

Skilled Trades & Technologies – 2022/2023



IN-SCHOOL
Program


SkillsCompétences
Canada
Manitoba

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

Manitoba Trades & Technologies




SkillsCompétences
Canada
Manitoba

Great jobs...
Great future!

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Scan to register

Skills Canada National Competition

Thursday and Friday, May 25 & 26, 2023

9 AM – 4 PM @ the RBC Convention Centre, Winnipeg
**A fun and interactive event that your students will
be talking about for weeks.**

REGISTER HERE!

OR ON OUR WEBSITE

**[https://www.skillscompetencescanada.com/en/event/
skills-canada-national-competition-2023/](https://www.skillscompetencescanada.com/en/event/skills-canada-national-competition-2023/)**

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.

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®**, **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.

With warmest regards,

Maria Pacella

Executive Director



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, the Extreme Sledding 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 10 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.



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.



WHAT IS +1?

The +1 represents the Technical Skills necessary for skilled trade and technology careers. Technical 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.



ADAPTABILITY – NEW

Your ability to achieve or adjust goals and behaviours when expected or unexpected change occurs, by planning, staying focused, persisting, and overcoming setbacks. For example, we use this skill to change work plans to meet new deadlines, learn how to work with new tools and improve our skills through feedback.

Why this skill is important

Major changes in society are affecting how you work, live, and learn and require you to constantly adapt to change. Strong adaptability skills will help you deal effectively with change and to learn new skills and behaviours when needed, stay focused on your responsibilities and goals, and not give up when situations are difficult. They will help you stay positive and manage the stress that can come from change in the workplace, community, and your life at home.



COLLABORATION

COLLABORATION

Your ability to contribute and support others to achieve a common goal. For example, at work we use this skill to provide meaningful support to team members while completing a project.

Why this skill is important

Today people are more connected within communities, across the country, and around the world. Modern workplaces are more diverse, and many jobs require you to work with others from different backgrounds and cultures to complete tasks and solve problems. It is important to be able to work respectfully with people who have different professions, experiences, cultures, and backgrounds. Collaboration skills help you perform better in a team by understanding how to support and value others, manage difficult interactions and contribute to the team's work. Strong collaboration skills help you build and maintain positive relationships with others at work, in school, and in other parts of your life.



COMMUNICATION

COMMUNICATION

Your ability to receive, understand, consider, and share information and ideas through speaking, listening, and interacting with others which includes broader concepts such as non-verbal communication. For example, we use this skill to listen to instructions, serve customers and discuss ideas.

Why this skill is important

Strong communication skills help you share information in a way that others can clearly understand. You also need strong communication skills to listen to, pay attention to, and understand others. In all jobs, communication skills are important for developing good working relationships with co-workers and clients, including those from different backgrounds and cultures. You also need these skills to work effectively in a team, understand a variety of viewpoints, and to gather and share information while problem solving – whether at work or in your daily life.



CREATIVITY & INNOVATION

CREATIVITY & INNOVATION – NEW

Your ability to imagine, develop, express, encourage, and apply ideas in ways that are novel, unexpected, or challenge existing methods and norms. For example, we use this skill to discover better ways of doing things, develop new products, and deliver services in a new way.

Why this skill is important

Creativity and innovation skills help you come up with new, unique, or “outside the box” ideas or to approach something differently than in the past, both at work and outside work. A curious mindset that finds inspiration from a broad range of experiences and perspectives helps develop creativity and innovation skills. Employers are increasingly seeking people who can apply creativity and innovation skills to their work in our increasingly diverse settings, and to come up with new solutions or approaches to tackling challenges. With strong creativity and innovation skills, you can also support and inspire others to develop their own creativity and innovation.



DIGITAL

DIGITAL

Your ability to use digital technology and tools to find, manage, apply, create and share information and content. For example, we use this skill to create spreadsheets, safely use social media, and securely make online purchases.

Why this skill is important

Digital technology has changed the way you find and share information, solve problems, and communicate with others. Most jobs now use digital skills, and you need them when you apply other skills such as reading, writing and numeracy. Digital skills help you keep up with changing demands in the modern workplace and in your daily life.



NUMERACY

NUMERACY

Your ability to find, understand, use, and report mathematical information presented through words, numbers, symbols, and graphics. For example, we use this skill to perform calculations, manage budgets, analyze and model data and make estimations.

Why this skill is important

The modern economy requires numeracy skills that go beyond basic arithmetic. Understanding numbers remains critical to functioning in today's society. Many jobs require the ability to work with numbers and math. Numeracy skills are also needed in a wide variety of daily contexts, including managing your finances and making sense of statistics in the news.



PROBLEM SOLVING

PROBLEM SOLVING

Your ability to identify, analyze, propose solutions, and make decisions. Problem solving helps you to address issues, monitor success, and learn from the experience. For example, we use this skill to make hiring decisions, select courses of action and troubleshoot technical failures.

Why this skill is important

Every day you use information to make decisions, solve problems, and take actions. This can include thinking about different ways to complete a task and choosing the best solution, or deciding what to do first when several activities are competing for your attention. The ability to think, make decisions, and solve problems effectively improves the way you carry out activities, and meet goals and deadlines at work or in other daily life situations. Strong problem-solving skills will help you gather the right information, identify and solve problems, and make better decisions. As you learn from these experiences, you will strengthen your problem-solving skills and more quickly and effectively adapt to change.



READING

READING

Your ability to find, understand, and use information presented through words, symbols, and images. For example, we use this skill to locate information on forms and drawings, and to read items such as emails, reports, news articles, blog posts and instructions.

Why this skill is important

Reading helps you to understand and interpret the meaning within the text. Strong reading skills allow you to do your job and to work safely, and efficiently. You use reading skills to learn other skills, for example, by reading online learning resources. Reading is important in day-to-day activities, such as understanding changes in travel advisories and interpreting the important messages in articles.



WRITING

WRITING

Your ability to share information using written words, symbols, and images. For example, we use this skill to fill out forms and applications, and write emails, reports and social media posts.

Why this skill is important

We write to communicate ideas and information to other people. In today's world, we require writing skills that are suitable for different situations including digital platforms. Knowing what to write, how much to write, and in which style to write is important. Writing skills ensure your writing is suitable for your purpose, the intended reader, and the context.

CONSTRUCTION TRADES



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Bricklayer	•	•	72320	
Carpenter	•	•	72310	
Concrete Finisher	•	•	73100	
Construction Craft Worker	•	•	75110	
Crane Operator		•	72500	*
Floorcovering Installer	•	•	75110	
Glazier	•	•	73111	
Insulator (Heat & Frost)	•	•	72014	
Ironworker (Generalist)	•	•	72105	
Landscape Horticulturist	•	•	22114	
Lather (Interior Systems Mechanic)	•	•	73102	
Painter & Decorator	•	•	73112	
Pre-Engineered Building Erector	•			
Roofer	•	•	73110	
Sloped Roofer	•		73110	

HSAP – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10. It is the responsibility of the student/apprentice to: find a qualified, insured employer willing to train an apprentice; complete the required apprenticeship application and send the application to the school contact/guidance counsellor; work with their employer and the school contact/guidance counsellor to make up a suitable on-the-job/academic timetable.

