



## Programs

- Construction and Maintenance Electrician
- Construction Craft Worker
- Customer Care Agent—Information Technology Contact Centre
- Early Childhood Educator
- Educational Assistant
- Metal Fabricator
- Native Clothing and Crafts Artisan
- Native Residential Construction Worker
- Special Events Coordinator
- Welder

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**An apprentice is someone who learns a skilled trade on the job under the direction of more experienced workers. Apprentices are employees and earn a salary while they learn a skilled trade. They also complete classroom instruction offered at a community college as a part of their training.**

The duties of an apprentice become more complex as his / her skills improve. Upon successful completion of the trade requirements, apprentices earn a Certificate of Apprenticeship or a Certificate of Qualification (“ticket”) that allows them to work on their own at a higher rate of pay.

Most apprenticeships last two to five years, with an average of 85% of the apprentice’s time spent in the workplace.

## The Benefits of Apprenticeships

- Train to meet the needs of new and emerging trades and occupations.
- Study curriculum and participate in training that are designed and supported by industry.
- Experience integrated hands-on training and enhanced “in-class” curriculum.
- Earn while you learn; increase your earning power as you progress.
- Enjoy a career that is motivating and provides opportunities for continued education.
- Become the solution to a forecasted critical shortage of skilled trades’ people throughout the province.

## Becoming an Apprentice

Becoming an apprentice can be an important first step to learning new skills and building a rewarding career. Jobs in the skilled trades pay well, are interesting and challenging, and are in high demand in many industries. The first step is to find an employer who is willing to take you on as an apprentice. You can do this by applying directly to an employer or a joint apprenticeship council at a union office. See How It Works ([http://www.ilc.org/cfm/CM/Apprenticeship/Overview/cm\\_howItWorks.cfm](http://www.ilc.org/cfm/CM/Apprenticeship/Overview/cm_howItWorks.cfm)) for more information.

Once you have found an employer, you will register with the Ministry of Training Colleges and Universities as an apprentice. An apprenticeship is a partnership between you as the apprentice, a sponsor/employer and the province of Ontario (ministry). The Province of Ontario will pay for approximately 85% of the tuition for the in-school training component while the apprentice is responsible to pay the balance of tuition fees.

**Apprenticeship sites of interest:**  
[http://skilledtrades.ca/assets/pdf\\_files/apprenticeship\\_fact\\_sheet.pdf](http://skilledtrades.ca/assets/pdf_files/apprenticeship_fact_sheet.pdf)  
[www.edu.gov.on.ca](http://www.edu.gov.on.ca)  
[www.careercruising.com](http://www.careercruising.com)

# Construction and Maintenance Electrician Apprenticeship

Construction and Maintenance Electrician is a compulsory certified trade regulated by the Trades Qualification and Apprenticeship Act. A person working in this trade must hold a valid Certificate of Qualification or be registered as an apprentice.

Upon successfully completing the apprenticeship program and passing a trade examination, a person working in this trade is entitled to a Certificate of Apprenticeship and a Certificate of Qualification.

## Apprenticeship Duration

9,000 hours (about 4 ½ years)

## Educational Requirement

Grade 10 (Grade 12 recommended)

## In-school Training

Northern College offers the three levels of theoretical training required for the Construction and Maintenance Electrician Apprenticeship.

Training is delivered in block release format, that is, 8 weeks for the first level and 10 weeks each for the second and third levels.

## In-school training includes instruction in:

- Workplace Health and Safety
- Canadian Electrical Code
- Reading Blueprints
- Trade Communications
- Electrical / Electronics Theory
- Installation Methods
- Instrumentation
- Fire Alarms and Building Systems
- Drive Systems
- Electrical Equipment Maintenance
- Control Systems
- Power Distribution

## For program information:

<http://www.edu.gov.on.ca/eng/training/training.html>

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# Construction Craft Worker Apprenticeship

## In-class and practical training include:

- Construction Health and Safety Practices
- Blueprint Reading, Interpretation and Specifications
- Construction Hand and Power Tools, Proper Use and Handling
- Equipment Handling Practices and Procedures
- Rigging, Hoisting and Material Handling
- Introduction to Formwork
- Introduction to Concrete
- Introduction to Scaffolding
- Earth Barriers and Controls

This program is designed to cover the multi-skills required of craft workers who primarily work in the construction industry.

