

WORKIT: A GUIDE TO YOUTH APPRENTICESHIP

Apprenticeship Training and Skill Development Division
Skills and Learning Branch
Nova Scotia Department of Labour and Workforce Development



www.workitns.ca



Introduction

Youth apprenticeship is a proven method for expanding the knowledge and experience of youth in the skilled trades. The Workit Youth Apprenticeship model introduces youth to career exploration and work experiences in the designated trades by exposing them to various career pathways and assisting them in navigating the apprenticeship system. It offers an exciting opportunity for employers to connect with youth and develop important working relationships and also addresses the increasing need for skilled tradespeople across the province.

Workit Youth Apprenticeship calls for the active involvement of industry, employers, youth, government, educators, communities and families to ensure students have an opportunity to envision a viable future for themselves and provide the supports needed in making important career decisions.

This guide is a resource for students, employers and teachers with an interest in assisting career focused youth as they prepare for post-secondary opportunities and/or workforce entry into occupations in the skilled trades.

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NOVA SCOTIA APPRENTICESHIP PROGRAM

SECTION 1



FULL-TIME APPRENTICESHIP PROGRAM

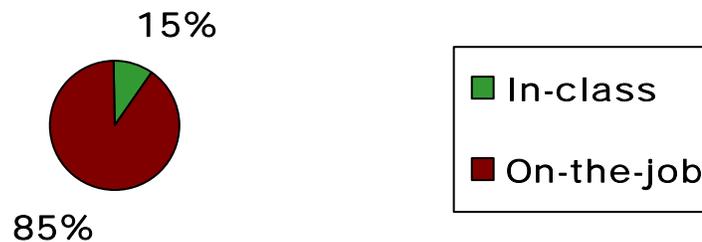
Overview

Apprenticeship training is an industry-based training program that combines on-the-job training and experience with periods of technical instruction. Active industry participants, both tradespeople and employers, determine the content of the training, both on-the-job and technical. The apprenticeship program offers individuals the opportunity to work with experienced trades professionals while learning the skills necessary to master a particular trade. This blend of training is an effective and efficient method of ensuring apprentices acquire the skills necessary to become qualified in a skilled trade or occupation.

Term of Apprenticeship

The traditional term of a full-time apprenticeship is approximately four years, or 8000 hours. The length of training depends on the trade chosen and how many hours and skills an individual has already collected through work placements or trade-related courses.

Apprenticeship is a combination of hands-on work experience, skill development and technical training.



On-the-Job Training

Employers deliver the on-the job portion of apprenticeship training. This training is documented through an apprentice log book which itemizes the practical skills that require sign-off by a certified tradesperson. A mentor program is available for supervising journeymen to assist them in knowing the best approaches to passing on their skills and knowledge.

Technical Training

Training providers are contracted by the division to deliver the technical training portion of the apprenticeship program. The primary deliverer of apprenticeship technical training is the Nova Scotia Community College (NSCC). Most technical training is available in an in-class format and takes between 4-8 weeks annually to complete.

In most trade areas, apprentices participate in technical training after completing approximately 2000 hours of on-the-job experience each year. This component of training is outlined in the apprenticeship agreement, signed by both the employer and apprentice, and is required by all apprentices to complete their apprenticeship program. Employees who take a training leave from their place of employment to attend technical training can access employment insurance (EI) benefits.

In some trades, technical training is available in an on-line format through the virtual campus of the NSCC. This approach to training enables apprentices to learn at home, work or wherever an

Internet connection is available in their community. In all trades, weekly tuition fees apply; for an up to date list of fees, refer to the Apprenticeship Training and Skill Development website under technical training at www.nsapprenticeship.ca. In addition, each time an apprentice successfully completes technical training, his/her rate of pay increases upon return to work.

Apprentices repeat this process each year until they have gained enough hours, skills and technical training to write the final certification exam. Once an apprentice passes the certification examination, he/she will become a certified journeyman. In many cases, apprentices who receive a Certificate of Qualification will also have a “Red Seal” affixed to their certificate, allowing for full labour mobility across Canada.

“RED SEAL” PROGRAM

The Interprovincial Standards “Red Seal” Program was established to provide full mobility across Canada for skilled workers. Through the program, both apprentices and journeymen who have successfully completed the interprovincial examination will obtain a “Red Seal” endorsement on their provincial Certificate of Qualification.

The program encourages standardization of provincial and territorial apprenticeship training and certification programs. The “Red Seal” allows qualified trades persons to practice their trade in any province or territory in Canada where the trade is designated, without having to write further examinations. Journeymen holding provincial Certificates of Qualification bearing a “Red Seal” therefore enjoy full labour mobility across Canada.

The “Red Seal” Program is administered in each province and territory under the guidance of the Canadian Council of Directors of Apprenticeship (CCDA). Each province and territory has an appointed Director of Apprenticeship for this purpose.

A National Occupational Analysis (NOA), developed for each “Red Seal” trade, is used as a base document for the development of interprovincial standard examinations and is encouraged to be used by the provinces and territories for curriculum development.

For more information about this program, refer to the Interprovincial Standards “Red Seal” Program website at www.red-seal.ca.



TRADE TYPES

- **Skilled Trade** – A practical occupation that requires a certain degree of skill. There are over 200 skilled trades in Canada.
- **Designated Trade** – A skilled trade in which an individual can become a certified journeyman. The number and type of designated trades vary from province to province. For an updated list of Nova Scotia’s designated trades, visit www.workitns.ca.
- **Compulsory Trade** – A designated trade that is specified compulsory certified in regulation, requiring those individuals who practice the trade to be a certified journeyman.

THE SEALS OF SUCCESS: LIFE AS A CERTIFIED JOURNEYMAN

Why become a trade certified journeyman? There are many great reasons for becoming a journeyman, including:

Wages

In general, certified journeymen earn above-average salaries. According to the 2001 Census, trades people earn 3.1 percent above the average national wage for all careers combined. Wages may vary from province to province and trade to trade: to find out more go to www.jobfutures.ca.

Options

Being a certified tradesperson proves to employers that an individual has attained an industry standard skill level and qualifications. Some employers only hire certified journeymen and often they are more likely to be promoted and paid a higher wage.

Flexibility

Be an entrepreneur; become your own boss. Many trades professionals decide to work for themselves. With business and management training, they can be confident they have all the skills needed to succeed. For more information about this training, see the Nova Scotia Community College website, www.nsc.ca.

Mobility

The “Red Seal” endorsement ensures skills and training are recognized across Canada. This recognition of trade qualification allows individuals the opportunity to practice their trade more easily, should they decide to work in another province or territory.

YOUTH MANUAL

SECTION 2



YOUTH MANUAL

Workit Youth Apprenticeship can help you get an early start on the path to becoming a certified journeyman in a designated trade.

More than ever, the skilled trades are a practical and profitable career option. By becoming an apprentice, you will learn the skills of a trade both on-the-job and in the classroom on your way to becoming a certified journeyman. Journeymen can expect to earn a very respectable salary, have the choice of where they work and possibly become their own boss.

Youth Apprentice → Full-time Apprentice → Certified Journeyman

What is an apprentice?

Apprentices are individuals who enter into an apprenticeship agreement with an employer of a designated trade. Through this agreement, apprentices agree to learn the trade, while employers agree to provide apprentices with practical training and the opportunity to obtain technical training. It is an employment relationship that involves the apprentice being trained on the job.

Apprentices learn a skilled trade by actually working in the trade. It is one of the oldest forms of education in the world – where one skilled person passes on the skills of the trade to another. In Canada, apprentices in designated trades must work a certain number of hours, demonstrate competence in the skills of the trade and pass a number of technical training courses before being able to write the certification examination to become a journeyman.

What is a youth apprentice?

Youth apprentices are both in and out of school youth, between the age of 16 and up to and including the age of 19. Employers and youth apprentices need to comply with the same regulations as an apprentice over the age of 19. Youth Apprentices are exempt from registration fees for the apprenticeship training system, but are required to pay a fee for their photo identification cards.

What about ratio?

According to Section 23(1) of the Apprenticeship Trades and Qualification Act General Regulations, “an employer must maintain a minimum ratio of 1 journeyman to each apprentice in a designated trade, unless otherwise indicated in the trade regulations for that designated trade”.

Youth apprentices who are attending a secondary educational institution on a full-time basis are typically only able to work part-time. For this reason, a variance of ratio is automatically granted to the employer until three months after the youth apprentice is no longer registered in secondary school, or upon the youth apprentice’s 20th birthday. Although ratio has been varied, direct supervision will be enforced. Youth apprentices must therefore be directly supervised by a certified journeyman in the same trade at all times and the supervising journeyman shall directly supervise only one youth apprentice per shift.

HOW YOUTH APPRENTICESHIP WORKS

1. You must first find an employer in one of the designated trades who is willing to hire you as an employee. The employer will pay your wages while training you on-the-job after school, on weekends or during the summer. To be eligible, employers must have a certified journeyman available to mentor you as an apprentice in the trade.
2. To register as a youth apprentice, contact the Youth Apprenticeship Coordinator at the Apprenticeship Training and Skill Development division. This can be done by email, phone or filling out the *Youth Apprenticeship – Expression of Interest* form located in Section 6 of this manual. The coordinator will assist with the registration process and have an Industrial Training and Certification Officer assigned to meet with you and the employer to register you as a youth apprentice.
3. As a youth apprentice, you will be connected with a mentor who is a certified journeyman in his/her trade. This person will supervise your on-the-job training and train you in the skills needed to become a certified journeyman.
4. The Industrial Training and Certification Officer will provide you with an apprentice log book that lists all of the skills needed to be learned in the trade. Once you receive your logbook, your mentor will sign off each of the skills as you become competent and perform them to industry standard. You will also track your hours of employment in your logbook.