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 journey person's competence and quality workmanship and ensures recognition of his/her certification across Canada. (Journey person 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.

Bricklayer

HSAP	•
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Red Seal	•
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NOC Code	72320
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Cert. Req'd.

What do they do?

Using properly-selected mortars and precisely-cut stone, bricks, concrete blocks or other materials, Bricklayers build interior and exterior walls and paths and apply brick to chimneys and smokestacks. They are also responsible for preparing surfaces to be covered, such as caulking and cleaning, and placing damp proofing and masonry flashing.

Potential Employers

- Construction companies
- Bricklaying contractors
- Self-employment

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

- Grade 12 recommended.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Manitoba Masonry Institute

1447 Waverley Street, Winnipeg, MB R3T 0P7

<http://www.manitobamasonry.ca>

Bricklayers and Masons Union

Unit 4-225 McPhillips Street, Winnipeg, MB R3E 2K3

(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

Carpenter

HSAP	•
Red Seal	•
NOC Code	72310
Cert. Req'd.	

What do they do?

Carpenters work on a wide variety of tasks associated with building and repairing whole, or parts of, buildings and other structures made of wood, wood substitutes, steel and other materials. Working in all areas of both the private and commercial construction industries, as well as in maintenance and renovations, carpenters crib basements, build house frameworks, walls, roofs and exterior finishes, and install doors, windows, flooring, cabinets, stairs, handrails, panelling, moulding and ceiling tiles. They are also responsible for building concrete forms, scaffolding, bridges, trestles, tunnels, shelters, towers and other structures.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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.meritmb.com> (204) 888-6202

Concrete Finisher

HSAP	•
Red Seal	•
NOC Code	73100
Cert. Req'd.	

What do they do?

Concrete Finishers plan, prepare, place and finish concrete on many different types of residential, industrial and commercial projects including floors, walls, driveways, sidewalks, streets, highways and airport runways. They understand the properties and types of concrete and apply the proper techniques for the desired finish, using both traditional and contemporary tools. Other projects include restoration and resurfacing of damaged concrete.

Potential Employers

- Construction companies
- General contractors
- Self-employment

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Chemistry.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Construction and Specialized Worker's Union Local 1258

Unit 2 - 225 McPhillips Street, Winnipeg, MB R3E 2K3

<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	75110
Cert. Req'd.	

What do they do?

Construction Craft Workers are responsible for site preparation and cleanup, setting up and removing access equipment, working on concrete and masonry, steel, wood and pre-cast erecting projects. They handle materials and equipment and perform demolition, excavation and compaction activities. They may also be responsible for site security and management of pedestrian and vehicular traffic. They are usually found working on a variety of structures including residential, commercial and industrial buildings, as well as hydroelectric dams, roadways, bridges and railways. In some areas, they may also work on utility, landscape and pipeline projects.

Potential Employers

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

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

- Grade 12 or equivalent.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Unit 2 - 225 McPhillips Street, Winnipeg, MB R3E 2K3

<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

Crane Operator

HSAP	
Red Seal	•
NOC Code	72500
Cert. Req'd.	*

What do they do?

A Crane Operator operates and maintains specific types of cranes or draglines that lift, move, position, or place machinery, equipment and other large objects. This does not apply to equipment used exclusively for fire fighting. Operators use mobile cranes, boom trucks and tower cranes to lift, move, position, unload and reload materials and equipment at construction sites, on offshore oil rigs, in rail yards, docks and plants.

Potential Employers

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

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

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a two to three – year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- 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

200 Regent Ave. W., Winnipeg, MB R2C 1R2

<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

Floorcovering Installer

HSAP	•
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Red Seal	•
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NOC Code	75110
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Cert. Req'd.

What do they do?

Floorcovering Installers assess, prepare, plan, repair, remove and install all kinds of floorcoverings such as carpet, resilient flooring, wood flooring and associated trim.

Potential Employers

- Floorcovering retail outlets
- Contractors
- Installation companies

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Glazier

HSAP	•
Red Seal	•
NOC Code	73111
Cert. Req'd.	

What do they do?

A Glazier cuts, prepares, fabricates and handles all glass materials for buildings and fixtures of all types. They set, attach, install and remove glass, and install and attach architectural metals or related substitutes in commercial and residential buildings.

Potential Employers

- Commercial construction companies
- Residential construction companies

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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.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

Insulator (Heat & Frost)

HSAP	•
Red Seal	•
NOC Code	72014
Cert. Req'd.	

What do they do?

Heat and Frost Insulators read and interpret drawings and specifications to determine the requirements, amount and type of materials for any specific project. They measure, cut, fit, install and secure insulation in the required area, and remove or seal off old asbestos insulation.

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?

- Grade 12 or equivalent.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

International Association of Heat and Frost Insulators and Allied Workers

Local 99-Manitoba

Unit 5 - 225 McPhillips Street, Winnipeg MB R3E 2K3 <http://www.insulators99.org> (204) 694-0726

Thermal Insulation Association of Canada (TIAC)

1485 Laperriere 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	72105
Cert. Req'd.	

What do they do?

Ironworkers are skilled tradespeople with a range of skills. They erect structural steel components, reinforce steel, post tension tendons, install conveyors and robotic equipment and perform reconstructive work on existing structures and bridges. The full range of tasks as an Ironworker includes planning and co-ordination of equipment, materials and human resources; construction and demolition of structures; and storage and inventory of materials and equipment.

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?

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

HSAP	•
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Red Seal	•
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NOC Code	22114
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Cert. Req'd.

What do they do?

Landscape Horticulturists design, construct, install and maintain landscaping. Projects include walkways, fences, decks, outbuildings, and irrigation systems. Responsibilities include maintaining inventory and facilities in greenhouses and garden retail centres and advising customers and clients on plants, plant materials, pesticides, fertilizers and other landscaping products.

Potential Employers

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

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

- Grade 12 or equivalent including a recommended course in Biology.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Manitoba Golf Superintendents Association

2605 Summerville Court Unit A2082, Mississauga, ON L4X 0A2

<http://www.mgsa.mb.ca> 1-800-387-1056

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.meritmnb.com> (204) 888-6202

Lather (Interior Systems Mechanic)

HSAP	•
Red Seal	•
NOC Code	73102
Cert. Req'd.	

What do they do?

Interior Systems Mechanics install and apply lath, stucco wire, frameworks, vapour barrier, sound baffling, shielding, thermal and sound insulation, and access flooring systems to nearly all parts of the interior and exterior of a house or building. They also install decorative finishes and accessories.

