Technician

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HSAP

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Red Seal

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NOC Code

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Cert. Req'd.

## What do they do?

Repairs, services, and marine and outdoor power equipment, including engines and mechanical systems, fuel and electrical systems and components of outdoor power equipment.

## Potential Employers

- Equipment distributors
- Retailers and rental companies
- Parks and recreation (landscaping maintenance and builders, golf courses, forestry companies)
- Original equipment manufacturers

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math
- Completion of a three-year apprenticeship program is required
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

**Mid-Canada Marine and Powersports Dealers Association**

[www.mmpda.ca](http://www.mmpda.ca)

# Motor Vehicle Body Repairer (Metal & Paint)

HSAP	•
Red Seal	•
NOC Code	7322
Cert. Req'd.	

## What do they do?

Repair and replace damaged body and underbody components, straighten bent frames and prepare repaired surfaces for painting.

## Potential Employers

- Autobody repair shops
- Auto dealerships
- Specialty automobile shops
- Public transit systems

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Automotive Trades Association (Man.) Inc.**

PO Box 28116, 1795 Henderson Hwy, Winnipeg, MB R2G 1P0

<http://www.atamb.ca> (204) 815-5277

### **Manitoba Motor Dealers Association**

112 - 1790 Wellington Avenue, Winnipeg, MB R3H 1B2

<http://www.mmda.mb.ca> (204) 985-4200

### **CARS on DEMAND**

<http://www.carsondemand.com> (855) 813-2101

### **Manitoba Public Insurance**

<http://www.mpi.mb.ca> (204) 985-7000



# Railway Car Technician

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**HSAP**

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**Red Seal**

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**NOC Code**

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**Cert. Req'd.**

## What do they do?

Inspect, repair, replace and recondition mechanical or structural components and systems of freight cars and passenger coaches.

Reforms, repairs and conducts safety inspections on trains.

## Potential Employers

- Railway Transport Companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Automotive Trades Association (Man.) Inc.**

PO Box 28116, 1795 Henderson Hwy, Winnipeg, MB R2G 1P0

<http://www.atamb.ca> (204) 815-5277

### **Manitoba Motor Dealers Association**

112 - 1790 Wellington Avenue, Winnipeg, MB R3H 1B2

<http://www.mmda.mb.ca> (204) 985-4200

### **CARS on DEMAND**

<http://www.carsondemand.com> (855) 813-2101

### **Railway Association of Canada**

99 Bank Street, Suite 901, Ottawa ON K2P 6B9

<http://www.railcan.ca> (613) 567-8591

# Recreation Vehicle Service Technician

HSAP	•
Red Seal	•
NOC Code	7384
Cert. Req'd.	

## What do they do?

Installs, maintains and repairs interior and exterior components on recreational vehicles, tent trailers, truck campers and vans.

## Potential Employers

- Recreation vehicle dealerships, manufacturers and independent repair shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Recreation Vehicle Dealers Association of Manitoba

386 Broadway, Suite 503, Winnipeg, MB R3C 3R6

<http://www.manitobarvda.com> (204) 975-8219

# Transport Trailer Technician

HSAP	•
Red Seal	•
NOC Code	7321
Cert. Req'd.	

## What do they do?

Repair and maintain transport trailers.

## Potential Employers

- Fleet repair shops
- Trailer dealerships
- General and specialized repair shops

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in applied or pre-calculus math.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Automotive Trades Association (Man.) Inc.**

PO Box 28116, 1795 Henderson Hwy, Winnipeg, MB R2G 1P0

<http://www.atamb.ca> (204) 815-5277

### **Manitoba Motor Dealers Association**

112 - 1790 Wellington Avenue, Winnipeg, MB R3H 1B2

<http://www.mmda.mb.ca> (204) 985-4200

### **CARS on Demand**

<http://www.carsondemand.com> 855-813-2101

### **Manitoba Trucking Association**

25 Bunting Street, Winnipeg, MB R2X 2P5

<http://www.trucking.mb.ca> (204) 632-6600

# Truck & Transport Mechanic

HSAP	•
Red Seal	•
NOC Code	7321
Cert. Req'd.	

## What do they do?

Diagnose, repair and service mechanical, electrical and electronic systems and components of trucks.

## Potential Employers

- Truck/transport dealerships
- Trucking firms
- Repair centres

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Trucking Association

25 Bunting Street, Winnipeg, MB R2X 2P5

<http://www.trucking.mb.ca> (204) 632-6600

### Teamsters Local 979

B1-1680 Dublin Avenue, Winnipeg, MB R3H 1A8

<http://www.teamsters.ca> (204) 694-9798



# CONSTRUCTION TRADES

“I would encourage young people to find a trade that involves something you love doing and are passionate about. Then it can be exciting to go to work and create something great! I was always building things out of wood as a young teenager because that was what was available. My skills improved and I really enjoyed it. Competing at Skills and completing my apprenticeship has brought me opportunities I wouldn't have thought possible.”

**Travis Wieler**

**Custom Millworker,  
Twin Creek Woodcraft**



**Great jobs...  
Great future!**



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Boilermaker	•	•	7234	
Boom Truck Hoist, Mobile Crane and Tower Crane Operators	•	•	7371	*
Bricklayer	•	•	7281	
Cabinetmaker	•	•	7272	
Carpenter	•	•	7271	
Concrete Finisher	•	•	7282	
Construction Craft Worker	•	•	7611	
Construction Electrician	•	•	7241	*
Floorcovering Installer	•	•	7295	
Gasfitter	•		7253	
Glazier	•	•	7292	
Industrial Mechanic (Millwright)	•	•	7311	
Insulator (Heat & Frost)	•	•	7293	
Ironworker (Generalist)	•	•	7236	
Landscape Horticulturist	•	•	2225	
Lather (Interior Systems Mechanic)	•	•	7284	
Painter & Decorator	•	•	7294	
Plumber	•	•	7251	
Pre-Engineered Building Erector	•			
Refrigeration & Air Conditioning Mechanic	•	•	7313	*
Roofer	•	•	7291	
Sheet Metal Worker	•	•	7233	
Sloped Roofer	•			
Sprinkler System Installer	•	•	7252	*
Steamfitter – Pipefitter	•	•	7252	*

**HSAP** – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10.

**Red Seal** – The Red Seal program is Canada's standard of excellence for skilled trades. Obtaining a Red Seal endorsement on a Certificate of Qualification acknowledges a journeyperson's competence and quality workmanship and ensures recognition of his/her certification across Canada. (Journeyman status is obtained when Provincial/Red Seal endorsed certification in that trade is achieved.)