CO-OPERATIVE EDUCATION

If you are a high school student, you may also explore the trades through Co-operative Education work placements. If this is the case, the work placement employer must supply documentation that verifies the hours worked in a designated trade and the skills used to gain the co-op credit. Both these skills and hours may count toward an apprenticeship training program when you register as a youth apprentice, if the work was performed under a certified journeyman. A maximum of **500** hours in apprenticeship credit will be given to you for completing unpaid co-op work placements in a designated trade. The *Record of Workplace Hours and Competencies* form, located in Section 6 of this manual, can be given to your employer to document the hours worked and skills acquired during your co-op placement.

By completing co-op placements you are not considered a youth apprentice. For this to take place you must first be hired as an employee and enter into an apprenticeship agreement. This agreement will then be registered with the Department of Labour and Workforce Development, Apprenticeship Training and Skills Development division.

IS YOUTH APPRENTICESHIP FOR ME?

Choosing a career is a big decision. There are many ways you can determine if a career in the skilled trades is the best fit for you.

Awareness

Check out the Workit website at www.workitns.ca. It provides information about apprenticeship training, youth apprenticeship, designated trades and labour market information and statistics. There is a personality quiz that will help you identify which trades best meet your interests and skills. The Workit website also has dedicated sections for youth, educators, parents and employers.

Exposure

You can become exposed to the trades in many ways. You can do a NSCC Test Drive, take a workplace tour or participate in a job shadow for a day. These activities provide you with the opportunity to get a quick glimpse at what it would be like to work in a skilled trade and help you determine if it is a good fit for you. NSCC Test Drives can also provide you with an opportunity to meet current students and faculty, ask questions about programming, and decide if college provides the right learning environment for you.

Experience

Experience in the trades can be obtained in a variety of ways, including enrollment in the Options and Opportunities (O₂) program and Co-operative Education courses. Co-op work placements give you the opportunity to try out various careers before committing to one training path. In some cases co-op placements develop into paid employment allowing you the opportunity to begin developing job related skills and knowledge. Once you determine a career in the trades is right for you, youth apprenticeship lets you also begin your apprenticeship training while still in high school.

There are over 200 skilled trades in Canada, with over 60 designated trades in Nova Scotia. Designated trades are those trades in which an individual can become a certified journeyman in this province. A number of the designated trades are also compulsory certified trades and require an individual to be a journeyman, apprentice, youth apprentice or have a temporary permit to be working legally in these trades.

In Nova Scotia, apprenticeship technical training is available in many of its designated trades. This number may change due to need, availability of technical training in nearby provinces or alternative delivery methods such as distance education. For an up-to-date list of designated trades for which technical training is available, contact the Apprenticeship Training and Skill Development division, or check the apprenticeship technical training schedule at www.nsapprenticeship.ca.

DESIGNATED TRADES WITH APPRENTICESHIP TECHNICAL TRAINING IN NOVA SCOTIA (July 2008)

Agricultural Equipment Technician	Instrumentation and Control Technician
Automotive Service Technician (AST)	Machinist
AST – Service Station Mechanic	Metal Fabricator (Fitter)
Boatbuilder	Motor Vehicle Body Repairer (Metal and Paint)
Boilermaker	Oil Burner Mechanic
Bricklayer	Painter and Decorator
Carpenter	Plumber
Communications Technician	Power Engineer
Construction Electrician	Powerline Technician
Cook	Refrigeration & Air Conditioning Mechanic
Gas Fitter	Restoration Stone Mason
Heavy Duty Equipment Technician	Sheet Metal Worker
Industrial Electrician	Sprinkler System Installer
Industrial Mechanic (Millwright)	Steamfitter/Pipefitter
Ironworker (Structural/Ornamental)	Truck and Transport Mechanic
Ironworker (Reinforcing)	Welder

DESIGNATED TRADES FOR CERTIFICATION ONLY (July 2008)

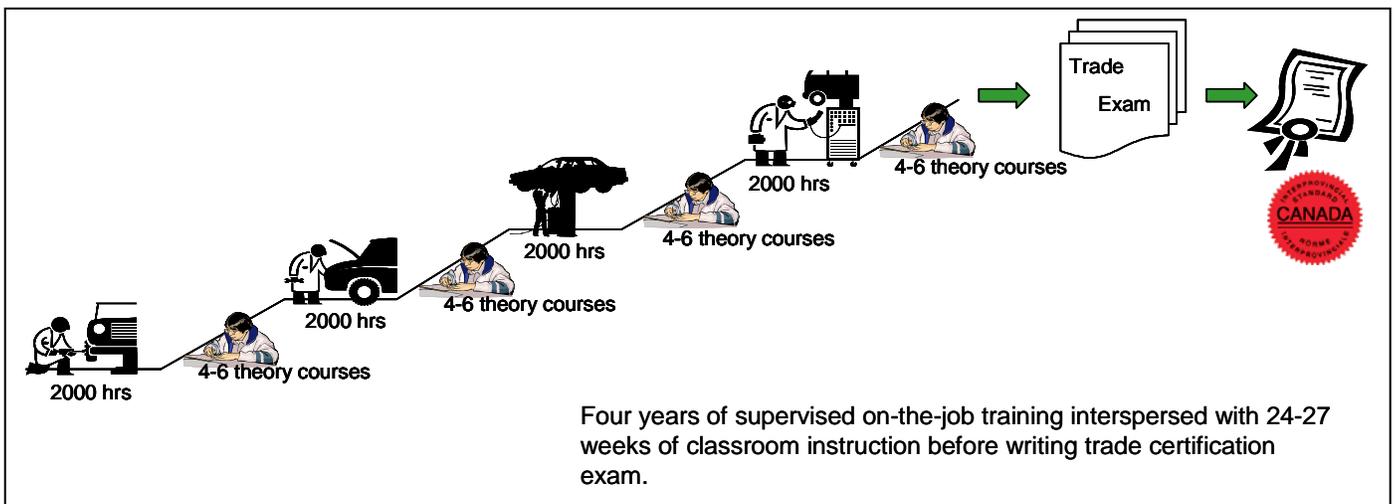
Alarm and Security Technician	Lather (Interior Systems Mechanic)
Appliance Service Technician	Locksmith
Automotive Painter	Marine Fitter
Baker	Mine Electrician
Blaster	Mine Mechanic
Cabinet Maker	Mobile Crane Operator
Concrete Finisher	Motorcycle Mechanic
Construction Craft Worker	Partsperson
Electric Motor System Technician	Recreation Vehicle Service Technician
Electronics Technician (Consumer Products)	Rig Technician
Floor Covering Installer	Roofer
Glazier	Tilesetter
Hairstylist	Tool and Die Maker
Insulator (Heat and Frost)	Transport Trailer Technician
Ironworker (Generalist)	

AFTER HIGH SCHOOL

After high school completion, if you were working part-time as a youth apprentice, you can now start working full-time with your employer. Re-registration with the Apprenticeship Training and Skill Development division is not required, as you are already registered as an apprentice. You will simply continue in your training program, working towards certification, and building on the hours and skill development you gained during high school.

Being a youth apprentice provides you and your employer with a head start in learning trade specific skills and accumulating hours required to complete your apprenticeship training. Once you acquire a set number of hours of experience, you will then be eligible to attend technical training.

EXAMPLE Four Year Training Program (8000 hour trade)



Alternative Pathways to Apprenticeship

If you did not register as a youth apprentice during high school, you still have apprenticeship training options available to you.

Option 1

After high school, obtain work in a designated trade and register in the apprenticeship training program.

Option 2

Enroll in and complete a Nova Scotia Community College (NSCC) pre-apprenticeship program, obtain work in a designated trade and register in the apprenticeship training program. Apprenticeship credit will be given for completion of NSCC pre-apprenticeship programs.

PEOPLE HERE TO HELP YOU

- Youth Apprenticeship Coordinator
 - answers questions and addresses concerns
 - facilitates the youth apprenticeship process
- Industrial Training and Certification Officers
 - register individuals into apprenticeship training
 - explain the use of the logbook for tracking hours and guiding training
 - monitor apprentices' on-the-job training
 - co-ordinate enrollment into technical training

KNOW YOUR RIGHTS

As a youth apprentice or certified journeyman, employees have some basic rights. These rights are designed to protect your health and wellness and cover everything from minimum wage, to vacation pay and holidays, to the hours an employer can expect you to work. Full details of these rights can be found at www.gov.ns.ca/lwd/employmentrights.

According to the Nova Scotia *Apprenticeship and Trades Qualifications Act*, an employer agrees to:

- connect apprentices with certified journeymen to do their on-the-job apprenticeship. While working in the trade, youth apprentices must be directly supervised at all times by a certified journeyman.
- pay apprentices a standard percentage of a certified journeyman's pay. As apprentices gain more skills and experience, their rate of pay goes up.

INJURY IS OPTIONAL. DON'T CHOOSE IT.