Potential Employers

- Construction contractors
- Renovation companies

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

- Grade 12 or equivalent.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

HSAP	•
Red Seal	•
NOC Code	73112
Cert. Req'd.	

What do they do?

Responsibilities of Painters and Decorators include blending and mixing paints, creating colour schemes, and using a variety of techniques to paint a wide range of surfaces. They also work with neutralizing agents, putty, varnish, lacquer, and stipple-texturing, and match and apply fabric or vinyl products to ceilings and walls.

Potential Employers

- Construction contractors
- Building maintenance firms
- Painting contractors

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

- Grade 12 or equivalent.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Pre-Engineered Building Erector

HSAP

•

Red Seal

NOC Code

Cert. Req'd.

What do they do?

Pre-Engineered Building Erectors fabricate, construct and join scaffolding, and erect pre-engineered buildings. They are limited to work on one-story, steel framed buildings generally referred to pre-engineered buildings.

Potential Employers

- Construction contractors

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

- Grade 12 or equivalent.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Roofer

HSAP	•
Red Seal	•
NOC Code	73110
Cert. Req'd.	

What do they do?

Roofers estimate, prepare, repair and replace flat and sloped roofs. Roofers also install vapour barriers and insulation.

Potential Employers

- Construction contractors
- Roofing contractors

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Science.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Sloped Roofer

HSAP	•
Red Seal	
NOC Code	73110
Cert. Req'd.	

What do they do?

A Sloped Roofer is a person who installs, replaces and repairs sloped roofs using products such as shingles, asphalt, metal, tile, wood, slate, composite or rolled product roofing. Sloped Roofers install attic ventilation systems and flashing for sloped roofs, installs roof accessories, such as brackets and skylights, in and on sloped roofs and maintains and diagnoses issues with existing sloped roofs.

Potential Employers

- Roofing companies
- Construction contractors

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

- Grade 12 or equivalent including recommended courses in Math and Science.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

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



PITC
PIPING INDUSTRY TECHNICAL COLLEGE

MANUFACTURING TRADES



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Boilermaker	•	•	72103	
Cabinetmaker	•	•	72311	
CNC Machinist		•	72100	
Electric Motor System Technician	•	•	72422	
Instrumentation and Control Technician		•	22312	
Machinist	•	•	72100	
Pork Production Technician	•		84120	
Rig Technician		•	8232	
Tool & Die Maker	•	•	72101	
Water and Wastewater Technician	•		92101	
Welder	•	•	72106	

HSAP – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10. It is the responsibility of the student/apprentice to: find a qualified, insured employer willing to train an apprentice; complete the required apprenticeship application and send the application to the school contact/guidance counsellor; work with their employer and the school contact/guidance counsellor to make up a suitable on-the-job/academic timetable.

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.

Boilermaker

HSAP	•
Red Seal	•
NOC Code	72103
Cert. Req'd.	

What do they do?

A Boilermaker assembles, installs and fits tanks, boilers and other storage equipment. They are involved with all aspects of tank and vessel construction and are trained to read and interpret blueprints, layout and cut steel plate, roll and cut sheet steel, assemble and install nozzles, rings, flanges and trays to finished units, weld using oxyacetylene and electric arc equipment, construct steam drums, refractories, air ducts, fans and other equipment for boiler units, dismantle rigging and hoisting equipment.

Potential Employers

- Industrial, manufacturing and commercial facilities

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

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Canadian Boilermakers Local 555

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

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

Cabinetmaker

HSAP	•
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Red Seal	•
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NOC Code	72311
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Cert. Req'd.

What do they do?

Cabinetmakers produce furniture, cabinetry and architectural millwork from a variety of natural and manufactured materials for both commercial and residential markets. Cabinetmakers use traditional and modern tools and techniques to produce high quality and other wood specialties, including staircases, doors, furniture, moulding, joinery, veneers, inlays and laminates.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

CNC Machinist

HSAP	
Red Seal	•
NOC Code	72100
Cert. Req'd.	

What do they do?

A CNC Machinist is someone who programs, sets up and operates metal-cutting computer numerical control machines. CNC 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?

- To become an apprentice in the trade, a person must hold a certificate of qualification in the Trade of Machinist or the Trade of Tool and Die Maker.
- Completion of a one-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

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

Electric Motor System Technician

HSAP	•
Red Seal	•
NOC Code	72422
Cert. Req'd.	

What do they do?

An Electric Motor System Technician is someone who tests, rebuilds and repairs electric motors, generators, transformers and controllers.

Potential Employers

- Electrical repair shops
- Manufacturing plants

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

- Grade 12 or equivalent including recommended courses in pre-calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Electrical Apparatus Service Association, Western Canada Chapter

<http://www.easa.com>

Instrumentation and Control Technician

HSAP

Red Seal

NOC Code

22312

Cert. Req'd.

What do they do?

An Instrumentation and Control Technician is someone who installs, examines, removes, repairs and/or replaces items such as sensors, indicators, tubing and wiring. They also work on x-ray equipment, closed-circuit television systems, monitoring and alarm systems, gas analysis equipment and other lab equipment. Instrumentation and Control Technicians are employed by water sewage treatment plants, mining and large manufacturing companies.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Manitoba Hydro

360 Portage Ave., Winnipeg, MB R3C 0G8

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

VALE

Box 5000, 1 Vale Road, Thompson, MB R8N 1P3

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

Machinist

HSAP	•
Red Seal	•
NOC Code	72100
Cert. Req'd.	

What do they do?

Machinists set up and operate a variety of machine tools to precision cut, mill, turn, bore, drill or grind metal and similar materials into parts or products. They study specifications and drawings, calculate dimensions and tolerances, and then measure, set up and manufacture their projects.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- You can also train to be a CNC Machinist after you complete either your machinist or tool and die certification.

For more information

Unifor

113 - 1376 Grant Avenue (Second Floor), Winnipeg, MB R3M 3Y4

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

Canadian Manufacturers and Exporters – Manitoba Chapter

200-1479 Buffalo Place, Winnipeg, MB R3T 1L7

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

Machinist and Aerospace Workers International

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

Pork Production Technician

HSAP	•
Red Seal	
NOC Code	84120
Cert. Req'd.	

What do they do?

Pork Production Technicians are certified to handle and care for pigs in the breeding, farrowing, nursery and finishing stages of pork production. Overall duties include caring for the breeding herd and growing pigs in their development from birth to market, including feeding, watering, care, stockmanship, and keeping a safe and sanitary barn environment.

Potential Employers

- Specialized farms

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

- Grade 12 or equivalent.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Rig Technician

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 (403) 264-4311

Tool & Die Maker

HSAP	•
Red Seal	•
NOC Code	72101
Cert. Req'd.	

What do they do?