If a jobsite needs to be cleared, scaffold erected, asphalt leveled or concrete demolished, construction craft workers are the people who carry out these tasks. They know how to work with a great number of tools, such as pneumatic hammers (jack hammers), vibrating tampers, compressors, pumps, hoists, and cement mixers. They are truly the "jacks-of-all trades".

A great deal needs to be done to get a job started at a building site. Construction craft workers unload machinery and building materials and build scaffolding and barricades. When a job begins, their tasks include excavating and leveling building sites, building forms for concrete, and pouring, mixing and spreading concrete. Once the job is completed, they disassemble all the equipment used and clean up the site, including removing debris. Sometimes, they also help demolish buildings which can include tearing down structures and salvaging materials to recycle.

Construction craft workers do not just work at building construction. They also work on roads, bridges, pipelines, and mining sites. Construction craft workers assist various other trades people, such as carpenters, plumbers, glaziers, roofers, and dry-wallers. They may work as flagmen/women, concrete mixers, and excavators.

## Apprenticeship Duration

Approximately 1-2 years

The Construction Craft Worker Apprenticeship is based on competencies through demonstrated skills rather than on a fixed number of hours on the job; however, the benchmark is 2,400 hours, which includes 480 hours of in-class training.

The apprenticeship becomes complete when the apprentice has achieved competency in all of the on-the-job performance objectives and when the two levels of in-school training have been successfully completed.

## Educational Requirement

Grade 10 or higher

Note: Many employers recommend Grade 12. Prospective apprentices should have English, mathematics, and science high school courses, in addition to good mechanical reasoning.

## In-school training

Northern College offers the two levels of in-class training needed for this apprenticeship training program. Each level is approximately 240 hours in duration. Training can be conducted in block format (8 consecutive weeks) or on a part-time basis. This in-class training can also be community-based.

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# Customer Care Agent

## – Information Technology Contact Centre Apprenticeship

Problem solving and communicating, this is the “name of the game” for customer care agents. Customer care agents provide customer service over the telephone for activities ranging from sales to technical troubleshooting. Agents access information provided to help customers with their concerns, negotiate customer issues, and generally provide effective service to customers. The customer care agent maintains a functional help desk environment; communicates clearly with clients, co-workers, and supervisors, demonstrates quality customer service skills, maintains required documentation, and shows a thorough knowledge of computer components and PC technology. The Customer care agent displays effective negotiating skills and the ability to handle pre-and post-sales service, as well as exhibits workplace professionalism, stress management, and knowledge of health and safety practices.

Customer care agents work in call centres, banks, computer hardware manufacturing, retail, consulting firms, government agencies, software development firms, and in private and public information technology departments.

### Certification

Upon successfully completing the apprenticeship program including both the in-class and on-the-job training components, a person working in this trade is entitled to a Certificate of Apprenticeship.

### Benchmark Apprenticeship Duration

2 to 3 years (4000 hours)

### Educational Requirement

Grade 12 or equivalency

### In-school Training

(270 hours) Delivered Online

Northern College offers the 270 hours of in-school training through Blackboard online technology. This delivery model is intended to facilitate access to professional training for call centre employees across the province.

Apprentices will be able to register at any given time during the year, and can advance at a self-paced rate throughout the program.

### Topics include:

- Health and Safety Practices
- Workplace Stress and Conflict Resolution
- Introduction to Computers
- Microcomputer Applications
- Desktop and Mobile Applications
- Quality Customer Service
- Communications
- Contact Centre Environment
- Time Management
- Professionalism in the Workplace
- Teamwork
- Mentoring and Coaching

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# Early Childhood Educator Apprenticeship

## Topics include:

- Child Development 1
- Creative Arts
- Advocacy and Bias-Free Practice
- Preschool Learning Environment 1
- Preschool Learning Environment 1 Placement
- Child Development 2
- Preschool Learning Environment 2
- Preschool Learning Environment 2 Placement
- School Age Learning Environment
- School Age Learning Environment Placement
- Health, Safety and Nutrition
- Interpersonal Communication
- Infant/Toddler Learning Environment
- Infant/Toddler Learning Environment Placement
- Philosophy of Early Childhood Education
- Preschool Learning Environment 3
- Preschool Learning Environment 3 Placement
- Child, Family, and Community
- Administration
- Child Development 3: Assessment and Inclusion
- Advanced Curricula
- Advanced Curricula Placement

The early childhood educator works in an environment that nurtures a child's development. He/she plans and leads age-appropriate programs for young children which facilitate their physical, social, emotional and cognitive growth.