It is in everyone's best interest to keep the workplace safe. It is also everyone's responsibility, not just the employer's, so as an employee play your part in keeping work safe.

In 2006, 11 young workers were injured every day on the job in Nova Scotia.

Here are some questions every new employee should ask their employer:

- What are the dangers of my job?
- When will I receive my safety orientation?
- What safety gear or equipment will I be expected to use? When will I be trained to use it?
- What should I do if there is a fire? Where are the extinguishers?
- Who is on the safety committee? When do they meet?
- Who is the first aid person? What do I do if I get hurt?

Employees have the right to know the hazards at the job and how to protect themselves.
Employees have the right to participate in making sure the job and workplace are safe.
Employees have the right to refuse work that will endanger their health and safety.

HEALTH AND SAFETY 101

Knowing about workplace health and safety is one more way you can ensure you stand out to an employer.

Check these Out:

Passport to Safety
www.passporttosafety.com

Workplace Health and Insurance Safety Board
www.hs101.ca

Youth.gc.ca/Health and Safety
www.youth.gc.ca

Youth Health and Safety in the Workplace
Worksafe BC Health and Safety Centre
www.youngworker.healthandsafetycentre.org

NS Safety Council/ Youth Safety Portal
www.youthsafetyportal.ca

WHAT EVERY EMPLOYER SHOULD TELL YOU

For some workplaces, it is required by law that workers have certificates in specific types of safety training. These may include:

- Occupational Health and Safety
- First Aid and CPR
- Transportation of Dangerous Goods
- Workplace Hazardous Materials Information Systems (WHMIS)
- Fall Arrest
- Forklift Safety and Operation

Many of these certificates can be provided by the employer as part of a new employee's training; however a number of these certificates can be completed independently. You should ask your employer what training courses come with your job.

WORKERS COMPENSATION BOARD – DOES IT COVER ME?

All youth apprentices are covered by the Workers Compensation Board. As an employee, if you are injured at work, the Workers Compensation Board of Nova Scotia (WCB) covers you by providing:

- wage replacement benefits
- health care benefits
- vocational rehabilitation
- return to work assistance

WCB is committed to making sure that injuries do not happen at work. It provides employers with health and safety education tools and programs to encourage safe workplaces. For more information on WCB, visit www.wcb.ns.ca.

If you are doing a co-op placement, you should check with your co-op coordinator about coverage for injuries while at a placement.

CONTACT INFORMATION

For more information about apprenticeships or youth apprenticeship, contact the Youth Apprenticeship Coordinator at:

Apprenticeship Training and Skill Development division
2021 Brunswick Street, PO Box 578
Halifax, NS B3J 2S9
Phone: (902) 424-5685
Fax: (902) 424-0717
Toll Free: 1-800-494-5651
apprenticeship@gov.ns.ca

EMPLOYER MANUAL

SECTION 3



EMPLOYER MANUAL

It is estimated that by the year 2020, Canada may experience a shortage of approximately one million skilled workers (www.careersintrades.ca). Employers can help ensure the future of their business – and the province’s economy – by registering a youth apprentice now.

Training makes good business sense. Young people can be taught the skills of the trade, while keeping abreast of new technologies. According to the study *Return on Apprenticeship Training Investment*, completed by the Canadian Apprenticeship Forum, “an employer receives a positive net benefit of \$1.38 for every \$1.00 invested in an apprentice” (www.caf-fca.org).

Workit Youth Apprenticeship is here to help employers assist youth in getting started on the path to becoming a certified journeyperson.

Youth Apprentice → Full-time Apprentice → Certified Journeyperson

There are over 200 skilled trades in Canada, with over 60 of them considered designated trades in Nova Scotia. Designated trades are the only trades in which an individual can become a certified journeyperson in this province and this can only be accomplished through enrollment in an apprenticeship training program. A number of the designated trades are also compulsory certified trades and require an individual to be a journeyperson, apprentice, youth apprentice or have a temporary permit to be working legally in these trades. For a complete list refer to the Apprenticeship Training and Skill Development division website at www.nsapprenticeship.ca.

HOW YOUTH APPRENTICESHIP WORKS

What is an apprentice?

Apprentices are individuals who enter into an apprenticeship agreement with an employer of a designated trade. Through this agreement, apprentices agree to learn the trade, while employers agree to provide apprentices with practical training and the opportunity to obtain technical training. It is an employment relationship that involves the apprentice being trained on the job.

What is a youth apprentice?

Youth apprentices are both in and out of school youth, between the age of 16 and up to and including the age of 19. Employers and youth apprentices need to comply with the same regulations as an apprentice over the age of 19.

What about ratio?

According to Section 23(1) of the Nova Scotia Apprenticeship Trades and Qualification Act General Regulations, “an employer must maintain a minimum ratio of 1 journeyperson to each apprentice in a designated trade, unless otherwise indicated in the trade regulations for that designated trade”.

Youth apprentices who are attending a secondary educational institution on a full-time basis are typically only able to work part-time. For this reason, a variance of ratio is automatically granted

to the employer until three months after the youth apprentice is no longer registered in secondary school, or upon the youth apprentice's 20th birthday. Although ratio has been varied, direct supervision will be enforced. Youth apprentices must therefore be directly supervised by a certified journeyman in the same trade at all times and the supervising journeyman shall directly supervise only one youth apprentice per shift.

How to become involved?

1. Employers, in the designated trades, can hire youth and register them as youth apprentices. Youth apprentices can work after school, on weekends and during the summer months. Youth apprentices who are no longer enrolled in high school may also work full-time. Employers pay youth apprentices for work completed, similar to any other apprentice.
2. To register a youth apprentice, employers should contact the Apprenticeship Training and Skill Development division. An Industrial Training and Certification Officer will meet with both the employer and the new employee to review and sign an apprenticeship agreement. By registering, the youth's hours will count towards his/her youth apprenticeship.

It is important to note that a youth apprentice is an apprentice and therefore subject to the same regulations as a full-time apprentice, with the exception of registration fees, technical training and in some cases ratio. By registering as a youth apprentice, the youth is able to start his/her on-the-job training and build skills in a trade from a younger age.

3. Employers will match the youth apprentice with a mentor who is a certified journeyman in the trade. This person will supervise the youth apprentice on the job and train him/her in the skills needed to become a certified journeyman.
4. The youth apprentice will keep an apprentice log book, supplied by the Apprenticeship Training and Skill Development division, listing all the skills he/she needs to master before becoming a certified journeyman in the trade. As the youth apprentice works, the mentor will sign off the skills mastered and the employer will also help the youth keep track of the hours gained in the trade.

MAKE THE WORK COUNT

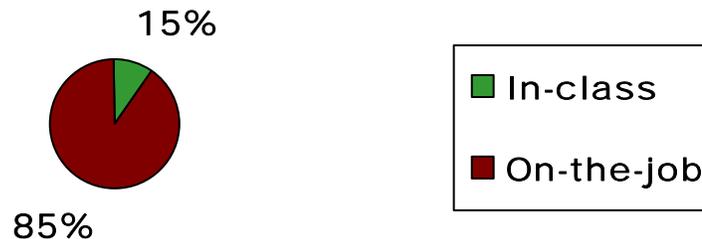
Employers can ensure youth receive credit for their hours and skills acquired in a trade. To do so, employers supporting Co-operative Education student placements must provide documentation proving the number of hours they worked specific to the tasks in the trade. The *Record of Workplace Hours and Competencies* form, located in Section 6 of this manual, can be filled out, or this information can be put on company letterhead. The form or letter must be signed by the student and the employer to be validated.

High school co-op placements are exploratory in nature and co-op students are not considered to be students of the trade or working in the trade. For this reason there is no need for employers to obtain a temporary permit if these students complete a work placement in a compulsory trade.

FULL-TIME APPRENTICESHIP PROGRAM

Term of Apprenticeship

Depending on the trade, the traditional term of a full-time apprenticeship is approximately four years, or 8000 hours. Apprenticeship is a combination of hands-on work experience, skill development and technical training.



Registering Youth Apprentices

If employers have already hired youth apprentices, they do not have to re-register them with the Apprenticeship Training and Skill Development division upon high school completion. Once the youth graduate from high school and obtains the required number of work related hours, they will become eligible to attend technical training. Being a youth apprentice is the same as being an apprentice, however it provides youth with a head start in their training towards a career in the trades.

Employers of a registered youth apprentice in a designated trade will:

- pay the youth apprentice for the hours worked: between 40–90 per cent of what a certified journeyman would make;
- help the youth apprentice keep a logbook recording those hours;
- match the youth apprentice with a certified journeyman who will supervise and document task-related learning, (a mentor program is available for supervising journeymen to assist them in knowing the best approaches to passing on their skills and knowledge.) and ;
- comply with ratio and direct supervision policies

Technical Training

Training providers are contracted by the division to deliver the technical training portion of the apprenticeship program. The primary deliverer of apprenticeship technical training is the Nova Scotia Community College (NSCC). Most technical training is available in an in-class format and takes between 4-8 weeks annually to complete.

In most trade areas, apprentices participate in technical training after completing approximately 2000 hours of on-the-job experience each year. This component of training is outlined in the apprenticeship agreement, signed by both the employer and apprentice, and is required by all apprentices to complete their apprenticeship program. Employees who take a training leave from their place of employment to attend technical training can access employment insurance (EI) benefits.