A Tool and Die Maker fabricates, repairs and modifies custom-made prototypes and a wide variety of tools, jigs, fixtures, gauges and dies for use in industrial and manufacturing production. Jigs and fixtures are devices that hold work pieces while they are bored, stamped, milled or drilled. Dies are metal forms used to shape metal in stamping and forging operations.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- You can also train to be a CNC Machinist after you complete either your machinist or tool and die certification.

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	92101
Cert. Req'd.	

What do they do?

Water and Wastewater Technicians are vital to almost every facet of the water and wastewater industry, ensuring the safety of potable water and the safe processing of wastewater to meet public health, environmental and consumer concerns.

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?

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- Requires the successful completion of 1 year in each of the following four subcomponent trades: Water Distribution Operator, Water Treatment Operator, Wastewater Collection Operator, and Wastewater Treatment Operator.

For more information

Manitoba Water and Wastewater Association

www.mwwa.net

Canadian Water and Wastewater Association

www.cwwa.ca (613) 747-0524

Welder

HSAP	•
Red Seal	•
NOC Code	72106
Cert. Req'd.	

What do they do?

A certified Welder has the knowledge, ability and skills required to lay out, cut, prepare, repair, form, bend, install and join metals using a variety of welding equipment. Since the range of industrial items made of metal is extensive, Welders must not only be versatile but also highly skilled.

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?

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- In addition to a Red Seal endorsed certification-theory examination, a practical examination is required for this trade.

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.cwbgroupp.org>

Manitoba Building and Construction Trades Council

<http://www.mbtrades.ca>



**Got a story to tell about Skills Manitoba?
Why not share it!**

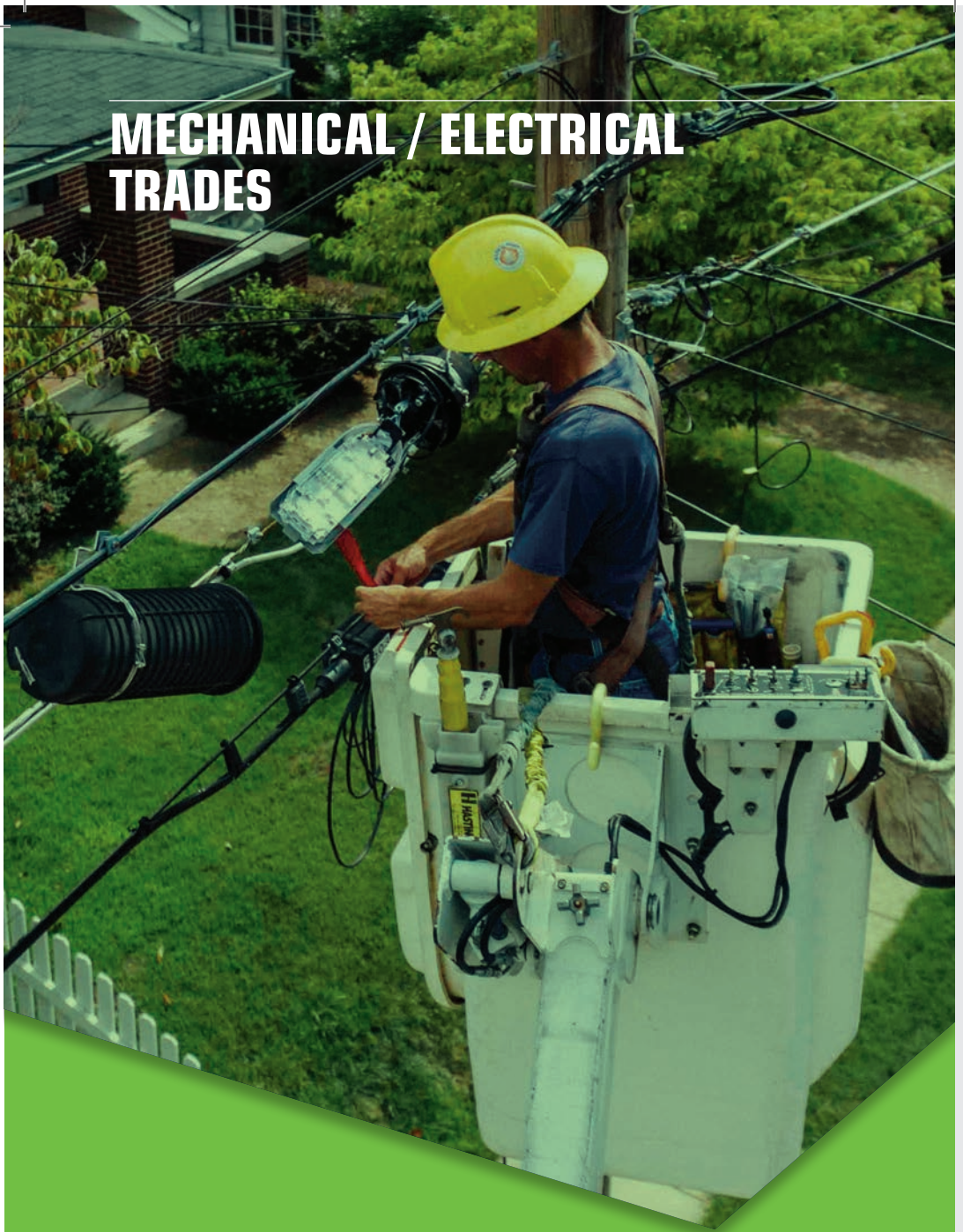
Help us get the message out.

**Go to
www.skillsmanitoba.ca/alumnistories
to tell **YOUR** story.**

Our goal is to make sure that young Manitobans
are informed about all the benefits of pursuing a
career in skilled trades and technologies.



MECHANICAL / ELECTRICAL TRADES



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Construction Electrician	•	•	72200	*
Gasfitter	•	•	72302	
Industrial Electrician	•	•	72201	*
Industrial Mechanic (Millwright)	•	•	72400	
Plumber	•	•	72300	
Power Electrician	•		72202	
Refrigeration & Air Conditioning Mechanic	•	•	72402	*
Sheet Metal Worker	•	•	72102	
Sprinkler Fitter	•	•	72301	*
Steamfitter – Pipefitter	•	•	72301	*

HSAP – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10. It is the responsibility of the student/apprentice to: find a qualified, insured employer willing to train an apprentice; complete the required apprenticeship application and send the application to the school contact/guidance counsellor; work with their employer and the school contact/guidance counsellor to make up a suitable on-the-job/academic timetable.

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.

Construction Electrician

HSAP	•
Red Seal	•
NOC Code	72200
Cert. Req'd.	*

What do they do?