**NOC** – National Occupational Classification code system

\* Compulsory Certification - To legally work in these trades, you must be an apprentice or hold a Certificate of Qualification issued by the Province of Manitoba.

**NOTE: Wages are based on a variety of government and industry sources and are meant as a GUIDELINE ONLY.**

# Boilermaker

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HSAP	•
Red Seal	•
NOC Code	7234
Cert. Req'd.	

## What do they do?

Assemble, install and fit tanks and boilers, roll and cut sheet metal, assemble and install nozzles, rings, fins and trays, weld using oxyacetylene and electric arc equipment and build steam drums, air ducts and fans.

## Potential Employers

- Industrial, manufacturing and commercial facilities

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in science.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

### **Canadian Boilermakers Local 555**

110 Haarsma Street, East St. Paul, MB R2E 0M8

[www.555.boilermaker.ca](http://www.555.boilermaker.ca) (204) 987-9200

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202



# Boom Truck Hoist, Mobile Crane & Tower Crane Operator

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7371</b>
<b>Cert. Req'd.</b>	*

## What do they do?

Operate mobile, tower cranes or boom truck cranes that lift, move, position or place equipment and materials.

## Potential Employers

- Construction contractors
- Railways
- Public works departments
- Industrial cargo handling companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in science.
- Completion of a two or three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.
- Red Seal certification is available for Mobile Crane and Tower Crane Operator. Boom Truck Operator is provincially certified.

## For more information

### **Manitoba Heavy Construction Association**

Unit 3 - 1680 Ellice Avenue, Winnipeg, MB R3G 0Z2

<http://www.mhca.mb.ca> (204) 947-1379

### **Crane and Hoisting Equipment Operator - Operating Engineers Local 987**

244 Cree Crescent, Winnipeg, MB R3J 3W1

<http://www.oe987.mb.ca> (204) 786-8658

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

### **Winnipeg Construction Association**

1447 Waverley St. Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

# Bricklayer

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7281</b>
<b>Cert. Req'd.</b>	

## What do they do?

Lay bricks, concrete blocks, stones and other similar materials to construct or repair walls, arches, chimneys, fireplaces and other structures in accordance with blueprints and specifications.

## Potential Employers

- Construction companies
- Bricklaying contractors
- Self-employment

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- To become a certified bricklayer, completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Masonry Institute**

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://www.manitobamasonry.ca>

### **Bricklayers and Masons Union**

#68 - 1313 Border Street, Winnipeg, MB R3B 0X4

(204) 694-0135

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

### **Construction Association of Rural Manitoba**

950-10th Street –Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

# Cabinetmaker

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7272</b>
<b>Cert. Req'd.</b>	

## What do they do?

Construct and repair wooden cabinets, furniture, fixtures and related products.

## Potential Employers

- Furniture manufacturing or repair companies
- Construction companies
- Cabinetmaking contractors
- Self-employment

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of secondary school is usually required including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Home Builders Association**

1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Construction Association of Rural Manitoba**

950-10th Street –Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### **Carpenters Local 343**

87 Cole Avenue, Winnipeg, MB R2L 1J3 (204) 774-1609

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Carpenter

HSAP	•
Red Seal	•
NOC Code	7271
Cert. Req'd.	

## What do they do?

Assembles wood products to build or repair buildings, frames and other structures.

## Potential Employers

- Construction contractors
- Custom cabinet shops
- Furniture manufacturers
- Self-employment

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Home Builders Association

1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### Carpenter Local 343

87 Cole Avenue, Winnipeg, MB R2L 1J3

(204) 774-1609

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmmb.com> (204) 888-6202

# Concrete Finisher

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7282</b>
<b>Cert. Req'd.</b>	

## What do they do?

Smooth and finish freshly poured concrete, apply surface treatments and repair concrete structures.

## Potential Employers

- Construction companies
- General contractors
- Self-employment

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math and chemistry.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Construction and Specialized Worker's Union Local 1258**

541 Waterfront Drive, Winnipeg, MB R3B 0H1

<http://www.local1258.ca> (204) 942-7193

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

### **Manitoba Heavy Construction Association**

Unit 3 - 1680 Ellice Avenue, Winnipeg, MB R3H 0Z2

<http://www.mhca.mb.ca> (204) 947-1379

### **Manitoba Ready Mix Concrete Association**

PO Box 1787 Station Main, Winnipeg, MB R3C 2Z9

<http://www.concretemanitoba.ca> (204) 667-8539

# Construction Craft Worker

HSAP	•
Red Seal	
NOC Code	7611
Cert. Req'd.	

## What do they do?

Responsible for site preparation and clean up, setting up and removing access equipment, working on concrete and masonry, steel and wood and pre-cast erecting projects.

## Potential Employers

- Construction site contractors
- Private, Municipal, Provincial or Federal governments

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing
- Completion of a two-year apprenticeship program is required
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Construction Association of Rural Manitoba

950-10th Street, Unit B Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### Winnipeg Construction Association

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### Construction and Specialized Worker's Union Local 1258

541 Waterfront Drive, Winnipeg, MB R3B 0H1

<http://www.local1258.ca> (204) 942-7193

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Construction Electrician

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7241</b>
<b>Cert. Req'd.</b>	*

## What do they do?

Read blueprints and electrical codes to install, replace and repair lighting fixtures, wiring and other electrical equipment.

## Potential Employers

- Electrical contractors
- Government
- Railways
- Mining companies
- Maintenance departments of large companies
- Electrical utility companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Electrical Association of Manitoba**

211 Commerce Drive, Winnipeg, MB R3P 1A3

<http://www.eamanitoba.ca> (204) 783-4125

### **Winnipeg Construction Association**

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### **I.B.E.W. Local 2085**

556 Notre Dame Avenue, Winnipeg, MB R3B 1S4

<http://www.ibew2085.com> (204) 982-2085

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Floorcovering Installer

HSAP	•
Red Seal	•
NOC Code	7295
Cert. Req'd.	

## What do they do?

Installs, repairs and replaces resilient floorcovering materials such as underlayment, carpet, sheet flooring and resilient tile in commercial, residential and industrial buildings.