In some trades, technical training is available in an on-line format through the virtual campus of the NSCC. This approach to training enables apprentices to learn at home, work or wherever an Internet connection is available in their community. In all trades, weekly tuition fees apply; for an up to date list of fees, refer to the Apprenticeship Training and Skill Development website under technical training at www.nsapprenticeship.ca. In addition, each time an apprentice successfully completes technical training, his/her rate of pay increases upon return to work.

Apprentices repeat this process each year until they have gained enough hours, skills and technical training to write the final certification exam.

PEOPLE HERE TO HELP YOU

- Youth Apprenticeship Coordinator
 - answers questions and addresses concerns
 - facilitates the youth apprenticeship process

- Industrial Training and Certification Officers
 - register individuals into the apprenticeship training
 - explain the use of the logbook for tracking hours and guiding training
 - monitor apprentices' on-the-job training
 - co-ordinate enrollment into technical training

EMPLOYEE'S RIGHTS AND THE EMPLOYER'S ROLE

All employees have some basic rights that are designed to protect their health and wellness. These rights can cover everything from minimum wage, to vacation pay and holidays, to the hours employers can expect their employees to work. Full details of these rights can be found at www.gov.ns.ca/lwd/employmentrights.

According to the Nova Scotia *Apprenticeship Trades and Qualifications Act*, an employer agrees to:

- connect apprentices with certified journeypeople to do their on-the-job apprenticeship. While working in the trade, youth apprentices must be directly supervised at all times by a certified journeyperson.

- pay apprentices a standard percentage of a certified journeyperson's pay. As apprentices gain more skills and experience, their rate of pay goes up.

INJURY IS OPTIONAL. CHOOSE SAFETY.

It is in everyone's best interest to keep the workplace safe. A safe workplace means a productive and cost-effective workplace. Due diligence must be taken on part of the employer to ensure the workplace is safe for all employees and they are properly trained in safety procedures.

In 2006, 11 young workers were injured every day on the job in Nova Scotia.

Here is some information employers should provide their new apprentices:

- Review the dangers of the job;
- Provide a safety orientation;
- Teach them how to use any safety gear or equipment they need on the job;
- Review what they should do in case of fire and tell them where the extinguishers are located;
- Tell them who their supervisor is and who they should go to with any safety questions;
- Tell them who the members of the safety committee are and when it meets;
- Tell them who the first aid person is and what they should do if they get hurt, and ;

WHAT EVERY EMPLOYEE SHOULD KNOW

For some workplaces, it is required by law that workers have certificates in certain types of safety training. These may include:

- Workplace Hazardous Materials Information Systems (WHMIS)
- Occupational Health and Safety
- Transportation of Dangerous Goods
- Forklift Safety and Operation
- Fall Arrest
- First Aid and CPR and others...

Employers should be prepared to provide any or all of the above certificates to keep their workforce and workplace safe.

WORKERS COMPENSATION BOARD – DOES IT COVER YOUTH APPRENTICES?

All youth apprentices are covered by the Workers Compensation Board. If a youth apprentice is injured at work, the Workers Compensation Board of Nova Scotia (WCB) provides:

- wage replacement benefits
- health care benefits
- vocational rehabilitation
- return to work assistance

WCB is committed to making sure that injuries do not happen at work. It provides employers with health and safety education tools and programs to encourage safe workplaces. For more information on WCB, visit www.wcb.ns.ca.

CONTACT INFORMATION

For more information about apprenticeships or youth apprenticeship, contact the Youth Apprenticeship Coordinator at:

Apprenticeship Training and Skill Development division
2021 Brunswick Street, PO Box 578
Halifax, NS B3J 2S9
Phone: (902) 424-5685
Fax: (902) 424-0717
Toll Free: 1-800-494-5651
apprenticeship@gov.ns.ca

TEACHER MANUAL

SECTION 4



TEACHER MANUAL

FOUNDATION FOR THE FUTURE Helping to Place Students in a Designated Trade

Students are looking for a solid, respectable and lucrative career, a career that offers them choices about how and where they will work and one that will serve them well for their entire working life.

Certified journeypersons enjoy this type of career. They earn above-average wages, have more options and can often choose to work for themselves. Most importantly, they are in demand and labour market research indicates that demand will continue to grow.

There are over 200 skilled trades in Canada, with over 60 designated trades in Nova Scotia. Designated trades are those trades in which an individual can become a certified journeyperson in this province.

Workit Youth Apprenticeship is here to help teachers get their students started on the path toward a solid future.

Cooperative Education → Youth Apprenticeship → Full-time Apprentice → Certified Journeyperson

FINDING A DESIGNATED TRADE WORK PLACEMENT

The first step in finding a work placement eligible for apprenticeship credit is to consult the Workit website www.workitns.ca for a complete list of Nova Scotia's designated trades. To be eligible for apprenticeship credit, students must complete their work placement under the supervision of a certified journeyperson in a designated trade and meet ratio and direct supervision requirements.

When seeking a trades placement, remember that not all company titles identify the trades that exist in their business, and many businesses employ certified journeypeople in a variety of designated trades. There may be more opportunities than you imagine for a co-op student work placement in the designated trades, so talk to your contacts and use the *Invest in Youth* database, www.investinyouth.ca, as a starting point.

The *Invest in Youth* database is a compilation of employers who have shown an interest in sharing their knowledge, experience, and skills with youth who are eager to be part of the labour market. Interested employers are linked to a local network of skilled workers, while students are provided with access to exploration opportunities in their local communities that will help inform and clarify their career decisions.

Teachers can also check out the following websites www.labourmarketinformation.ca or www.workitns.ca for additional ideas or direction in finding suitable work placements for their students.

COMPULSORY TRADES

A small number of designated trades are specified as compulsory certified trades. This means, by law, a person must hold a certificate of qualification, be a registered apprentice or youth apprentice, or hold a temporary permit to work legally in the trade.

Due to the exploratory nature of high-school co-op placements, students completing a placement in a compulsory trade are not required to obtain a temporary permit. Students are not permitted to perform work in compulsory trades, and are therefore not considered students of the trade or working in the trade.

As of the date of publication, the following trades were specified as compulsory certified:

Compulsory Trades under the *Apprenticeship and Trades Qualifications Act*

Automotive Service Technician
Automotive Service Technician (Service Station Mechanic)
Bricklayer
Construction Electrician
Oil Burner Mechanic
Plumber
Refrigeration and Air Conditioning Mechanic
Sprinkler System Installer
Truck and Transport Mechanic

To see an up to date list of all the designated and compulsory trades, visit www.workitns.ca.

MAKE EVERY HOUR COUNT

Make sure students receive documentation from their work placement employers for the hours they have worked and the skills they have learned in a designated trade. This information will serve them well if they decide to enter the apprenticeship program.

Use the form *Record of Workplace Hours and Competencies*, located in Section 6 of this manual, to document student placement information and have the employer sign it. Employers may also supply the same information on company letterhead.

LIFE AFTER THE CO-OP PLACEMENT

Students do not have to wait until high school graduation to start their apprenticeship training. They can become a youth apprentice while still in school. Their co-op experience is a good first step to exploring a trade and developing important employer connections. In addition, once students become employed in a trade, their co-op hours may be credited to their apprenticeship training program: up to 500 hours in total. To be eligible for apprenticeship credit, co-op placements must take place under the supervision of certified journeyman in a designated trade.

A youth apprentice is different from a co-op student on work placement. The youth apprentice may work part-time in the evenings or weekends, or full-time during the summer and are paid for their work. Youth apprentices will also be matched with a certified journeyman mentor who supervises them and signs off on the skills gained in their trade. Every hour worked and skill gained counts toward certification.

Typically the ratio of apprentice to journeyman is 1:1, although this may vary by trade. Employers who hire youth apprentices attending a secondary educational institution on a full-time basis are automatically granted a variance of ratio. This variance ceases to exist three months after the youth apprentice is no longer registered in secondary school, or upon the youth apprentice's 20th birthday.

Although ratio has been varied, direct supervision will be enforced. Youth apprentices must therefore be directly supervised by a certified journeyman in the same trade at all times, and the supervising journeyman shall directly supervise only one youth apprentice per shift. This variance of ratio applies to both compulsory and voluntary trades.

What is a Youth Apprentice?

A youth apprentice is an in or out of school youth, between the age of 16 and up to and including the age of 19, who has entered into an apprenticeship agreement with an employer of a designated trade.

BECOMING A YOUTH APPRENTICE

- Youth must first find an employer in a designated trade willing to hire and train them.
- Youth should contact the Youth Apprenticeship Coordinator to indicate their interest in becoming a youth apprentice. This can be done by email, phone or filling out the *Youth Apprenticeship – Expression of Interest* form located in Section 6 of this manual.
- An Industrial Training and Certification Officer will meet with the student and the employer to set up an apprenticeship agreement.
- Youth will need to provide the Industrial Training and Certification Officer with documentation from their prior work placement(s) proving the hours worked and skills used.
- Youth will be given an apprentice log book outlining the skills required of the trade and a certified journeyman will be assigned by the employer to oversee the training program.

LEARN WHILE THEY EARN

Youth apprentices are paid for their work. They earn a first-year apprentice's wage, which is a percentage of a certified journeyman's rate of pay in a particular trade. To find out more about a journeyman's salary, refer to www.labourmarketinformation.ca.