A Construction Electrician plans, assembles, installs, repairs, tests and maintains electrical fixtures and systems that provide heat, light, power or control in residential, commercial and industrial buildings. Construction Electricians ensure that the electrical apparatus and systems people at home and in business depend on every day are safe and operate properly. Construction Electricians also troubleshoot and repair or reinstall electrical systems when required. They must have the experience to safely remove electrical services and systems as well as assess the suitability of existing services for future use. Many Construction Electricians specialize in specific types of installations such as new home construction or in the commercial and industrial sectors in hospitals or factories.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

320-830 King Edward Street, Winnipeg, MB R3H 0P4

<http://www.eamanitoba.ca> (204) 744-2405

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

Gasfitter (Domestic Gasfitter *prerequisite for 'Gasfitter')

HSAP	•
Red Seal	•
NOC Code	72302
Cert. Req'd.	

What do they do?

There are two types of Gasfitters based on the license they obtain:

- Gasfitter (Class A): commonly referred to as Commercial / Industrial
- Domestic Gasfitter (Class B)

Gasfitters install, inspect, repair and maintain gas lines and gas equipment such as meters, regulators, heating units and appliances in residential, commercial and industrial establishments. This also includes testing and replacing defective equipment, attending to gas-escape calls and assisting in the investigation of gas fires and explosions, advising clients on safety features and maintenance of gas units, converting cars or appliances to use natural gas fuels, preparing work reports, reading and interpreting drawings and blueprints.

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?

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Gasfitter (Class A): Completion of a four-year apprenticeship program;
- Domestic Gasfitter (Class B): Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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.mcamb.ca> (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

Industrial Electrician

HSAP	•
Red Seal	•
NOC Code	72201
Cert. Req'd.	•

What do they do?

An Industrial Electrician plans, installs, tests, inspects, troubleshoots and services all types of industrial electrical equipment vital to the operation of commercial and industrial businesses. These include all equipment or components directly or indirectly exposed to electric power, such as motors, generators, pumps, lighting systems and associated electrical and electronic controls. They also do preventive maintenance and keep maintenance records. Industrial Electricians are employed by electrical contractors, government, and maintenance departments in factories, plants or mines.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Industrial Mechanic (Millwright)

HSAP	•
Red Seal	•
NOC Code	72400
Cert. Req'd.	

What do they do?

An Industrial Mechanic, also known as a Millwright, installs, tests, removes, repairs and services a wide variety of industrial machinery and equipment. Industry depends on Industrial Mechanics to install machinery and keep important equipment running smoothly and efficiently. Industrial Mechanics read blueprints, drawings and manuals to determine repairs and work procedures and perform preventative and operational maintenance.

Potential Employers

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

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

- Grade 12 or equivalent including a recommended course in Science.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Plumber

HSAP	•
Red Seal	•
NOC Code	72300
Cert. Req'd.	

What do they do?

Plumbers plan, install, maintain, inspect and repair plumbing systems, fixtures, equipment and controls in residential and commercial buildings. Some Plumbers install piping systems in new home construction, commercial, industrial and public buildings. Others are experts in the retrofitting, repair and maintenance of existing systems. In smaller communities, Plumbers generally do a wider variety of plumbing and related tasks, including installing private sewage disposal systems and potable (drinking) water distribution systems. Plumbers must be able to read blueprints and project specifications to determine the layout for the plumbing and other materials. They may work with pipes made from iron, steel, lead, copper, plastic, glass and cement and need to know the particular characteristics of the substances being carried in the pipes.

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?

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Power Electrician

HSAP	•
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Red Seal	
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NOC Code	72202
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Cert. Req'd.	
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What do they do?

A Power Electrician is certified to install, test, repair and maintain electrical apparatuses in generating and converter stations and substations. This equipment is used to generate, transmit, distribute and convert electricity. One very important requirement of this trade, in addition to the technical knowledge, is the need to observe and practice safety at all times because of the hazards and dangers associated with electricity. Power Electricians work both inside and outside buildings and structures such as thermal and hydraulic generating stations, substations and other utility-owned buildings. Maintenance work takes place on the ground and at various heights requiring bucket-truck or ladder work.

Potential Employers

- Electrical utility companies such as, Manitoba Hydro.

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Canadian Union of Public Employees (CUPE) – Local 500

203-275 Broadway, 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

Refrigeration & Air Conditioning Mechanic

HSAP	•
Red Seal	•
NOC Code	72402
Cert. Req'd.	*

What do they do?

In Manitoba, you can train to be a Commercial Refrigeration and Air Conditioning Mechanic OR a Residential Refrigeration and Air Conditioning Mechanic. Mechanics in this trade install, repair, service, replace and maintain a variety of air conditioning and heating equipment, as well as ventilation and air exchange systems. Commercial Mechanics work in buildings such as apartments, restaurants, hospitals and ice rinks. Residential Mechanics work in private residences.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Science.
- Commercial: Completion of a four-year apprenticeship program;
- Domestic: Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- Red Seal certification is available for Commercial. Domestic is provincially certified.

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

Sheet Metal Worker

HSAP	•
Red Seal	•
NOC Code	72102
Cert. Req'd.	

What do they do?

After reading blueprints and orders, Sheet Metal Workers lay out, cut, shape and finish sheet metal using hand and power tools and join the sheet metal using welding tools, rivets, screws and folding.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

Sprinkler Fitter

HSAP	•
Red Seal	•
NOC Code	72301
Cert. Req'd.	*

What do they do?

A Sprinkler Fitter installs and maintains water, foam, carbon dioxide and dry chemical fire protection systems in buildings. Duties include reading drawings and specifications; planning system layouts; preparing written cost estimates; and communicating with customers.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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.meritmmb.com> (204) 888-6202

Steamfitter - Pipefitter

HSAP	•
Red Seal	•
NOC Code	72301
Cert. Req'd.	*

What do they do?

Steamfitter-Pipefitters fabricate and maintain piping systems used to carry gases, liquids and solids of all types. They work in many industrial settings, from manufacturers to water treatment plants. Duties include interpreting blueprints and drawings; sketching fabrication details; and working to codes and specifications.

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?

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Cook	•	•	63200	
Electrologist	•		63211	*
Esthetician	•		63211	*
Hairstylist	•	•	63210	*

HSAP – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10. It is the responsibility of the student/apprentice to: find a qualified, insured employer willing to train an apprentice; complete the required apprenticeship application and send the application to the school contact/guidance counsellor; work with their employer and the school contact/guidance counsellor to make up a suitable on-the-job/academic timetable.

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.

Cook

HSAP	•
Red Seal	•
NOC Code	63200
Cert. Req'd.	

What do they do?

Cooks plan menus, prepare a variety of foods according to health and safety regulations and manage commercial kitchens. While specific duties vary depending on the establishment, Cooks generally prepare meals and are responsible for food costing, safety and sanitation. Cooks also supervise kitchen helpers and food preparation personnel in food preparation, cooking and handling. Respect for diets due to culture, health or religion is important.

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?