This can include:

- establishing learning-enriched and safe environments
- identifying children's development level
- applying observational techniques
- fostering relationships with children
- planning developmentally appropriate programs
- practicing and promoting health
- cultivating family, culture and social relationships
- communicating with clients, colleagues, supervisors, health and social care professionals, and the community
- working with the family

In short, early childhood educators become effective role models for children and parents alike.

Apprentices work in child-care centers or facilities, and in pre-school sections of hospitals and schools.

## Certification

Upon successfully completing the apprenticeship program including both the in-class and on-the-job training components, a person working in this trade is entitled to a Certificate of Apprenticeship.

## Benchmark Apprenticeship Duration

3 to 4 years (5,280 hours)

## Educational Requirement

Grade 12 or equivalency

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# Educational Assistant Apprenticeship

The educational assistant works in the educational environment including elementary and secondary schools, special needs groups, as well as in community-based programs. They are trained to work with children who need more individual attention.

The educational assistant's role is to meet the needs of specific students, and/or program needs within the school. The educational assistant works under the direction and guidance of the teacher, offering meaningful assistance and educational help. The educational assistant's responsibility extends to creating a positive and stimulating learning environment, and implementing individual educational program plans under the teacher's supervision.

Upon successfully completing the apprenticeship program, including both the in-class and on-the-job training components, a person working in this trade is entitled to a Certificate of Apprenticeship.

## Apprenticeship Duration

2 to 3 years

The Educational Assistant Apprenticeship is based on competencies through demonstrated skills rather than on a fixed number of hours on the job. The benchmark is approximately 2,700 hours.

The apprenticeship is completed when the apprentice has achieved competency in all of the on-the-job performance objectives and when all levels of in-school training have been successfully completed.

## Educational Requirement

Grade 12 or equivalency

## In-school Training

Northern College offers the two levels of theory training required for the Educational Assistant Apprenticeship Program.

Training is currently delivered in part-time format, through distance education and independent learning. Level One is 213 hours, while Level Two is 219 hours.

Training can also be delivered in a block format, and may also be community-based depending on the demonstrated need (minimum number of students required).

## Topics include:

- Introductory Psychology
- Educational Foundations:  
*Roles, Responsibilities, Teamwork  
How Children Learn and Develop*
- Orientation to Schools and the Assistant Role: Practicum I & II
- Classroom Skills:  
*Language Arts  
Mathematics and Other Curriculum  
Concrete Materials and Technology*
- Personal and Interpersonal Dynamics:  
*Analyses and Solutions  
Behaviour Management*
- Exceptionalities:  
*Introduction to Exceptionalities  
Behaviourally and Emotionally  
Challenged (includes crisis intervention)  
Intellectually Challenged  
Physically Challenged  
Multiple Challenged  
Communications*
- Computers in the Classroom
- Working Safely:  
*Standard First Aid  
Safe Care of Self and Others*

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# Metal Fabricator (Fitter) Apprenticeship

## Program of Studies

### Level I (10 weeks; 300hours)–Block A

WA1013	Welding Theory
WA1002	Welding Quality
WA1003	Blueprint Reading
WA1010	Welding and Cutting
WA1012	Trade Practices
WA1023	Trade Mathematics

The above subjects correspond to the following Apprenticeship reportable subjects: Trade Practices, Applied Blueprint Reading, Welding Theory I, Materials and Process Quality I, Shielded Metal Arc Welding (SMAW) Practical I, Gas Shielded Semi-Automatic Welding Practical I, and Thermal Cutting.

### Level II (7 weeks; 210hours) – Block B

MF2012	Trade Practices
MF2002	Materials, Process Quality
MF2005	Layout and Fabrication
MF2004	Blueprint Reading
MF2022	Gas Tungsten Arc Welding

The above subjects correspond to the following apprenticeship reportable subjects: Blueprint Advanced, Fabrication I, Gas Tungsten Arc Welding (GTAW) Practical, Machine Operation, Material and Process Quality II, Pattern and Template Development I.

### Level III (7 weeks; 210hours) – Block D

MF4003	Pattern and Template Development
MF4013	Project Planning and Shipping
MF4002	Installation
MF4006	Fabrication
CM1233	Trade Communications

The above subjects correspond to the following apprenticeship reportable subjects: Patterns and Templates Development II, Fabrication II, Project Planning, Preparation for Shipping, Installation.