WORKIT GRANTS

Workit grant funding is available to all Nova Scotia regional school boards to help increase awareness and provide exploratory opportunities for high school students across the province. Teachers who are interested in providing these opportunities to their students and would like to receive funding, should submit a proposal to their Community-Based Learning Consultant at the appropriate regional school board.

For more information about this funding opportunity or to obtain the appropriate funding documents, go to the Workit website at www.workitns.ca/educatoropportunities.php, or contact a school board Community-Based Learning Consultant.

CONTACT INFORMATION

For more information about apprenticeships or youth apprenticeship, contact the Youth Apprenticeship Coordinator at:

Apprenticeship Training and Skill Development division
2021 Brunswick Street, PO Box 578
Halifax, NS B3J 2S9
Phone: (902) 424-5685
Fax: (902) 424-0717
Toll Free: 1-800-494-5651
apprenticeship@gov.ns.ca

ADDITIONAL RESOURCES

SECTION 5



WORKIT YOUTH APPRENTICESHIP MODEL

WorkIt! A Pathway to a Career in the Apprenticable Trades

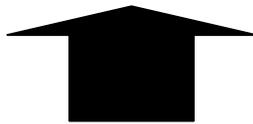
Journeyman Certification/Lifelong Learning

- A good career as a journeyman
- Additional certification
- Opening a business/management
- Further post-secondary education



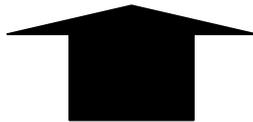
Attachment to Apprenticeship

- Registered apprentice accumulating hours and training toward a trade



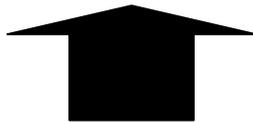
Career Building

- Work with an employer in an apprenticeship trade
- Registered as a Youth Apprentice (between the ages of 16-19)



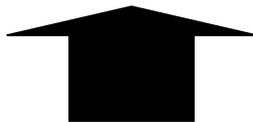
Career Experience

- A work experience(s) in a skilled trade
- In-school and Out-of-School youth over age 16
- Job finding and job maintenance skill development



Career Exploration

- Junior high to Grades 10 and 11
- Job shadowing/Test Drives
- Supporting curriculum choices



Career Awareness

- Elementary and Junior High School youth
- Information sessions/promotion
- Class projects

Working with Industry/Schools/Youth/Parents/Community

PATHWAYS TO APPRENTICESHIP

YOUTH APPRENTICESHIP

Age requirement is 16 years of age, and up to and including 19 years of age.

Find an employer in Nova Scotia willing to hire you as a Youth Apprentice.

Register as a Youth Apprentice.
(There must be at least one certified journeyman at the workplace to provide **direct supervision**.)

Work part or full-time in the trade. (High school students may also complete Co-Op placements during the school day.)

Complete Grade 12 or Equivalent

Direct Entry

Youth Apprentices who were registered prior to completing Grade 12 will receive credit for hours worked and skills acquired.

Registration is not required for current youth apprentices.

(There must be at least one certified journeyman per registered apprentice at the workplace.)

Work continues with current employer – approximately 2000 hrs.

Attend Group A, (Level 1), Technical Training for 5-8 weeks.

Work approximately 2000 hrs.

Find an employer in Nova Scotia willing to hire you as an apprentice.

Register as an Apprentice or Youth Apprentice – dependent on age.

(There must be at least one certified journeyman per registered apprentice at the workplace.)

Work approximately 2000 hrs.

Attend Group A, (Level 1) Technical Training for 5-8 weeks.

Work approximately 2000 hrs.

Complete a one or two year program

Complete a one-year or two-year Trades Program at NSCC.

Find an employer in Nova Scotia willing to hire you as an apprentice.

Register as an Apprentice.
(There must be at least one certified journeyman per registered apprentice at the workplace.)

NSCC Graduates of a one-year program usually receive Group A, (Level 1), technical training credits and 1000 hours.

NSCC Graduates of a two-year program usually receive Group A + B, (Level 1 and 2), technical training credits and 2000 hrs.

Work approximately 2000 hrs.

Attend Group B, (Level 2), Technical Training for 5-8 weeks (not required for NSCC graduates of two-year programs)

Work approximately 2000 hrs.

Attend Group C, (Level 3), Technical Training for 5-8 weeks

Work approximately 2000 hrs. (required for 8000 hour trades)

Attend Group D, (Level 4), Technical Training for 5-8 weeks (required for 8000 hour trades)

Successfully challenge a Certification of Qualification Examination to become a certified journeyman. If the trade is a "Red Seal" trade, you will receive an endorsement on your Certificate of Qualification which is recognized anywhere in Canada.

DESIGNATED TRADES DESCRIPTION

Blaster (1000 – 4000 hours)

Duties:

Blasters engage in all blasting activities including storage, handling, transportation, preparation and use of explosives and drilling conducted at a blasting area or in relation to the use of explosives.

They:

- Study requirements, plan drill patterns, determine the depth and diameter of blast holes and conduct field tests, if required, to determine the type explosive and quantity to use.
- Prepare detonators, fuses, detonating cords, primers, explosive charges and other materials, or supervise the placement of explosive charges.
- Load explosives into blast holes by hand or by using mechanical delivery systems on bulk explosives trucks.
- Check series of electrical wires with blasting galvanometers or blasting multimeters to ensure complete circuits.
- Use detonating cords, delays, shock tubes and detonators to create blasting circuits.
- Control blast sites to ensure safety regulations are met.
- Fire charges.
- Deal with misfires or missed holes.
- Check blast sites for hazards such as overhanging rock or harmful fumes.
- Maintain blast equipment and ensure that safety procedures for handling, storing and moving explosives are followed.
- Keep records of explosives inventories, blast patterns, design, tie-in, times, weather and other relevant information.

Work life:

Blasters are generally employed in the oil and gas, mining, quarrying or construction industries. In the construction industry, blasters break up rock and soil, dislodge tree stumps and demolish structures such as buildings or bridges. In the mining industry, blasters prepare and blast large quantities of rock to improve mine equipment efficiency. Blastors work primarily outdoors, sometimes in remote or hazardous locations. Working conditions often are noisy and dirty. All blasters should enjoy operating machinery and performing tasks that require precision, conducting tests and analyzing information, and directing the work of others.

Bricklayer (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticiable trade.

Duties:

Bricklayers build and repair brick and block buildings, walls, floors, fireplaces, chimneys, patios and walkways with bricks, stones and blocks.

They:

- Work from blueprints to calculate the materials that are needed for the job.
- They cut and trim bricks, concrete blocks and other masonry materials using hand and power tools.
- They construct and repair walls, chimneys and fireplaces, arches, paving, floors, smokestacks, patios, garden walls and other decorative structures.
- They install fire bricks to line chimneys, furnaces, kilns, boilers and similar installations.

Work life:

Bricklayers primarily work outside and do a lot of heavy lifting. They are employed in the construction industry for small, medium and large sized businesses or may be self-employed.

Cabinet Maker (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Cabinet Makers build custom or production-type wooden, (or wood substitute), fixtures, cabinets and furniture.

They:

- Read and study drawings of the project.
- Order construction materials.
- Measure and cut wood or construction materials to fit the specifications.
- Make layouts and patterns.
- Use and maintain tools of the trade.
- Assemble and build the project with hand and power tools.
- Repair or restyle wooden furniture.
- Estimate the cost and timing of the project for customers.

Work life:

Cabinet Makers are often employed by wood products manufacturers or in the construction industry. They mostly work indoors, in shop environments.

Carpenter (8000 hours)

This is a “Red Seal” Certified and Apprenticeship trade.

Duties:

Carpenters construct, erect, install, maintain and repair buildings, houses, and other structures made of wood, wood substitutes and other materials.

They:

- Work on residential jobs. They crib the basement; build the house framework, walls, roof, exterior and interior finishes; and install doors, windows, flooring, cabinets, stairs, handrails, paneling, molding and ceiling tiles.
- Work on commercial or industrial jobs. They build concrete forms; scaffolding; bridges; trestles; tunnels; shelters; towers and other structures.
- Work on maintenance jobs. They repair and remodel existing structures of different kinds.
- Read and interpret blueprints and drawings to meet building code requirements.
- Order construction materials.
- Measure the wood or construction materials to fit the specifications.
- Make layouts and patterns that conform to building codes.
- Maintain tools of the trade.
- Assemble and build the project with hand and power tools.

Work life:

Carpenters are employed in the construction industry. They work directly with companies in the industrial, commercial, institutional or residential sectors or with contractors who work with those companies. Carpentry work can be affected by seasonal changes.

Concrete Finisher (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Concrete Finishers place, finish, cut and repair concrete structures such as concrete floors, driveways, sidewalks, curbs, bridge decks, walls, ceilings.

They:

- Place wet concrete into forms and spread it to a specific depth.
- Fill hollows and remove high spots, smooth freshly placed concrete.
- Operate a power vibrator to compact the concrete.
- Finish the concrete to various surfaces: smooth, nonskid, exposed aggregate, decorative, (patterned or stamped) or a coloured surface using hand and power tools.
- Install anchor bolts, steel plates, door sills and other fixtures in freshly poured concrete.
- Waterproof, damp-proof and restore concrete surfaces.