- Grade 12 or equivalent.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Canadian Culinary Federation, Winnipeg Branch

<http://www.winnipegchefs.org>

Manitoba Restaurant and Food Services Association

450-112 Market Ave., Winnipeg, MB R3B 0P4

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

Electrologist

HSAP	•
Red Seal	
NOC Code	63211
Cert. Req'd.	*

What do they do?

Electrologists perform pre-epilation (pre-hair removal) treatments, Electrolysis using galvanic and/or short-wave currents, and post-epilation (post-hair removal) treatments to remove unwanted hair for clients. Electrologists consult with clients to determine the treatment needed and to outline any risks. They also sterilize equipment and keep their work areas clean and sanitary, sometimes performing reception and management duties

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?

- Grade 12 or equivalent.
- Completion of a one-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- In addition to a provincial certification-theory examination, a practical examination is required for this trade.
- When registering as an apprentice, enrolment in or completion of technical training is required.

For more information

Federation of Canadian Electrolysis Associations

<http://www.fcea.org>

Esthetician

HSAP	•
Red Seal	
NOC Code	63211
Cert. Req'd.	*

What do they do?

The Esthetician trade is comprised of two sub-trades: Nail Technician and Skin Care Technicians. 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?

- Grade 12 or equivalent.
- Esthetician: Completion of a two-year apprenticeship program;
- Nail Technician: Completion of a one-year apprenticeship program;
- Skin Care Technician: Completion of a one-year apprenticeship program;
- Approximately 80% paid on-the-job training and 20% in-class technical training.
- In addition to a provincial certification-theory examination, a practical examination is required for this trade.
- When registering as an apprentice, enrolment in or completion of technical training is required.

Hairstylist

HSAP	•
Red Seal	•
NOC Code	63210
Cert. Req'd.	*

What do they do?

Hairstylists use a range of specialty equipment and products to cut, style, colour and chemically treat hair. Duties also include treating the hair, scalp and related skin conditions. Classroom instruction includes developing a working knowledge of workplace health and safety, as well as personal and public hygiene. Hairstylists enjoy working with, and meeting people. They need to be able to stand for long periods of time, maintain a well-groomed and professional appearance, and keep up-to-date with styles, supplies and technologies.

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?

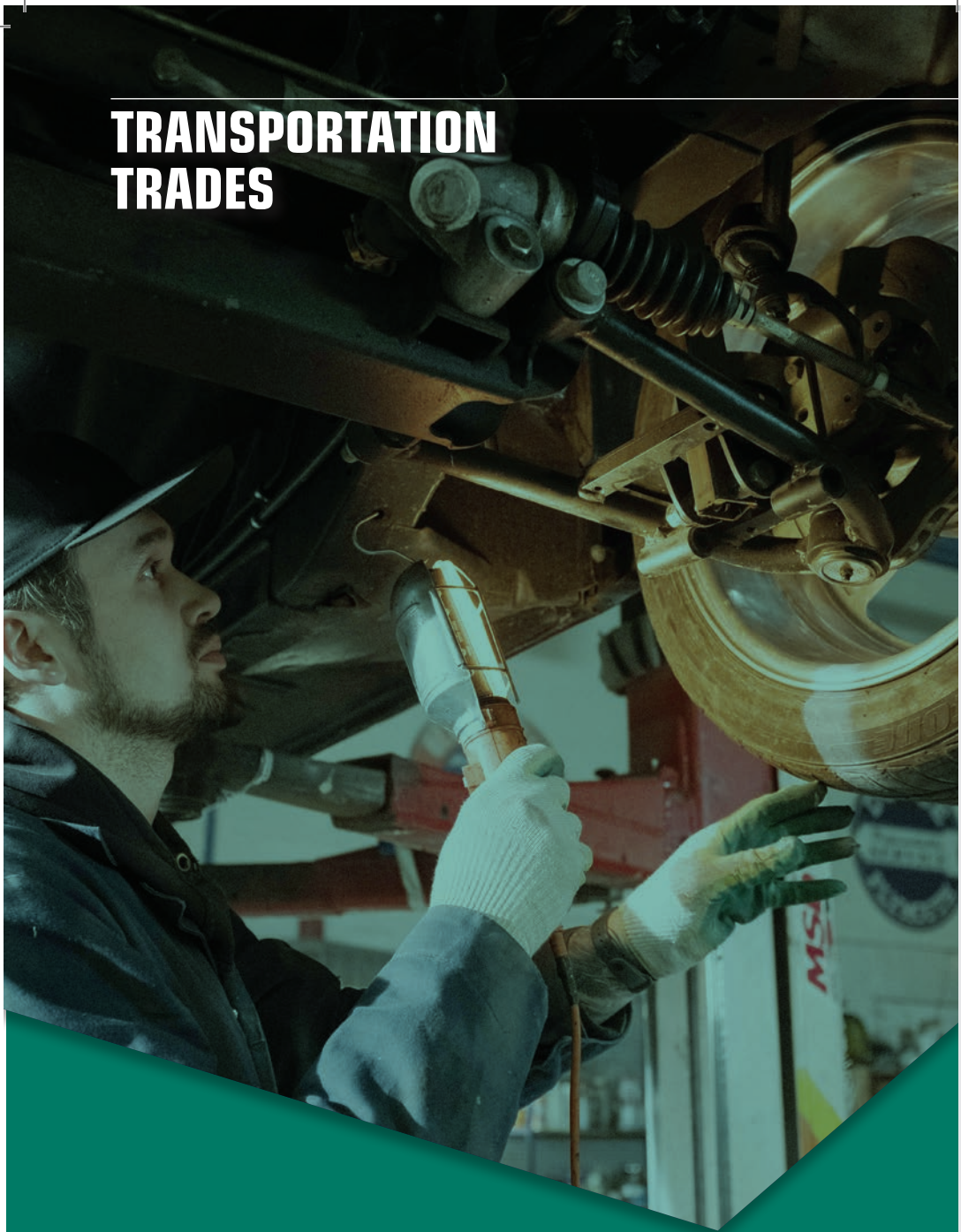
- Grade 12 or equivalent.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.
- In addition to a Red Seal endorsed certification-theory examination, a practical examination is required for this trade.
- When registering as an apprentice, enrolment in or completion of technical training is required.

For more information

Manitoba Hairstylists Association

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

TRANSPORTATION TRADES



Trade	HSAP	Red Seal	NOC Code	Compulsory Certification
Agricultural Equipment Technician	•	•	72401	
Aircraft Maintenance Journeyperson	•		72020	
Automotive Painter	•	•	72411	
Automotive Service Technician	•	•	72410	
Diesel Engine Mechanic	•		72401	
Gas Turbine Repair and Overhaul Technician	•			
Heavy Duty Equipment Technician	•	•	72401	
Marine & Outdoor Power Equipment Technician	•			
Motor Vehicle Body Repairer (Metal & Paint)	•	•	72411	
Partsperson	•	•	14401	
Railway Car Technician	•			
Recreation Vehicle Service Technician	•	•	72423	
Transport Trailer Technician	•	•	72410	
Truck and Transport Mechanic	•	•	72410	

HSAP – High School Apprenticeship Program. Allows students in high school to begin an apprenticeship program in grade 10. It is the responsibility of the student/apprentice to: find a qualified, insured employer willing to train an apprentice; complete the required apprenticeship application and send the application to the school contact/guidance counsellor; work with their employer and the school contact/guidance counsellor to make up a suitable on-the-job/academic timetable.