## Potential Employers

- Floorcovering retail outlets
- Contractors
- Installation companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Home Builders Association

1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### Winnipeg Construction Association

1447 Waverley St. Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### International Union of Painters and Allied Trades Local 739 District Council 17

168 Higgins Avenue, Winnipeg, MB R3B 0B8

<http://www.dc17.ca> (204) 943-2497

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

### Construction Association of Rural Manitoba

950-10th Street –Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567



# Gasfitter (Domestic Gasfitter \*prerequisite for 'Gasfitter')

HSAP	•
Red Seal	•
NOC Code	
Cert. Req'd.	

## What do they do?

Install, inspect, repair and maintain gas lines and gas equipment such as meters, regulators, heating units and appliances in residential, commercial and industrial establishments.

There are two types of gasfitters based on the license they obtain;

Gasfitter – works on all equipment, commonly referred to as commercial/industrial

Domestic Gasfitter – works on equipment with up to and including 400,000 BTU's (British thermal units)

## Potential Employers

- Gas utility companies
- Gas servicing companies
- New home building and renovation
- Heavy industrial
- Institutional and commercial construction sectors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in Applied or Pre-Calculus Math and Physics.
- Domestic Gasfitter is a two- year apprenticeship program and pre-requisite to enrol in the two-year Gasfitter apprenticeship program.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Plumbers & Pipefitters Union Local 254

34 Higgins Avenue, Winnipeg, MB R3B 0A5

<http://www.ualocal254.ca> (204) 947-0497

### Mechanical Contractors Association

<https://www.mca-mb.com> (204) 774-2404

### Winnipeg Construction Association

1447 Waverley Street, Winnipeg, MB R3T 0P7 <http://winnipegconstruction.ca>

### Construction Association of Rural Manitoba

950-10th Street – Unit B, Brandon, MB R7A 6B5 (204) 727-4567 <http://www.carm.ca>

### The Heating, Refrigeration and Air Conditioning Institute of Canada

<http://www.hrai.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7292</b>
<b>Cert. Req'd.</b>	

## What do they do?

Install glass in buildings, furniture, display cabinets, bathroom fixtures and decorative windows.

## Potential Employers

- Commercial construction companies
- Residential construction companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Winnipeg Construction Association**

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **International Union of Painters and Allied Trades Local 739 District Council 17**

168 Higgins Avenue, Winnipeg, MB R3B 0B8

<http://www.dc17.ca> (204) 943-2497

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmmb.com> (204) 888-6202

### **Construction Association of Rural Manitoba**

950-10th Street –Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

# Industrial Mechanic (Millwright)

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7311</b>
<b>Cert. Req'd.</b>	

## What do they do?

Install, maintain, troubleshoot and repair equipment in manufacturing plants and industrial companies.

## Potential Employers

- Construction contractors
- Manufacturing and mining companies
- Pulp and paper mills

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in science.
- Completion of a four-year apprenticeship program in industrial mechanics (millwright) is required.
- Contact Apprenticeship Manitoba for an apprenticeship application to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Federation of Labour**

303-275 Broadway Avenue, Winnipeg, MB R3C 4M6

<http://www.mfl.mb.ca> (204) 947-1400

### **Construction Association of Rural Manitoba**

950-10th Street, Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### **Construction Labour Relations Association of Manitoba**

701-161 Portage Avenue East, Winnipeg, MB R3B 0Y4

<http://www.clram.ca> (204) 775-0441

### **Winnipeg Construction Association**

1447 Waverley St. Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Insulator (Heat & Frost)

HSAP	•
Red Seal	•
NOC Code	7293
Cert. Req'd.	

## What do they do?

Applies, repairs and removes thermal and acoustical insulation on many types of industrial equipment.

## Potential Employers

- Construction companies
- Insulation contractors
- Railways
- Steel and iron production companies
- Electrical utility companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### International Association of Heat and Frost Insulators and Allied Workers

Local 99-Manitoba

946 Elgin Avenue West, Winnipeg MB R3E 1B4 <http://www.insulators99.org> (204) 694-0726

### Thermal Insulation Association of Canada (TIAC)

1485 Laperrriere Avenue, Ottawa, Ontario K1Z 7S8 <http://www.tiac.ca> (613) 724-4834

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2 <http://www.meritmb.com> (204) 888-6202

### Construction Association of Rural Manitoba

950-10th Street, Unit B, Brandon, MB R7A 6B5 <http://www.carm.ca> (204) 727-4567

### Winnipeg Construction Association

1447 Waverley St. Winnipeg, MB R3T 0P7 <http://winnipegconstruction.ca> (204) 775-8664

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

# Ironworker (Generalist)

HSAP	•
Red Seal	•
NOC Code	7236
Cert. Req'd.	

## What do they do?

Make, install and repair structural ironwork, precast concrete, reinforcing materials and other metals.

## Potential Employers

- Construction contractors
- Metal fabrication shops
- Railways
- Steel and iron production companies
- Electrical utility companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in science.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Ironworkers Union Local 728**

895A Century St., Winnipeg, MB R3H 0M3

<http://www.ironworkers728.com> (204) 783-7853

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Landscape Horticulturist

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>2225</b>
<b>Cert. Req'd.</b>	

## What do they do?

Grow, tend and transplant flowers, shrubbery, trees and plants and perform landscape construction activities such as surveying, assessment sketching and design. Construct and maintain gardens, parks, golf courses and other landscaped environments.

## Potential Employers

- Construction contractors
- Railways
- Public works departments
- Industrial cargo handling companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in biology.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Golf Superintendents Association**

Box 55041, Dakota Crossing, MB R2N 0A8

<http://www.mgsa.mb.ca> (204) 326-3460

### **Golf Manitoba**

420-145 Pacific Avenue, Winnipeg, MB R3B 2Z6

<http://www.golymb.ca> (204) 925-5730

### **Manitoba Nursery Landscape Association**

<http://www.mbnla.com>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Lather (Interior Systems Mechanic)

HSAP	•
Red Seal	•
NOC Code	7284
Cert. Req'd.	

## What do they do?

Install support frameworks for ceiling systems, walls and building partitions and apply, tape and finish drywall.

## Potential Employers

- Construction contractors
- Renovation companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Winnipeg Construction Association

1447 Waverley St., Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### Carpenters and Lathers Local 343

87 Cole Avenue, Winnipeg, MB R2L 1J3

(204) 774-1609

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmmb.com> (204) 888-6202

# Painter & Decorator

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7294</b>
<b>Cert. Req'd.</b>	

## What do they do?

Apply paint, wallpaper, fabric and other finishes, repair cracks and holes in walls and prepare work surfaces.