Work life:

Concrete Finishers mostly work in the construction industry. They often work on a project-to-project basis. This trade requires physical strength and coordination.

Construction Craft Worker

This is a “Red Seal” trade.

Duties:

Construction Craft Workers set up/dismantle forms, site preparation and clean-up, excavation, backfill/compaction, traffic control duties, concrete placement and finishing, mason tending and operates grading equipment.

They:

- Read blueprints.
- Prepare, excavate, backfill, compact and clean up work sites.
- Load and unload construction materials, move materials to work areas.
- Erect and dismantle concrete forms, scaffolding, ramps, catwalks, shoring and barricades required at construction sites.
- Mix, pour and spread materials such as concrete and asphalt.
- Assist varied tradespersons such as carpenters, bricklayers, cement finishers, roofers and glaziers in construction activities.
- Level earth to fine grade specifications using rake and shovel.
- Assist in demolishing buildings using prying bars and other tools and sort, clean and pile salvaged materials.
- Remove rubble and other debris at construction sites using rakes, shovels, wheelbarrows and other equipment.
- Operate pneumatic hammers, vibrators and tampers as directed.
- Tend or feed machines or equipment used in construction such as mixers, compressors and pumps.

Work life:

Construction Craft Workers work outdoors in all weather conditions, are exposed to water, noise, vibrations and situations requiring attention to safety, and are on their feet for long periods of time. They must be in good physical condition and enjoy hard physical labour. They are employed on a project-by-project basis or work for small, medium and large construction companies in the residential, commercial and industrial sectors.

Construction Electrician (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Construction Electricians install and repair electrical systems designed to provide heat, power, control or signals in buildings and residences.

They:

- Read and interpret drawings and electrical code specifications to determine wiring layouts for new or existing installations.
- Splice, join and connect wire to fixtures and components to form circuits.

- Position, maintain and install distribution and control equipment such as switches, relays, circuit breaker panels and fuse enclosures.
- Install and repair electrical systems and related electrical equipment.
- Install data cabling.
- Test circuits to ensure safety and compatibility of the system.
- Investigate and identify faults in electrical systems and remove faulty components.

Work life:

Construction Electricians do a variety of electrical work. They often work with contractors on a project-to-project basis in the construction industry.

Floor Covering Installer (5000 hours)

This is a “Red Seal” Certified trade.

Duties:

Floor Covering Installers install and repair resilient and carpet floor coverings such as underlayment, sheet goods, (vinyl), and tile in residential or industrial environments.

They:

- Inspect, clean and prepare the sub-floors for covering.
- Measure, estimate and cut the quantity of material needed for the project.
- Determine where to place any seams or joints if needed.
- Lay the material and tack down or glue an underlayment over the floors.
- Sew the carpet seams together or use a special heat tape.
- Stretch and fasten the carpet around the perimeter of the room.
- Install sheet goods by applying adhesive to the subfloor, laying the material and rolling it out to finish.
- Repair damage to floor coverings as required.

Work life:

Floor Covering Installers work in a variety of indoor settings. They often work independently and are self-employed.

Glazier (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Glaziers install and prepare glass to install in automobiles, commercial and residential environments.

They:

- Interpret blueprints to determine the type and thickness of glass, frame, installation and materials required.
- Cut glass using manual or computerized cutters.
- Secure the panes in place using clips, points or moldings.
- Assemble parts of prefabricated glass, mirrors or glass products on walls, display cases, shower or revolving doors, store fronts, automatic doors, sky lights, solariums and other structures.
- Repair and service glass structures in residential and automotive settings, such as furniture, windows and doors.

Work life:

Glaziers will often work for glass installation contractors, window manufacturers, glass factories, automotive shops and service and repair shops. They can work from great heights.

Insulator (Heat and Frost) (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Insulators install thermal and acoustical insulation materials in commercial and industrial structures and remove asbestos.

They:

- Read drawings and specifications to determine the insulation requirements of the structure.
- Choose the amount and type of insulation to be installed as well as the method of securing the insulation according to the unique requirements of the setting.
- Apply insulation materials to plumbing, heating, cooling and refrigeration systems, piping equipment and pressure vessels, in walls, floors and ceilings of other structures to prevent or reduce the passage of heat, cold, sound or fire.
- Measure and cut insulating material and the coverings.
- Install vapour barriers and finish insulated surfaces by applying metal cladding, canvas, plastic sheeting or cement.
- Remove or seal off old asbestos insulation.

Work life:

Insulators work in a variety of construction and industrial settings, both indoors and outdoors. They have to be especially aware of safety, as they sometimes work with hazardous materials, such as asbestos.

Ironworker (Generalist) (11,000 hours)

This is a “Red Seal” Certified trade.

Ironworker (Structural/Ornamental) (6000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Ironworker (Reinforcing) (3000 hours)

This is a Read Seal Certified and Apprenticeable trade.

Duties:

Ironworkers fabricate, erect, hoist, install and repair structural ironwork, pre-cast concrete, concrete reinforcement materials, curtain walls, ornamental iron, and other metals used in the construction of buildings.

They:

- Read specifications to lay out their work.
- Unload and stack steel units so each piece can be hoisted as needed.
- Erect and set up scaffolding, hoisting and rigging equipment such as construction cranes and cables, pulleys and hooks.
- Weld or bolt steel units in place after aligning using an electric arc process.
- Erect structural and architectural pre-cast concrete components for buildings, bridges, towers and other structures.
- Assemble and erect prefabricated metal structures.
- Select, cut, bend, align and secure steel bars or metal mesh in concrete forms to reinforce the concrete.
- Mount and install ornamental and other structural metalwork such as curtain walls, metal stairways, railings and power doors.

Work life:

Ironworkers work outdoors, in most situations. They will sometimes work at great heights in challenging and changing circumstances. Ironworkers often work from contract-to-contract on construction sites and can often travel to different locations. Employment can vary with seasonal weather conditions.

The Ironworker (Generalist) is a combination of both the Ironworker (Reinforcing) and the Ironworker (Structural/Ornamental) trades.

Lather (Interior Systems Mechanic) (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Lathers assemble and install the frameworks for ceilings, drywall partitions, soundproofing and vapour barriers.

They:

- Interpret blue prints and sketches to determine their work.
- Erect a metal or wood framework for walls, partitions, ceiling systems and ornamental shapes.
- Fabricate and install suspended metal ceiling grids and place in panels to form acoustical and coffered ceilings.
- Prepare wall and ceiling layouts.
- Install metal stud framing and furring for interior drywall walls and ceilings.
- Attach gypsum lath, metal lath and stucco wire.
- Install items such as metal door and window frames, access doors and wall insulation.
- Set up corner beads and wire mesh around beams to which plaster is to be applied.

Work life:

Lathers work on a project-to-project basis and will often travel for work. They work primarily indoors and sometimes from a height. They will most often work in a construction team and will be in good physical condition.

Mobile Crane Operator (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Mobile Crane Operators use mobile cranes to lift and move heavy objects. Crane and hoisting equipment operators service and operate the hoist and swing equipment used to move machinery, materials and other large objects.

They:

- Service and operate booms that are mounted on crawlers or wheeled frames.
- Operate cranes or draglines to lift, move or position machinery, equipment and other large objects at construction or industrial sites.
- Inspect all equipment and calculate crane capacity and weight to prepare for rigging and hoisting.
- Drive pilings into earth to provide support to dredge waterways and to provide support for buildings and other structures.
- Drive the crane to the job site, rig and set up the machine for the lift using blocking and leveling materials.
- Perform routine maintenance work on the cranes.

Work life:

Mobile Crane Operators work outside, in all kinds of conditions. They work on various construction sites and are hired by general contractors and subcontractors in the forestry, mining, construction and oil industries, and by crane rental companies. They can also work directly for building developers, construction firms or heavy construction firms. This is seasonal employment and depends on weather conditions.

Painter and Decorator (6000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Painters and Decorators apply paint, varnish, stain, wallpaper, and wallcoverings to interior and exterior surfaces of buildings and other structures.

They:

- Determine quantities of material required by measuring surfaces or reviewing a work order.
- Prepare and clean surfaces using methods such as scraping, stripping with solvents, sanding, sand blasting, wire brushing and steam cleaning.
- Mix paint to obtain desired colour and texture.
- Apply an undercoat primer or sealer before painting, or apply “sizing” before wallpapering.
- Apply paint or other materials such as stain, lacquer, fiberglass, fire-proof and fire-retardant coatings or varnishes to surfaces of wood, metal, brick, concrete, plaster, stucco or stone using brushes, rollers or spray equipment.
- Apply finishes that are sponged, ragged and layered.
- Sandblast and apply industrial coatings.
- Measure, cut and apply wallpaper and fabrics to walls.
- Assemble and erect scaffolding and swing gates.
- Keep up-to-date on product changes and advise customer on selection of colour schemes and choice of wall coverings.
- Provide cost estimates to clients.

Work life:

Painters and Decorators are employed by contractors involved in construction or remodeling work, or by organizations that own or manage large buildings such as apartment complexes or schools. Painters and Decorators try to arrange their work so they will be outdoors in late spring, summer and early fall, and indoors in the late fall and winter.

Plumber (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Plumbers install, repair and maintain pipes, fixtures and other plumbing equipment used for water distribution and waste water disposal in residential, commercial and industrial buildings.