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.

Agricultural Equipment Technician

HSAP	•
Red Seal	•
NOC Code	72401
Cert. Req'd.	

What do they do?

An Agricultural Equipment Technician is certified to service, repair, assemble and maintain any agricultural equipment and attachments used for farming operations. To become an Agricultural Equipment Technician, you must possess a wide range of skilled technical abilities related to the repair and maintenance of agricultural equipment used in farming operations.

Potential Employers

- Farm machinery industry
- Service shops

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

- Grade 12 or equivalent.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Canada West Equipment Dealers Assoc.

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

<https://www.naeda.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	72020
Cert. Req'd.	

What do they do?

An Aircraft Maintenance Journeyperson inspects aircraft, completes aircraft weight and balance reports, tows and taxis aircraft, and troubleshoots and repairs aircraft systems.

Potential Employers

- Passenger and aircraft carriers
- Specialty repair shops

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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	72411
Cert. Req'd.	

What do they do?

Automotive Painters sand, fill, prime, finish and paint motor vehicles. They handle exterior trim and hardware, apply decals, transfers and stencils, and clean and maintain spray guns, spray booths and other equipment.

Potential Employers

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

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

- Grade 12 recommended.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

301 - 1780 Wellington Avenue, Winnipeg, MB R3H 1B3

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

CARS on DEMAND

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

Automotive Service Technician

HSAP	•
Red Seal	•
NOC Code	72410
Cert. Req'd.	

What do they do?

An Automotive Service Technician diagnoses malfunctions in automobiles, buses and trucks and repairs them. They work on all parts of both gas-powered and diesel-powered motor vehicles, perform scheduled maintenance and advise customers on work performed, general vehicle conditioning and future repair requirements. Automotive Service Technicians also perform safety checks for licensing and insurance.

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?

- Grade 12 or equivalent.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

301 - 1780 Wellington Avenue, Winnipeg, MB R3H 1B3

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

CARS on DEMAND

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

Diesel Engine Mechanic

HSAP	•
Red Seal	
NOC Code	72401
Cert. Req'd.	



What do they do?

Diesel Engine Mechanics diagnose, service, adjust, overhaul and maintain and test diesel engines and related equipment and components as well as related electrical and electronic systems. Much of the heavy equipment used in the construction, transportation and farming industries, such as bulldozers, cranes and tractors are powered by diesel.

Potential Employers

- Equipment dealers
- Manufacturers
- Diesel equipment repair companies

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

HSAP

•

Red Seal

NOC Code

Cert. Req'd.

What do they do?

A Gas Turbine Repair and Overhaul Technician works in a facility that has a dedicated engine overhaul, heavy maintenance or repair shop capable of disassembly, inspection and reassembly of internal engine components using engine manuals and engine-specific tooling. Much of the technician's work is hand work; consequently, manual dexterity and strong manual skills are important. Technicians must be able to use a wide range of hand and power tools.

Potential Employers

- Aircraft Manufacturing Facilities

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math and Physics.
- Completion of a two-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Canadian Council on 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	72401
Cert. Req'd.	

What do they do?

A Heavy Duty Equipment Technician is certified to diagnose, troubleshoot, assemble, service, repair and maintain heavy duty equipment. This includes any mobile equipment and attachments used to construct buildings, roads or highways, logging or mining operations, and railway operations.

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?

- Grade 12 or equivalent.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

HSAP



Red Seal

NOC Code

Cert. Req'd.

What do they do?

A Marine and Outdoor Power Equipment Technician is certified to repair, service and maintain small gasoline and diesel powered equipment such as outboard and inboard motors, jet drives in boats and personal watercraft (PWC), stern drives, lawn and garden equipment, snowmobiles, all terrain vehicles (ATVs) and similar multi-wheeled vehicles and related trailers.

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?

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

Mid-Canada Marine and Powersports Dealers Association

www.mmpda.ca

Motor Vehicle Body Repairer (Metal & Paint)

HSAP	•
Red Seal	•
NOC Code	72411
Cert. Req'd.	

What do they do?

Motor Vehicle Body Repairers restore the structural integrity of damaged vehicles by straightening frames, fixing minor body damage, removing badly damaged sections and priming and painting all repaired surfaces. As a Motor Vehicle Body Repairer, you will also repair and/or replace vehicle glass and interior and exterior components of the vehicle. Duties also include verifying dimensional accuracy, system functions, passenger protection, proper alignment and proper handling.

Potential Employers

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

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

- Grade 12 recommended.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

301 - 1780 Wellington Avenue, Winnipeg, MB R3H 1B3

<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

Partsperson

HSAP	•
Red Seal	•
NOC Code	14401
Cert. Req'd.	

What do they do?

Partspersons manage and sell parts for vehicles, appliance, machinery and equipment. They are responsible for maintaining parts storage systems, ordering parts for sale, tracking inventory, receiving orders and ensuring they are filled accurately. Partspersons also price parts and assist both the general public and other tradespeople in finding the parts they need.

Potential Employers

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

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

- Grade 12 or equivalent.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

For more information

The Manitoba Trucking Association

25 Bunting St., Winnipeg, MB R2X 2P5

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

Railway Car Technician

HSAP



Red Seal

NOC Code

Cert. Req'd.

What do they do?

Railway Car Technicians inspect, repair, replace and recondition mechanical or structural components and systems of freight cars and passenger coaches.

Potential Employers

- Railway Transport Companies

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

301 - 1780 Wellington Avenue, Winnipeg, MB R3H 1B3

<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 K1P 6B9

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

Recreation Vehicle Service Technician

HSAP	•
Red Seal	•
NOC Code	72423
Cert. Req'd.	

What do they do?

Recreation Vehicle Service Technicians are trained to inspect, test, replace and service all systems contained within a recreation vehicle, except for its engine and drive train. They work on systems such as propane, electrical, water, heating, braking, stabilizing and security systems and, therefore, have a broad base of knowledge and many different skills.

Potential Employers

- Recreation vehicle dealerships, manufacturers and independent repair shops

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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	•
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Red Seal	•
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NOC Code	72410
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Cert. Req'd.

What do they do?