## Potential Employers

- Construction contractors
- Building maintenance firms
- Painting contractors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Construction Association of Rural Manitoba**

950 10th Street – Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### **Manitoba Home Builders Association**

1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **International Union of Painters and Allied Trades Local 739 District Council 17**

168 Higgins Avenue, Winnipeg, MB R3B 0B8

<http://www.dc17.ca> (204) 943-2497

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202



# Plumber

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7251</b>
<b>Cert. Req'd.</b>	

## What do they do?

Install and repair water and waste disposal systems in commercial, industrial and residential buildings.

## Potential Employers

- Construction companies
- Heating and plumbing contractors
- Maintenance departments of plants, factories, governments and schools

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math.
- Completion of a five-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Home Builders Association**

1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### **Plumbers and Steamfitters Local Union 254**

34 Higgins Avenue, Winnipeg, MB R3B 0A5

<http://www.ualocal254.ca> (204) 947-0497

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Pre-Engineered Building Erector

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HSAP

•

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Red Seal

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NOC Code

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Cert. Req'd.

## What do they do?

Fabricate, construct and join scaffolding, and erect pre-engineered buildings. They are limited to work on one-storey, steel framed buildings generally referred to as pre-engineered buildings.

## Potential Employers

- Construction contractors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Winnipeg Construction Association

1447 Waverley St., Winnipeg, MB R3T 0P7

<http://winnipegconstruction.ca> (204) 775-8664

### Construction Association of Rural Manitoba

950 10th Street – Unit B, Brandon, MB R7A 6B5

<http://www.carm.ca> (204) 727-4567

### Metal Building Contractors and Erectors Association

<http://www.mbcea.ca>

### Ironworkers Union Local 728

895A Century St., Winnipeg, MB R3H 0M3

<http://www.ironworkers728.com> (204) 783-7853

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Refrigeration & Air Conditioning Mechanic

HSAP	•
Red Seal	•
NOC Code	7313
Cert. Req'd.	*

## What do they do?

Install, maintain and repair residential or commercial refrigerators, cooling and residential air conditioning systems.

## Potential Employers

- Air conditioning contractors
- Refrigeration equipment dealers
- Truck transportation firms
- Storage warehouses

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including a recommended course in science and Applied or Pre-Calculus Math.
- Completion of a four or five-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.
- Red Seal certification is provided for Commercial Mechanics.
- Provincial certification is provided for Domestic Mechanics.

## For more information

### Construction Labour Relations Association of Manitoba

701-161 Portage Avenue East, Winnipeg, MB R3B 0Y4

<http://www.clram.ca> (204) 775-0441

### Refrigeration and Air Conditioning Mechanic, Local 254

34 Higgins Avenue, Winnipeg, MB R3B 0A5

<http://www.ualocal254.ca> (204) 947-0497

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Roofer

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7291</b>
<b>Cert. Req'd.</b>	

## What do they do?

Install, repair, maintain, and replace flat roofs on residential and commercial buildings.

## Potential Employers

- Construction contractors
- Roofing contractors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing and recommended courses in Math and Science.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Homebuilders Association**

Unit 1-1420 Clarence Ave., Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### **Roofing Contractors Association of Manitoba**

1447 Waverley St., Winnipeg, MB R3T 0P7

<http://www.rcam.ca> (204) 783-6365

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Sheet Metal Workers and Roofers Local 511**

438 Higgins Avenue, Winnipeg MB R3A 1S5

<https://www.smart-local.org/smart-sheet-metal-local-511> (204) 774-4447

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Sheet Metal Worker

HSAP	•
Red Seal	•
NOC Code	7233
Cert. Req'd.	

## What do they do?

Design, install and repair sheet metal products.

## Potential Employers

- Construction, bus, farm equipment and aircraft manufacturers
- Metal fabrication shops
- Railways

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math.
- Completion of a four-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Sheet Metal Workers and Roofers Local 511

438 Higgins Avenue, Winnipeg MB R3A 1S5

<https://www.smart-local.org/smart-sheet-metal-local-511> (204) 774-4447

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Sloped Roofer

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**HSAP** •

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**Red Seal**

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**NOC Code**

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**Cert. Req'd.**

## What do they do?

Install, replace and repair sloped roofs on mostly residential and commercial buildings in order to shed water.

## Potential Employers

- Roofing companies
- Construction contractors

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing including recommended courses in Math and Science.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Manitoba Homebuilders Association**

Unit 1-1420 Clarence Avenue, Winnipeg, MB R3T 1T6

<http://www.homebuilders.mb.ca> (204) 925-2560

### **Roofing Contractors Association of Manitoba**

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://www.rcam.ca> (204) 783-6365

### **Manitoba Building and Construction Trades Council**

<http://www.mbtrades.ca>

### **Sheet Metal Workers and Roofers Local 511**

438 Higgins Avenue, Winnipeg MB R3A 1S5

<https://www.smart-local.org/smart-sheet-metal-local-511> (204) 774-4447

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Sprinkler System Installer

HSAP	•
Red Seal	•
NOC Code	7252
Cert. Req'd.	*

## What do they do?

Install and repair fire protection sprinkler systems in buildings.

## Potential Employers

- Mechanical construction firms
- Plumbing contractors
- Heating and air-conditioning companies
- Building developers

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math and physics.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Plumbers and Steamfitters Local Union 254

34 Higgins Avenue, Winnipeg, MB R3B 0A5

<http://www.ualocal254.ca> (204) 947-0497

### Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>

### Construction Sector Council Careers

<http://www.careersinconstruction.ca>

### Merit Contractors Association of Manitoba

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202

# Steamfitter - Pipefitter

<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>7252</b>
<b>Cert. Req'd.</b>	*

## What do they do?

Layout, install and repair piping systems carrying water, steam, chemicals and fuel.

## Potential Employers

- Pipeline and general construction contractors
- Thermal or steam generating plants
- Manufacturing factories
- Hospitals and schools
- Chemical plants, pulp mills and oil refineries

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing including a recommended course in applied or pre-calculus math and physics.
- Completion of a five-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Plumbers and Steamfitters Local Union 254**

34 Higgins Avenue, Winnipeg, MB R3B 0A5

<http://www.ualocal254.ca> (204) 947-0497

### **Manitoba Building & Construction Trades Council**

<http://www.mbtrades.ca>

### **Construction Sector Council Careers**

<http://www.careersinconstruction.ca>

### **Merit Contractors Association of Manitoba**

112-131 Provencher Blvd., Winnipeg, MB R2H 0G2

<http://www.meritmb.com> (204) 888-6202





# SERVICE TRADES

“My advice to other young people is – try new things and follow new paths until you find what you love. The experience of working in a trade you love is unmatched by anything. Thanks to Skills Canada I’ve met amazing and inspiring people who have forever changed my life.”