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Metal fabricators (also known as fitters or plateworkers) work with ferrous and non-ferrous metals, including plate, tube and structural steel sections, to provide or repair component parts for bridges, buildings, towers, platforms, steel stairs, boilers, tanks, chutes, hoppers, stacks and other assemblies and structures made from metal. Metal fabricators set into place and mount these parts and components.

Although many of these structures can be enormous, metal fabricators need to work within close tolerances following blueprints and diagrams. If one piece is out two centimeters, the next will be out six centimeters, and the next twelve, and so on. Precision is vital. Their work often involves assembly, welding, cutting, shearing, bending, and /or bolting elements of structures together.

Metal fabricators are employed in a wide variety of work environments, including boiler fabrication plants, heavy-machinery manufacturing companies, platework fabrication plants, shipbuilding companies, structural-steel fabrication plants.

The work of metal fabricators can be both indoors and outdoors, sometimes in extreme weather. Safety is important, as they often work at great heights.

## Apprenticeship Duration

3-4 years (5,400 benchmark hours) including both in-school (720 hours) and on-the-job training

## Educational Requirement

Grade 12 or equivalency

## In-School Training

Northern College offers the three levels of theoretical training required for the Metal Fabricator (Fitter) Apprenticeship Program. Theory and shop classes concentrate on welding and fabrication safety practices related to the trade. Included is the safe and correct use of hand and power tools, arc welding and cutting processes, material and process quality theory and practical exercises, blueprint reading, layout and fabricating methods, pattern and template development, project planning, and installation.

Introductory theory in metallurgy, codes and quality control methods are taught. This gives the student a good understanding of the complexities and engineering involved in fabricating structural steel components and manufacturing, high pressure, processing equipment, components for plants, and other industries that rely on quality fabrication.

# Native Clothing and Crafts Artisan

The Native Clothing and Crafts Artisan Apprenticeship program is for individuals who design and make tailored clothes and associated leather crafts reflecting traditional themes.

These individuals are very creative and are often self-employed.

## Apprenticeship Duration

Approximately 2 years

## Educational Requirement

Grade 12 or equivalency

## In-school Training

Students in the Native Clothing and Crafts Artisan Apprenticeship program will cover all facets in the creation of native clothing and crafts, as well as starting and maintaining a successful small business.

### Topics include:

- Garment and craft design
- Selection and use of fabrics
- Selection and use of fur, leather, and suede
- Measurement and pattern layout
- Garment assembly
- Alteration techniques
- Decorations
- Marketing, advertising, merchandising and displays
- Bookkeeping
- Communications
- Small business start-up

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# Native Residential Construction Worker Apprenticeship

## Topics include:

- Blueprint Reading
- Framing (floors, walls and roof)
- Formwork and Foundations
- Site Preparation
- Safety
- Interior Finishing
- Exterior Finishing
- Plumbing
- Electrical
- Construction Management

The Native Residential Construction Worker Apprenticeship program has been designed to provide training to First Nations workers in all aspects of residential construction. Upon completion of the program, these journeypersons are trained for careers in construction.

Residential construction workers assist skilled trade persons in support of a construction project. They further perform labour activities at the construction site, including: loading and unloading construction materials and moving materials to work areas, reading and interpreting blueprints, plans and sketches, performing basic welding, formwork and foundations, framing, interior and exterior finishing.

They are knowledgeable in safety and building code, and can proficiently operate power tools.

The program also features a component on construction management in order to allow future occupational opportunities in supervisory or entrepreneurial roles.

## Apprenticeship Duration

2 – 3 years

The Native Residential Construction Worker Apprenticeship is based on competencies through demonstrated skills rather than on a fixed number of hours on the job; however, the benchmark is 4,000 hours.

The apprenticeship is completed when the apprentice has achieved competency in all of the on-the-job performance objectives and when all levels of in-school training have been successfully completed.

## Educational Requirement

Grade 12 or equivalency

## In-school Training

Northern College offers the two levels of theory training required for the Native Residential Construction Worker Apprenticeship program.

Training is currently delivered in full-time, block format and is community-based. Both Level 1 and Level 2 are 240 hours each.

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# Special Events Coordinator Apprenticeship

The Special Events Coordinator Apprenticeship program is a relatively new program targeted to individuals who organize, plan, and deliver events, such as fundraising activities, consumer and trade shows, incentive programs, product launches, meetings, conferences, sporting events, weddings, and festivals.