A Transport Trailer Technician is certified to service, repair, assemble and maintain transport trailers used to carry commercial or non-commercial goods as registered under The Highway Traffic Act. They work on all parts and systems of a transport trailer, including framework, body work, suspension, brakes, wheels, electrical, hydraulic, refrigeration and heating.

Potential Employers

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

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a three-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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

301 - 1780 Wellington Avenue, Winnipeg, MB R3H 1B3

<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	72410
Cert. Req'd.	

What do they do?

A Truck and Transport Mechanic is certified to service, repair, assemble and maintain transport trucks and buses, including those with a gross weight of 4,500 kilograms or more. Equipment registered to carry people, equipment or goods on a highway as designated under The Highway Traffic Act, are also included in this certification.

Potential Employers

- Truck/transport dealerships
- Trucking firms
- Repair centres

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

- Grade 12 or equivalent including recommended courses in Applied or Pre-Calculus math.
- Completion of a four-year apprenticeship program: approximately 80% paid on-the-job training and 20% in-class technical training.

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.teamstersc.ca> (204) 694-9798

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
- Bricklayer
- Cabinetmaker
- Carpenter
- CNC Machinist
- Concrete Finisher
- Construction Craft Worker
- Construction Electrician
- Cook
- Electric Motor System Technician
- Floorcovering Installer
- Gasfitter
- 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
- Mobile Crane
- 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 Fitter
- Steamfitter-Pipefitter
- Tool and Die Maker
- Tower Crane Operator
- Transport Trailer Technician
- Truck and Transport Mechanic
- Welder

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

Apprenticeship Manitoba

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 qualify for the HSAP you must be enrolled in an approved Manitoba grade 10, 11 or 12 program. If you are under 16 years old, you will also need to apply for a child work permit. To become an apprentice, you must be working in a trade that is recognized by Apprenticeship Manitoba and have a qualified employer who can give you quality, on-the-job training. You, your employer and your school contact/guidance counsellor are required to submit the Apprenticeship Application to Apprenticeship Manitoba. After your application is approved and you are registered, you will learn the skills of your chosen trade by working closely with certified tradespeople in the industry.

It's a great opportunity

With HSAP you can:

- Earn high school credits while you work (up to eight, 40 Senior credits, or up to six credits for mature diploma students – based on 110 working hours per credit)
- Earn money while you learn (approximately 10 per cent more than provincial minimum wage)
- Earn post-secondary apprenticeship training hours
- Use your new skills and training to get a full-time job, a career in management or to start your own business.

Grants and Incentives

High School Apprenticeship Program (HSAP) Incentive

For every two HSAP credits earned (220 hours of on-the-job training), a tuition exemption for one level of Post Secondary Technical Training may apply, to a maximum of four Post Secondary Technical Training levels.

Career Sources

Red Seal Program

<http://www.red-seal.ca>

NOC – National Occupation Classification

<http://http://www.cic.gc.ca/english/immigrate/skilled/noc.asp>

Working in Canada/Labour Market Information

<http://www.jobbank.gc.ca>

Post Secondary Education Sources

Apprenticeship Manitoba

<http://www.gov.mb.ca/wd/apprenticeship>

Assiniboine Community College

<http://www.assiniboine.net>

Manitoba Institute of Trades & Technology

<http://www.mitt.ca>

Red River College

<http://www.rrc.mb.ca>

University College of the North

<http://www.ucn.ca>

Apprenticeship
Manitoba

Manitoba 

To learn more about apprenticeship training:

www.apprenticeshipmanitoba.ca

Become a fan of Apprenticeship on Facebook:

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



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 Technologists 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.

Architectural Technology/Architectural Engineering Technology

Communications Engineering Technologist

Electrical Engineering Technologist

Electronic Engineering Technologist

Environmental Protection Technologist

Geomatics Engineering Technologist

Instrumentation and Control Engineering Technologist

Mechanical Engineering Technologist

Municipal Engineering Technologist

Structural Engineering Technologist

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

Architectural Technology/ Architectural Engineering Technology

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

What do they do?

Architectural Technology (AT) focuses on the technologies and generation for building construction documents. Architectural Engineering Technology A/E focuses on the engineering systems, architectural aspects, and construction practices that build a building.

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 20-month program in Architectural Technology, or an equivalent is usually required for Architectural Technician. Those interested in Architectural Technology may enter directly into the program.
- 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.

For more information

Certified Technicians and Technologists Association of Manitoba (CTTAM)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Communications Engineering Technologist

Salaries

- **\$50,000 per annum – starting**
- **\$74,000 per annum – average**
- **\$100,000+ per annum – high**

Average Hourly Wage

- **Student Work Co-op**
\$20.30

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 Website: www.assiniboine.net/CET

Certified Technicians and Technologists Association of Manitoba

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Electrical Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

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

Electronic Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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

Certified Technicians and Technologists Association of Manitoba (CTTAM)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Environmental Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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

Certified Technicians and Technologists Association of Manitoba (CTTAM)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

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Email: register@rrc.ca

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

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

Geomatics Engineering Technologist

Salaries

- **\$50,000 per annum – starting**
- **\$74,000 per annum – average**
- **\$100,000+ per annum – high**

Average Hourly Wage

- **Student Work Co-op**
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Instrumentation and Control Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Mechanical Engineering Technologist

Salaries

- **\$50,000 per annum – starting**
- **\$74,000 per annum – average**
- **\$100,000+ per annum – high**

Average Hourly Wage

- **Student Work Co-op**
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Municipal Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

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

Structural Engineering Technologist

Salaries

- \$50,000 per annum – starting
- \$74,000 per annum – average
- \$100,000+ per annum – high

Average Hourly Wage

- Student Work Co-op
\$20.30

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)

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

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

Red River College

Email: register@rrc.ca

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

<https://www.rrc.ca/services/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:

Provide certification through credibility, recognition, employability and relationship.

If you wish further information please contact us at:

PO Box 700064 Kenaston PO, Winnipeg, MB, R3P 0X6

Phone: (204) 784-1088

E-mail: admin@cttam.com

Website: www.cttam.com



Diversity Statement:

Skills Canada Manitoba recognizes the need for a diverse workforce and inclusive work environment in order to attract and retain skilled employees to the trades and technology sectors. We will continue to address these needs by collaborating with students and partners to deliver culturally relevant programs and to facilitate safe and accessible learning spaces for those pursuing a career in trades and technologies.



Land Acknowledgment:

Skills Canada Manitoba offices are located in
Treaty 1 and Treaty 5 territories.

Our work spans across the traditional
territories of the Anishinaabe, Cree,
Oji-Cree, Dakota, Dene and Inuit peoples
and the homeland of the Metis Nation.

We will continue to develop and deliver
culturally relevant programs and to
promote Indigenous innovation and invention
across Manitoba.



NOTES

Skilled Trades & Technologies - 2022/2023



Our Mission:

**To attract young Manitobans to careers in
skilled trades and technologies**

Our Vision:

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



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