They:

- Read design drawings, manufacturer's literature and installation diagrams to determine the layout of a plumbing system, water supply network, waste drainage systems and connected appliances.
- Install and repair domestic, commercial or industrial plumbing fixtures and systems; such as installing sinks, tubs and toilets.
- Locate, mark and cut for pipe connections, passage holes and fixtures in walls and floors.

- Select the type and size of pipe required and measure to specifications
- Join pipes using couplings, clamps, screws, bolts, cement or soldering, brazing and welding equipment.
- Test pipes for leaks using air and water pressure gauges.

Work life:

Plumbers are employed by construction contractors, plumbing repair shops and large organizations. Their employment prospects vary considerably with seasonal and economic climates.

Restoration Stone Mason (8000 hours)

This is an Apprenticeable trade.

Duties:

Restoration Stone Masons construct and reconstruct structures using stone and other kinds of masonry.

They:

- Lay brick and stone, concrete blocks, structural tiles and other kinds of masonry in residential, commercial and industrial settings.
- Identify types and properties of stone.
- Read sketches and blueprints to calculate materials required.
- Cut and trim bricks and concrete blocks according to specifications using hand and power tools.
- Construct, erect, install and repair walls, arches, paving, floors, fireplaces, chimneys, smokestacks and other such structures.
- Install firebricks to line industrial chimneys, furnaces, kilns, boilers and similar installations.
- Lay bricks, stone or similar materials to provide veneer facing to walls or other surfaces.
- Lay bricks or other masonry units to build patios, garden walls and other decorative installations.

Work life:

Restoration Stone Masons are usually employed on a project-by-project basis or work for a construction company. They may work specifically with brick, stone, restoration, masonry, plastering, drywalling or lathing contractors.

Roofer (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Roofers install, repair and replace flat roofs and shingles, shakes or other roofing tiles on sloped roofs.

They:

- Install and repair built-up roofing systems using materials such as asphalt-saturated felts and hot asphalt and gravel.
- Prepare and apply protective coverings to flat and sloped roof surfaces in accordance with blueprints and specifications.
- Install and repair single-ply roofing systems using waterproof sheet materials such as modified plastics, elastomeric or other asphaltic compositions.
- Install, repair or replace shingles, shakes and other roofing tiles on sloped roofs of buildings.
- Install and repair metal roofs using hand and power tools.
- Set up scaffolding to provide safe access to roofs.
- Estimate materials required and quote costs.
- Set up manual and power hoists.

Work life:

Roofers are employed by roofing contractors on construction or repair jobs. They work outdoors on roofs of varying heights. Roofers may work considerable overtime in warmer seasons. This occupation is less sensitive to economic changes than some other construction trades because there is steady demand for repair work even if construction is slow.

Tilesetter (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Tilesetters cover and decorate interior and exterior walls, floors and ceilings with ceramic, marble and quarry tile, mosaics or terrazzo.

They:

- Prepare, measure and mark the surfaces to be covered.
- Build underbeds and install anchor bolts, wires and brackets.
- Determine the best layout to achieve the desired pattern in a given space.
- Mix, apply and spread adhesives such as mortar, cement, mastic or epoxy over the surface.
- Set tiles or groups of tiles into position, align the tiles and tap them into place.
- Align and straighten tile, using levels, squares and straight edges.
- Cut and fit tiles around obstacles and openings using hand and power cutting tools.
- Pack grout (a fine mortar) into joints and remove the excess.
- Install terrazzo surfaces by scattering and rolling marble chips or other aggregates over a mortar base, and polishing it by hand or machine.
- Cut, surface, polish and install marble and granite.
- Lay and set mosaic tiles to create decorative wall, mural and floor designs.
- Remove and replace damaged tiles.
- Prepare cost estimates and orders.

Work life:

Tilesetters are employed by special trade, building and general contractors. Those who are self-employed usually contract their services for smaller renovation projects. Employment prospects for tilesetters change with seasonal and economic climates. They work both indoors and outdoors.

Welder (6000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Welders join, cut or shape 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 using electric arc, oxyacetylene flame, or other welding processes.

They:

- Read and interpret blueprints or welding process specifications.
- Develop patterns for projects.
- Lay out, cut and form metal to specification.
- Fit sub-assemblies and assemblies together and prepare them for welding.
- Clean, check for defects and shape component parts, sometimes using a cutting torch.
- Operate manual or semi-automatic welding equipment to fuse metal segments using processes such as gas tungsten arc, gas metal arc, flux cored arc, plasma arc, shielded metal arc, resistance welding and submerged arc welding.
- Operate brazing and soldering equipment.
- Operate metal shaping machines such as brakes, shears and other metal straightening and bending machines.

Work life:

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. Welders may work outdoors on construction sites or indoors in production and repair shops. Travel may be required on jobs such as oil field-related welding.

Motive Trades

Agricultural Equipment Technician (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Agricultural Equipment Technicians inspect, test, repair and maintain farming equipment such as tractors, tillage, spraying, irrigation, seeding and harvesting equipment.

They:

- Test and diagnose equipment using computerized diagnostic tools.
- Work on all parts of engine repair and maintenance of the vehicles and farm equipment systems, including fuel, brakes, steering, suspension, drive train, tires, emission control and exhaust, climate control and electrical systems.
- Maintain vehicles regularly with oil changes, lubrications and tune-ups.
- Explain and advise customers on the work done and needed in the future on the equipment.
- Assemble and adjust farm machinery.

Work life:

The majority of journeypeople in this field work full-time all year round. They are often hired by employers who sell and maintain wholesale equipment and machinery or in transportation.

Automotive Painter (4000 hours)

This is a “Red Seal” Certified trade.

Duties:

An Automotive Painter prepares and paints cars and other vehicles.

They:

- Inspect the condition of the vehicle.
- Prepare the vehicle for painting by sanding, spot filling and priming using specialized hand and power tools.
- Mix paint and match colours.
- Use brushes or spray guns to apply primer, paint, enamel, lacquer and protective and decorative coatings.
- Apply decals, transfers, stencils and other decoration to vehicles.

Work life:

Automotive Painters are often hired in auto body repair shops, automotive and truck dealerships, high-end automotive shops, trucking companies and bus lines.

Automotive Service Technician (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticiable trade.

Duties:

Automotive Service Technicians inspect, diagnose, repair and service cars and light trucks. They may specialize in areas of brakes, steering, suspension, and engine and fuel systems.

Automotive Service Technician (Service Station Mechanic) (6000 hours)

This occupation is a Compulsory Certified and Apprenticeable trade.

Duties:

Automotive Service Technicians (Service Station Mechanics) do tune-ups, safety inspections, install engines, service and repair braking systems, clutch and tires of cars and light trucks.

They:

- Inspect vehicles using road tests, observation of operation and computerized diagnostic and testing equipment.
- Adjust, repair and may rebuild steering and braking systems, drive trains, vehicle suspensions, electrical and air-conditioning systems, emission control and exhaust and wheel alignments using specialized hand and power tools.
- Perform maintenance service such as oil changes, lubrications and tune-ups.
- Consult manufacturers' guides to diagnose and fix problems.
- Advise customers on the work completed and future vehicle maintenance issues.

Work life:

Automotive Service Technicians are hired in small, medium or large-scale businesses such as car dealerships. Many go on to own their own businesses or work for manufacturers or suppliers as salespeople.

Boat Builder (Competency-Based)

This is an Apprenticeable trade.

Duties:

Boatbuilders build and repair boats for commercial and recreational use. The boats range in size from small 7ft dinghies to large 70ft draggers or live-aboard cruisers. Boats can be made of fiberglass, steel, aluminum, wood, or wood-epoxy.

They:

- Laminate fiberglass hulls using hand tools or spray guns and a mixture of resin and fiberglass cloth using specified laminate schedule.
- Cut and weld aluminum or steel parts for assembly of hulls, decks and superstructure following blueprint specifications.
- Install machinery and equipment into the hull following design specifications and drawings and in accordance with industry standards such as Transport Canada or American Boat & Yacht Council.
- Take detailed internal hull measurements to fabricate and fit interior furnishings and trim.
- Fill, sand and fair surfaces of the hull, superstructure and interior using sanding board and power sander.
- Apply marine-grade paints to hull, superstructure and interior surfaces to specified finish using hand brush, roller, or spray gun.

- Install wiring in the hull to specified design to industry standards such as Transport Canada or American Boat & Yacht Council.
- Fit and install piping systems in the hull to industry standards such as Transport Canada or American Boat & Yacht Council.
- Consult with customer or supervisor and read blueprint drawings to determine the necessary repairs.
- Position and secure staging and support structures in the boat construction area.

Unique Training Path:

Work as an apprentice for a period of typically 3 ½ to 5 years to complete all the required skills competencies and become a provincially and industry-recognized Boat Builder. The Nova Scotia Boat Builder Apprenticeship program is a competency-based (not time-based) program of skills learning. Apprentices learn on-the-job, as employees of a boatbuilding company. Some theory training is required to complete the required skills competencies. Contact the Nova Scotia Boatbuilders Association (www.nsboats.com) for advice and help in finding an employer.

Work life:

There are approximately 50 boatbuilding companies in Nova Scotia. They range from small operations that build one boat at a time, to large organizations that employ dozens of skilled tradespeople. Boat Builders work year-round. Wage rates are competitive with most other industry sectors.