**Marcela Sanchez**

**Pastry Chef**



**Great jobs...**  
**Great future!**

Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Cook	•	•	6322	
Electrologist	•		6562	*
Esthetician	•		6562	*
Hairstylist	•	•	6341	*
Partsperson	•	•	1522	
Pork Production Technician	•		8253	

**HSAP** – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10.

**Red Seal** – The Red Seal program is Canada’s standard of excellence for skilled trades. Obtaining a Red Seal endorsement on a Certificate of Qualification acknowledges a journeyperson’s competence and quality workmanship and ensures recognition of his/her certification across Canada.

(Journeyman status is obtained when Provincial/Red Seal endorsed certification in that trade is achieved.)

**NOC** – National Occupational Classification code system

\* Compulsory Certification - To legally work in these trades, you must be an apprentice or hold a Certificate of Qualification issued by the Province of Manitoba.

**NOTE: Wages are based on a variety of government and industry sources and are meant as a GUIDELINE ONLY.**

# Cook

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<b>HSAP</b>	•
<b>Red Seal</b>	•
<b>NOC Code</b>	<b>6322</b>
<b>Cert. Req'd.</b>	

## What do they do?

Cooks, plans, orders and prices a wide variety of food.

## Potential Employers

- Restaurants
- Hotels
- Hospitals and other health care institutions
- Central food commissaries
- Clubs and similar establishments
- Ships

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **Canadian Culinary Federation, Winnipeg Branch**

P.O. Box 1072, Winnipeg, MB R3C 2X4

<http://www.winnipegchefs.org>

### **Manitoba Restaurant and Food Services Association**

5 - 130 Marion Street, Winnipeg, MB R2H 0T4

<http://www.mrfa.mb.ca> (204) 783-9955

# Electrologist

HSAP	•
Red Seal	
NOC Code	6562
Cert. Req'd.	*

## What do they do?

Removes unwanted body hair by using electric currents.

## Potential Employers

- Beauty salons
- Electrolysis studios
- Scalp treatment and hair replacement clinics and other similar establishments
- Self-employed

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a one-year apprenticeship program is required for certification.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.
- Enrolment in or completion of technical training at an accredited institution is required before an apprenticeship.

## For more information

**Federation of Canadian Electrolysis Associations**

<http://www.fcea.org> 1-888-333-2783

# Esthetician

HSAP	•
Red Seal	
NOC Code	6562
Cert. Req'd.	*

## What do they do?

Esthetician – is comprised of two sub-trades: nail technician and skin care technician. Nail Technicians perform manicures and pedicures and apply artificial nail products. Skin Care Technicians perform body treatments, facial treatments, make-up applications, depilatory hair removal, and lash and brow tint services. Estheticians have completed and performed services in both sub-trades.

## Potential Employers

- Beauty salons
- Electrolysis studios
- Scalp treatment and hair replacement clinics and other similar establishments
- Self-employed

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a one or two year apprenticeship program is required for certification as an Esthetician.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.
- Enrolment in or completion of technical training at an accredited institution is required before an apprenticeship.

# Hairstylist

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HSAP	•
Red Seal	•
NOC Code	6341
Cert. Req'd.	*

## What do they do?

Shampoo, rinse, cut, trim, perm, colour and style hair.

## Potential Employers

- Hairstyling salons
- Barber shops
- Retail product sales companies
- Theatre, film and television production companies

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Enrolment in or completion of technical training at an accredited institution is required before an apprenticeship.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### Manitoba Hairstylists Association

501 Sargent Avenue, Winnipeg, MB, R3B 1V9 (204) 775-8633

# Partsperson

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HSAP	•
Red Seal	•
NOC Code	1522
Cert. Req'd.	

## What do they do?

Manage and sell an inventory of parts for vehicles, appliances, machinery and equipment.

## Potential Employers

- Automotive, heavy equipment, truck and parts distribution outlets.

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent academic standing.
- Completion of a three-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### **The Manitoba Trucking Association**

25 Bunting St., Winnipeg, MB R2X 2P5

<http://www.trucking.mb.ca> (204) 632-6600



# Pork Production Technician

HSAP	•
Red Seal	
NOC Code	8253
Cert. Req'd.	*

## What do they do?

Handle and care for pigs in the breeding, farrowing, nursery and grow/finish stages.

## Potential Employers

- Specialized farms

## What kind of education, training, requirements and experience are needed?

- You must have Grade 12 or equivalent high school academic standing.
- Completion of a two-year apprenticeship program is required.
- Contact Apprenticeship Manitoba for an apprenticeship application and to formalize an apprenticeship agreement with your employer.

## For more information

### National Farmers Union – Manitoba Region

<http://www.nfu.ca>

### Manitoba Pork Council

28 Terracon Place, Winnipeg, MB R2J 4G7

<http://www.manitobapork.com> (204) 237-7447

## RED SEAL

The Canadian Council of Directors of Apprenticeship (CCDA) is responsible for the Interprovincial Standards "Red Seal" Program. The Red Seal program forms a partnership between the provincial, territorial and federal governments. Its goal is to provide skilled workers mobility across Canada by encouraging the standardization of training and certification programs. Red Seal certified workers can work anywhere in Canada where their trade is designated. They have qualified by passing industry developed interprovincial examinations that are based on the National Occupational Analysis.