The coordinator may work in a variety of environments, such as not-for-profit organizations, charities, educational institutions, government, associations, hotels, resorts, conference and convention centres, sports facilities, amusement and entertainment facilities, tourism attractions and bureaus, cultural organizations, catering companies, and banquet facilities.

## Certification

Upon successfully completing the apprenticeship program including both the in-class and on-the-job training components, a person working in this trade is entitled to a Certificate of Apprenticeship.

## Apprenticeship Duration

2 to 4 years (5,000 hours)

## Educational Requirement

Grade 12 or equivalency

### Topics include:

- Health and Safety: Protecting Self and Others
- Communicating with clients and co-workers
- Performing office and events administration duties
- Developing and coordinating preliminary event plans
- Implementing marketing plans
- Implementing risk management plans
- Coordinating staff and volunteers
- Implementing on-site events

### Legislation to be covered includes:

- Occupation Health and Safety Act
- Basic First Aid
- Employment Standards Act
- Amusement Devices Act
- Fire Code
- WHMIS
- Building Code
- Liquor Licensing Act

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**Program of Studies****Level I (10 weeks; 300hours) – Block A**

WA1013	Welding Theory
WA1002	Welding Quality
WA1003	Blueprint Reading
WA1010	Welding and Cutting
WA1012	Trade Practices
WA1023	Trade Mathematics

The above subjects correspond to the following Apprenticeship reportable subjects: Trade Practices, Applied Blueprint Reading, Welding Theory I, Materials and Process Quality I, Shielded Metal Arc Welding (SMAW) Practical I, Gas Shielded Semi-Automatic Welding Practical I, and Thermal Cutting.

**Level II (6 weeks; 180 hours) – Block C**

WA3003	Blueprint Reading / Fitting
WA3013	Shielded Metal Arc Welding
WA3002	Welding Theory
WA3023	Semi-automatic Welding
WA3012	Gas Tungsten Arc Welding

The above subjects correspond directly to the apprenticeship reportable subjects.

**Level III (8 weeks; 240hours) – Block E**

WA5003	Welding Quality
WA5006	Fitting
WA5013	Shielded Metal Arc Welding
WA5002	Automatic and Semiautomatic Welding Processes
WA5023	Gas Tungsten Arc Welding and Plasma Arc Welding

The above subjects correspond directly to the apprenticeship reportable subjects.

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Welders join or sever metals in beams, girders, vessels, piping and other metal components make metal parts used in construction and manufacturing plants, and weld parts, tools, machines and equipment.

Welding usually involves applying heat to metal pieces to melt and fuse them together. In electric arc welding, heat is created as electric current flows through an arc between the tip of the welding electrode and the metal. In gas welding, such as oxy-acetylene welding, the flame from the combustion of burning gases melts the metal. In both arc and gas welding, filler materials are melted and added to fill the joint and make it stronger. In resistance welding, the metal piece itself is melted as current flows through it, and no filler is added.

Welders use different welding processes and fillers depending upon the type of metal, its size and shape, and requirements for finished product strength. For a typical welding project, they:

- develop patterns for projects or follow directions given in layouts, blueprints and work orders
- clean, check for defects and shape component parts, sometimes using a cutting torch
- weld parts together

Welders may also build up worn parts by welding layers of high-strength hard-metal alloys onto them.

Welders work in a wide variety of work environments. They may work outdoors on construction sites or indoors in production and repair shops. Welders are employed in a variety of industries including vessel or structural steel assembly, pipeline construction, commercial construction, industrial construction, steel fabrication and heavy equipment repair. Employment prospects for welders change with seasonal and economic climates.

Experienced welders may advance to positions such as welding inspector, welding foreman or supervisor, or plant supervisor. Some open their own repair shops, or work as portable rig welders who contract out their services.

**Apprenticeship Duration**

3 years including both in-school and on the job training

**Educational Requirement**

Grade 12 or equivalency

**In-School Training**

Northern College offers the three levels of theoretical training required for the Welder Apprenticeship program. Theory and shop classes concentrate on welding and fabrication safety practices related to the trade. Included is the safe and correct use of hand and power tools, arc welding and cutting processes, material handling theory and practical exercises, blueprint reading, layout and fabricating methods on structural steel, bridges, tanks, boilers and pressure vessels.

Introductory theory in metallurgy, codes and quality control methods are taught. This gives the student a good understanding of the complexities and engineering involved in fabricating structural steel components and manufacturing, high pressure, processing equipment, components for plants, and other industries that rely on quality fabrication.