### Red Seal Trades designated in Manitoba

- Agricultural Equipment Technician
- Automotive Painter
- Automotive Service Technician
- Boilermaker
- Boom Truck Hoist, Mobile Crane and Tower Crane Operator
- Bricklayer
- Cabinetmaker
- Carpenter
- CNC Machinist
- Concrete Finisher
- Construction Craft Worker
- Construction Electrician
- Cook
- Electric Motor System Technician
- Floorcovering Installer
- Glazier
- Hairstylist
- Heavy Duty Equipment Technician
- Industrial Electrician
- Industrial Mechanic (Millwright)
- Instrumentation and Control Technician
- Insulator (Heat and Frost)
- Ironworker (Generalist)
- Landcape Horticulturist
- Lather Interior Systems Mechanic
- Machinist
- Motor Vehicle Body Repairer (Metal and Paint)
- Painter and Decorator
- Partsperson
- Plumber
- Recreation Vehicle Service Technician
- Refrigeration and Air Conditioning Mechanic
- Rig Technician
- Roofer
- Sheet Metal Worker
- Sprinkler System Installer
- Steamfitter-Pipefitter
- Tool and Die Maker
- Transport Trailer Technician
- Truck and Transport Mechanic
- Welder

### For more information about the Apprenticeship and the Red Seal program in Manitoba contact:

Apprenticeship Manitoba

Education and Training

100 - 111 Lombard Avenue, Winnipeg Manitoba R3B 0T4

Telephone: (204) 945-3337

Toll free (Manitoba only) 1-877-97TRADE (1-877-978-7233)

Fax: (204) 948-2346

Website: <http://www.manitoba.ca/tradecareers>

## **BENEFITS OF APPRENTICESHIPS**

### **As an apprentice you:**

Receive hands on training – this is one of the best ways to learn.

Journeypeople are masters of their trade – they pass their knowledge onto apprentices to ensure a skill is learned correctly and safely.

As an apprentice you earn while you learn. The rate of pay increases with the amount of training undertaken.

Have a competitive edge! Registration and other costs are a fraction of what others pursuing a college diploma or university degree pay. Some diploma programs count towards an apprenticeship if at any time you decide to obtain your trade certification.

Secure greater opportunities for your future: job security, higher income, opportunities for advancement.

### **For Families and Teachers**

Is this for my child or student? Many adults do not realize that the skilled trades and technologies can be such viable career options and rewarding job opportunities for young people.

These are careers that use some of the most sophisticated equipment available. Young people who train for these careers need to be intelligent, creative, hard working and committed. Training for many of these careers takes longer than acquiring a university degree.

We're trying to give you all of the information that is available so you can help the young people in your life make informed career choices.

We suggest that you talk to your child or student. Sit down with all of the information and study all of the options. We owe it to young people to let them excel and prosper. Remember when young people win, we all win.

### **Educational Requirements**

The skilled trades and technologies are highly technical and take a firm commitment to master.

A university education can provide wonderful opportunities to our youth, but the fact remains that there are many more young people who do not attend university than those who do. We're making sure that those young people are not forgotten, misguided or misinformed and that they are aware of the wonderful career opportunities available to them.

### **What are the academic requirements?**

Most trades require Grade 12 or equivalent academic standing. While mechanical and hands-on skills are still core requirements to a trade, you need to finish high school.

Positions in the trades are often technology-based and require math, science and computer skills. However, excellent reading, writing and communication skills are also very valuable.

## What is the High School Apprenticeship Program (HSAP)?

HSAP lets you start your apprenticeship while you are still in high school. It combines regular high school instruction with paid, part-time, on-the-job apprenticeship training.

To begin, you will need a qualified, insured employer who will agree to train you as an apprentice. You will work with your school guidance counsellor and the HSAP co-ordinator at Apprenticeship Manitoba to ensure you meet all of the program's academic requirements. Then, together with the employer, you will set up a suitable on-the-job/academic timetable that allows you to attend all of your required high school classes.

## How do I qualify?

To participate in HSAP you must be enrolled in an approved Manitoba High School program, be a minimum 16 years of age and completion of grade 9 (including core subjects).

## It's a great opportunity

Manitoba's skilled, certified tradespeople play an important role in our society. In the next decade, many of them will be nearing retirement, leaving Manitoba with shortages in the skilled trades. That's where HSAP comes in. Think of it as an early opportunity to set goals for your future.

HSAP provides practical, paid, work experience and the opportunity to:

- get hands-on work experience (one academic credit for every 110 hours of work experience up to a maximum of 880 hours)
- earn up to eight optional academic credits for graduation
- get paid a specific rate that's more than provincial minimum wage
- apply your on-the-job training hours to continued, full-time apprenticeship training after graduation
- use the skills you learn for a career in management or to start your own business

## Grants and Incentives

### High School Apprenticeship Program (HSAP) Incentive

HSAP participants are eligible for financial help to offset Manitoba tuition costs for full-time, post-secondary apprenticeship training following their high school studies. For every 220 hours of on-the-job training obtained as a high school apprentice (up to a maximum of 880 hours), students who transfer into a full-time apprentice program after high school will receive a tuition exemption for one level of in-school training in Manitoba (to a maximum of four levels).

Various financial incentives and grants are available to both apprentices and employers who hire apprentices or journeypersons. Visit Apprenticeship Manitoba, [www.manitoba.ca/tradecareers](http://www.manitoba.ca/tradecareers) for more information.

All trades are eligible for HSAP. Although certain restrictions may apply. Please contact Apprenticeship Manitoba for requirements or eligibility.

## Career Sources

Red Seal Program	<a href="http://www.red-seal.ca">http://www.red-seal.ca</a>
NOC – National Occupation Classification	<a href="http://http://www.cic.gc.ca/english/immigrate/skilled/noc.asp">http://http://www.cic.gc.ca/english/immigrate/skilled/noc.asp</a>
Working in Canada/Labour Market Information	<a href="http://www.jobbank.gc.ca">http://www.jobbank.gc.ca</a>

## Post Secondary Education Sources

Apprenticeship Manitoba	<a href="http://www.gov.mb.ca/wd/apprenticeship">http://www.gov.mb.ca/wd/apprenticeship</a>
Assiniboine Community College	<a href="http://www.assiniboine.net">http://www.assiniboine.net</a>
Manitoba Institute of Trades & Technology	<a href="http://www.mitt.ca">http://www.mitt.ca</a>
Red River College	<a href="http://www.rrc.mb.ca">http://www.rrc.mb.ca</a>
University College of the North	<a href="http://www.ucn.ca">http://www.ucn.ca</a>

**Apprenticeship**  
Manitoba



**To learn more about apprenticeship training:**

**[www.apprenticeshipmanitoba.ca](http://www.apprenticeshipmanitoba.ca)**

**Become a fan of Apprenticeship on Facebook:**

**[facebook.com/apprenticeshipmanitoba](https://facebook.com/apprenticeshipmanitoba)**

**Contact your nearest apprenticeship office:**

**Winnipeg: 204-948-2346**

**Brandon: 204-726-6365**

**The Pas: 1-877-978-7233**

**Thompson: 204-677-6346**

**Call toll-free:**

**Anywhere in rural Manitoba: 1-877-978-7233**

# TECHNOLOGIES

"I've always loved to take things apart to see how they work. With my education and Skills Manitoba experience, I now have a job where I get to design the kinds of things I used to take apart!

The electronics field is rapidly changing and there is always something new so my advice is to stay on top of technology and trends. Never stop learning and researching."

**Jorgen Kaspick, C.E.T.**

**Embedded Hardware Designer,  
Price Electronics**



**Great jobs...  
Great future!**



Although Canadians use the terms 'Technician' and 'Technologist' generally to describe many different occupations, **Engineering/Applied Science Technicians and Technologists are very distinct individuals.**

From the moment Manitobans wake up in the morning and turn on a light switch or shower, until the end of the day, they rely on the work of these professionals. Technicians install cable and phone, monitor traffic, and work in labs. Technologists design plans with engineers, create commercial buildings and return well sites properly to nature. They ensure fast-acting telephone networks, smart traffic signals, proper water pressure at home, perfectly clean water to drink, reliable natural gas service and electrical power, and smooth roads on which to drive.

Professional Technicians and Technologist impact your life everyday, from morning through the night. They do so by having participated in the design, selection, use, installation, testing and repair of devices and equipment related to all aspects of everyday life. As technology professionals, they provide essential services and protection as part of a large team which includes trades people, engineers and scientists.

For individuals wishing to become an Engineering Technologist they should have a strong science and mathematics education background. They should enjoy problem solving and can pay attention to detail.

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Architectural / Building Engineering Technologist

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Communications Engineering Technologist

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Electrical Engineering Technologist

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Electronic Engineering Technologist

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Environmental Protection Technologist

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Geomatics Engineering Technologist

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Instrumentation and Control Engineering Technologist

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Mechanical Engineering Technologist

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Municipal Engineering Technologist

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Structural Engineering Technologist

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**NOTE: Wages are based on a variety of government and industry sources and are meant as a GUIDELINE ONLY.**

# Architectural / Building Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Design and construction of building systems, prepare feasibility studies and cost estimates, research and specify appropriate materials and practices, apply technical design concepts using CAD and 3D modeling, specify project methods and materials, perform site inspections and project management, promote sustainability in the building industry through the application of green design and building practices.

## Potential Employers

- Architecture firms
- consulting engineering firms
- building contractors
- building materials and equipment suppliers
- home design and construction companies
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 32 month college program in Architectural Engineering Technology, or an equivalent is usually required for Architectural Engineering Technologists. After successfully completing the first year of Civil Engineering Technology, you can choose the Architectural Engineering Technology option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### **Certified Technicians and Technologists Association of Manitoba (CTTAM)**

602-1661 Portage Avenue, Winnipeg, MB, R3J 3T7

Tel: (204) 784-1088    <http://www.cttam.com>

### **Red River College**

Email: [register@rrc.ca](mailto:register@rrc.ca)

Phone: 204-632-2327    Toll Free: 1-800-903-7707

<https://www.rrc.ca/student-service-centres>



# Communications Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Develop new devices and solutions for mobile communications, design, install and maintain broadband communication systems used for internet access, fiber optics networks. Maintain broadcast studio and communications systems (TV and Radio), voice, data, monitoring and control systems. Install, commission, and maintain mobile communication networks.

## Potential Employers

- Mobile service providers and developers
- Utilities
- Broadband service providers Communications,
- Wireless communications companies
- Oil and Gas Exploration and production companies
- Engineering consulting and design firms
- Provincial and Federal Government agencies and Canadian Forces

## What kind of education, training, requirements and experience are needed?

- Completion of a two year Engineering Technology program with a focus on communications systems, device and applications.
- It is common for Engineering Technology programs to require the completion of a 4 month co-op placement term.
- Some employers require technologists to be certified by a provincial association, which in Manitoba is the Certified Technicians and Technologists Association of Manitoba (CTTAM).

## For more information

### Assiniboine Community College, School of Trades & Technology

1430 Victoria Ave E, Brandon, MB R7A 2A9

Phone: 204.725.8718 Toll Free: 800.862.6307

Email: [technology@assiniboine.net](mailto:technology@assiniboine.net) Website: [www.assiniboine.net/CET](http://www.assiniboine.net/CET)

### Certified Technicians and Technologists Association of Manitoba

602-1661 Portage Avenue, Winnipeg, MB R3J 3T7

(204) 784-1088 <http://www.cttam.com>

### Canadian Council of Technicians and Technologists

2197 Riverside Dr., Suite 405, Ottawa, ON K1H 7X3

Tel: (613) 238-8123 <http://www.cctt.ca>

# Electrical Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Work independently or in teams to support of the design, commissioning, engineering sales and support; operation and maintenance of electrical power system generation; distribution and protection; manufacturing; construction; machine and process control and electricity utilization systems.

## Potential Employers

- Electrical utilities
- Communications companies
- Manufacturers of electrical and electronic equipment
- Consulting firms
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 28 month college program in Electrical Engineering Technology, or an equivalent is usually required for Electrical Engineering Technologists.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### **Certified Technicians and Technologists Association of Manitoba (CTTAM)**

602-1661 Portage Avenue, Winnipeg, MB, R3J 3T7

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Phone: 204-632-2327 Toll Free: 1-800-903-7707

<https://www.rrc.ca/student-service-centres>

# Electronic Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Work independently or in teams to design components; equipment, processes; infrastructure, or systems; interpretation or preparation of specifications and drawings; quality management; operations and maintenance; installations and/or servicing of equipment and systems; project management; supervision of projects and training activities.

## Potential Employers

- Aerospace Industry
- Cable companies
- Cell phone system providers
- Satellite manufacturers
- Manufacturers of electrical and electronic equipment
- Consulting firms
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 28 month college program in Electronic Engineering Technology, or an equivalent is usually required for Electronic Engineering Technologists. After successfully completing the first year of Electrical Engineering Technology you can choose the Electronic option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

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<https://www.rrc.ca/student-service-centres>

# Environmental Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Works on environmental issues and projects regarding the effects of human activity on the environment such as site investigation, reclamation, remediation, and containment, reuse and recycling, workplace health and safety, testing and quality control and integrated project management.

## Potential Employers

- Utilities
- Private Firms
- Consulting engineering firms
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 32 month college program in Environmental Protection Engineering Technology, or an equivalent is usually required for Environmental Protection Engineering Technologists. After successfully completing the first year of Civil Engineering Technology you can choose the Environmental Protection Municipal Engineering Technology option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

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<https://www.rrc.ca/studentsservicecentres>

# Geomatics Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Use advanced technologies such as satellite-based positioning and navigation, geographic information systems (GIS) and digital mapping to gather, analyze and interpret geospatial information for applications in natural resources, geology, environment, infrastructure creation and land use planning.

## Potential Employers

- Communication and location based companies
- Private Industry
- Consulting Engineering firms
- Survey firms
- Manufacturing, processing and transportation industries
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 32 month college program in Geomatics Engineering Technology, or an equivalent is usually required for Geomatics Engineering Technologists. After successfully completing the first year of Civil Engineering Technology, you can choose the Geomatics Engineering Technology option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### Certified Technicians and Technologists Association of Manitoba (CTTAM)

602-1661 Portage Avenue, Winnipeg, MB, R3J 3T7

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<https://www.rrc.ca/student-service-centres>

# Instrumentation and Control Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Work independently or in teams to use their skills to design and calibrate systems used to measure, record, and control industrial process variables. Graduates have found employment as instrument engineering technologists, junior control loop designers, and technical sales people in engineering offices and manufacturing plants.

## Potential Employers

- Private Industry
- Consulting Engineering Firms
- Manufacturers
- Technical Sales
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 28-month year college program in Instrumentation and Control Engineering Technology, or an equivalent is usually required for Instrumentation Engineering Technologists.
- Experienced technicians (with a one or two-year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### **Certified Technicians and Technologists Association of Manitoba (CTTAM)**

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Phone: 204-632-2327 Toll Free: 1-800-903-7707

<https://www.rrc.ca/student-service-centres>

# Mechanical Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Work in mechanical engineering fields such as the design, development, analysis, computer aided design, maintenance and testing of machines, components, tools, heating and ventilating systems, power generation and power conversion plants, manufacturing plants, automation and equipment.

## Potential Employers

- Aerospace Industry
- Transportation equipment manufacturing
- Farm equipment manufacturers
- Government (Municipal, Provincial, Federal)
- A wide range of manufacturing and transportation industries

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 28 month college program in Mechanical Engineering Technology, or an equivalent is usually required for Mechanical Engineering Technologists.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### **Certified Technicians and Technologists Association of Manitoba (CTTAM)**

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Phone: 204-632-2327 Toll Free: 1-800-903-7707

<https://www.rrc.ca/student-service-centres>

# Municipal Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Design and construction of civil works and municipal infrastructure; project inspection; materials testing, interpretation or preparation of specifications/drawings; construction management; contract inspection and administration; quantity surveying; engineering and construction survey layout.

## Potential Employers

- Utilities
- Consulting engineering firms
- Construction firms
- Private industry
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 32 month college program in Municipal Engineering Technology, or an equivalent is usually required for Municipal Engineering Technologists. After successfully completing the first year of Civil Engineering Technology, you can choose the Municipal Engineering Technology option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### Certified Technicians and Technologists Association of Manitoba (CTTAM)

602-1661 Portage Avenue, Winnipeg, MB, R3J 3T7

Tel: (204) 784-1088 <http://www.cttam.com>

### Red River College

Email: [register@rrc.ca](mailto:register@rrc.ca)

Phone: 204-632-2327 Toll Free: 1-800-903-7707

<https://www.rrc.ca/studentsservicecentres>



# Structural Engineering Technologist

## Salaries

- \$45,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

## Average Hourly Wage

- Student Work Co-op  
\$19.50

## What do they do?

Design and construction of building systems, computer-assisted design and drafting, site inspection, testing, and supervision, construction administration and project management.

## Potential Employers

- Municipal infrastructure departments.
- Utilities
- Consulting Engineering firms
- Transportation Companies
- Government (Municipal, Provincial, Federal)

## What kind of education, training, requirements and experience are needed?

- In Manitoba, completion of a 32 month college program in Structural Engineering Technology, or an equivalent is usually required for Structural Engineering Technologists. After successfully completing the first year of Civil Engineering Technology, you can choose the Structural Engineering Technology option.
- Experienced technicians (with a one or two year college diploma) may advance to technologists positions.
- Most employers require technologists to be certified by a provincial association which in Manitoba is the Certified Technicians and Technologists Association of Manitoba. A period of supervised employment is required before certification.

## For more information

### **Certified Technicians and Technologists Association of Manitoba (CTTAM)**

602-1661 Portage Avenue, Winnipeg, MB, R3J 3T7

Tel: (204) 784-1088 <http://www.cttam.com>

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Phone: 204-632-2327 Toll Free: 1-800-903-7707

<https://www.rrc.ca/student-service-centres>

## The Certified Technicians and Technologists Association of Manitoba (CTTAM)

CTTAM is the professional association that certifies and regulates Engineering Technicians and Technologists in Manitoba. It is an association of technically qualified individuals working in business and industry who have completed a significant level of post secondary technical education complemented by related practical experience.

CTTAM grants three Designations which are recognized nationally and internationally:

- Certified Engineering Technologist (C.E.T.)
- Applied Science Technologist (A.Sc.T.)
- Certified Technician (C.Tech.)

Consumers and technology professionals alike are always poised to learn about the latest advancements in technology and what can supply that crucial leading edge. Providing its members with guidance, career advantages and accreditation to which they might not otherwise have access, CTTAM offers the latest and the best, leading edge opportunities.

CTTAM credentials are recognized across Canada and internationally, making it easy to transfer to another jurisdiction. CTTAM has an agreement with each of the other provincial associations to allow certified Technicians and Technologists to transfer to another province and retain their certified status.

Many employers recognize the benefits of hiring CTTAM technology professionals. CTTAM members have been peer reviewed and deemed to have met national standards for education and experience related to engineering and science technologies. Members must have passed the professional practice exam on the code of ethics. All of these membership attributes provide the employer with assurance that when they hire a CTTAM member, they are hiring the most qualified technical person available.

### CTTAM's Mission Statement is:

To Safeguard the Public Interest by the Certification and Governance of our Professional Members in the Application of National Standards of Applied Science Technology.

#### **If you wish further information please contact us at:**

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# Skilled Trades & Technologies - 2019/2020



## Our Mission:

To attract young Manitobans to careers in skilled trades and technology

## Our Vision:

Skills Canada Manitoba will be a leader and vital partner in meeting Manitoba's skilled workforce needs



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