Heavy Duty Equipment Technician (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Heavy Duty Equipment Technicians repair, maintain and overhaul heavy-duty equipment such as bulldozers, cranes and graders.

They:

- Maintain and repair vehicles and equipment including combustion engines and components, crawler tractors, rippers, ditchers, backhoes, trenchers, gantry cranes and similar ground working equipment.
- Work on scrapers, motor scrapers, tractors, off-highway motor vehicles, trucks and trailers.
- Repair and maintain the equipment as necessary, including cleaning, lubricating and general maintenance.
- Work with and interpret technical manuals and computers to assist diagnosing faults or malfunctions.
- Replace defective parts or components using various hand and power tools.

Work life:

Heavy Duty Equipment Technicians often work outside on construction sites or in industrial sites. These sites can be in many different industries, such as transportation, forestry, mining, oil and gas, landscaping or land clearing. A few Heavy Duty Equipment Technicians might even work in laboratories overhauling fuel injection pumps and delivery systems. The job is quite variable and depends on the contract or project.

Motorcycle Mechanic (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Motorcycle Mechanics assemble, service, and repair motorcycles, motor scooters and other multi-wheeled lightweight all-terrain vehicles and accessories.

They:

- Review work orders and discuss the work to be performed with supervisor.
- Diagnose problems and locate failures with the electrical system, engine, power train, suspension or frame by inspecting the vehicle, listening to it operate and using testing equipment.
- Determine estimates of repair cost.
- Diagnose and repair fuel injection, carburetor system, drive line, steering system, front and rear suspension, mechanical braking system, hydraulic braking system, ignition system, charging system, frames, tires and wheels.
- Test and adjust repaired systems for proper performance.
- Perform scheduled maintenance such as cleaning and adjusting the carburetor, adjusting the clutch, brakes and drive chain, and replacing worn parts.
- Advise customers on the work performed and the general condition of motorcycle.

Work life:

Motorcycle Mechanics are employed at motorcycle dealerships and repair shops or are self-employed. Motorcycle Mechanics usually work indoors, however, the bulk of their work is working on motorcycles in the warmer months. Often mechanics will also work on all-terrain vehicles and snowmobiles to continue working through the winter.

Motor Vehicle Body Repairer (Metal and Paint) (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Motor Vehicle Body Repairers, (Metal and Paint), are responsible for restoring the structural integrity of damaged vehicles during the repair process.

They:

- Read and interpret specification charts and use sophisticated measuring and repair systems to restore damaged vehicles.
- Repair, reshape, and refit body panels, fenders, and skirtings.
- Weld breaks in body panels, fenders and skirtings.
- Repair restraint systems, such as air bags and seat belts.
- Shrink or stretch metal body panels by heat treatment.
- Remove or replace electrical and vacuum components, wiring harnesses, air conditioning systems and water pumps.
- Remove and install bolt-on components such as hoods, decklids, fenders, trim, doors, glass and interior components.
- Straighten and align frame and unibody assemblies.
- Remove, replace or adjust steering and suspension components.
- Verify dimensional accuracy, system functions, passenger protection and finally, test-drive the vehicle to ensure proper alignment and handling.

Work life:

Motor Vehicle Body Repairers are employed by auto body repair shops, automobile and truck dealerships, custom shops and sometimes by trucking companies and bus lines. They mostly work indoors. Motor Vehicle Body Repairers can also become automobile damage appraisers for insurance companies.

Partsperson (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Partspersons manage and dispense parts inventories, which may include automotive, heavy duty, agricultural, industrial and recreational vehicle parts.

They:

- Are responsible for stock handling, warehousing, identifying and cataloguing parts and assemblies.
- Order, receive, inspect, price and sell parts in wholesale, retail or warehouse distribution businesses.
- Maintain records of the amount, kind and location of parts in the store using a manual or computerized inventory system.
- Provide customer support service and merchandising by selling spare and replacement parts for motor vehicles, machinery and equipment in a retail setting in person, over the telephone or Internet.
- Organize and ship exchange parts and returns.
- Prepare, maintain and update purchasing files, reports, catalogues and price lists.
- Prepare statements.
- Submit bills.

- Use administrative and organizational tools such as computers, calculators, facsimile (fax) and materials handling equipment.

Work life:

A Partsperson may work for motor vehicle parts manufacturers, motor vehicle manufacturers, motive power repair shops and retail parts establishments. They may work indoors or outdoors, which may include working in storerooms where large inventories of parts are kept, usually on rows of shelves or in bins. With some sales experience, partspeople can move into sales representative positions.

Recreation Vehicle Service Technician (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

RV Service Technicians install and repair exterior and interior components, install accessories, and perform pre-delivery inspections on motor homes, holiday trailers, fifth wheels, truck campers, and tent trailers.

They:

- Examine, troubleshoot and diagnose units needing repairs and/or maintenance by using computerized and electrical testing equipment, troubleshooting techniques, manufacturers' specifications, and Internet websites.
- Repair or replace electrical wiring, plumbing, propane gas lines, appliances, windows, doors, cabinets and structural frames in recreational vehicles.
- Repair fiberglass, body and structural components of recreational vehicles.
- Communicate with supervisors, manufacturers and consumers to ensure timely, efficient and economical repairs.
- Install accessories.
- Perform pre-delivery inspections.
- Write repair estimates.

Work life:

Recreation Vehicle Service Technicians are employed by dealerships, manufacturers and independent repair shops. Recreation Vehicle Service Technicians enjoy a high level of job security, usually work at indoor shops and occasionally work outdoors and at RV sites. Experienced Recreation Vehicle Service Technicians may advance to a number of supervisory or administrative positions, specialize in a particular area of repair, or open their own repair shops.

Transport Trailer Technician (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Truck and Transport Technicians repair and service the braking, electrical, hydraulic system, and heating/cooling units of trucks and transport trailers, on-highway vehicles, both towed and self-propelled.

They:

- Interpret work orders and technical manuals and discuss work orders with supervisor.
- Inspect truck trailer systems and components using computerized diagnostic and other testing devices to diagnose and isolate faults.
- Adjust, repair or replace parts of truck trailer systems including electrical and electronic systems, landing gear assemblies, frames, hitching and coupling systems, bodies, suspension parts, tires, wheels, rims, hubs, and axles, air and auxiliary systems, braking systems, heating and refrigeration systems and ventilation devices and hydraulic systems, using hand tools and other specialized repair equipment.
- Test and adjust repaired systems to manufacturer's performance specifications.
- Keep equipment cleaned, lubricated and maintained.
- Advise customers on work performed, general trailer condition and future repair requirements.
- Write service reports.

Work life:

Truck and Transport Technicians are employed in small repair shops, large fleet maintenance companies, transportation and construction companies. The working environment for transport trailer technicians varies considerably from one job to another.

Truck and Transport Mechanic (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Truck and Transport Mechanics repair and service the various systems and engine components of buses and transport vehicles. These may include flat decks, dry freight vans, refrigerated vans, tankers, converters, boosters, pole trailers, jeeps, steering dollies, dump trailers and any other commercial pull type devices.

They:

- Review work orders and discuss work with supervisor.
- Inspect motors in operation and road test motor vehicles.
- Test systems and components using computerized diagnostic and other testing devices to diagnose and isolate faults.

- Adjust, repair or replace parts and components of truck and bus systems including fuel, brake, steering and suspension, engine and drive train, emission control and exhaust, cooling and climate control, and electrical and electronic systems using hand tools and other specialized automotive repair equipment.
- Test repaired equipment to ensure that the work done meets manufacturers' specifications and legislated regulations.
- Perform scheduled maintenance service, such as oil changes, lubrications and tune-ups.
- Advise customers on work performed, general vehicle conditions and future repair requirements.
- Write service reports.

Work life:

Transport Trailer Mechanics are employed in transportation fleet repair shops, trailer dealerships, municipal or provincial highway transportation departments, general mechanical repair shops, manufacturers' repair shops and specialized repair shops. Truck and Transport Mechanics may also work as service advisors, work for suppliers or manufacturers, or work in sales.

Industrial/Mechanical Trades

Alarm and Security Technician (6000 hours)

Duties:

An Alarm and Security Technician installs and repairs intrusion alarm, closed circuit video and access control systems.

They:

- Repair, install and service security systems.
- Change access code combinations.
- Discuss security needs with clients.
- Advise clients on materials and costs.
- Install and test security systems including intrusion alarms, closed circuit videos and access control systems.
- Order replacement parts.
- Keep up to date with new products and developments.

Work life:

Alarm and Security Technicians tend to work in shops or have a mobile workshop. They need to keep informed about all of the new developments in security systems. They often work with customers for a good portion of their day.

Appliance and Service Technician (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Appliance and Service Technicians install and repair household and commercial appliances such as refrigerators, ovens, ranges, washers, dryers, microwaves and waste disposers.

They:

- Investigate and diagnose problems in household equipment with specialized tools.
- Consult manufacturers’ manuals and technical bulletins to identify how to fix the problem.
- Clean and replace parts of equipment.
- Deal with customers often in their home environment, prepare cost estimates and work orders.

Work life:

Appliance Service Technicians are very independent. They can work in a shop if the appliances are portable, or work out of a truck if the appliances are not portable. They will often be dealing with customers in their homes.

Boilermaker (6000 hours)

This is a “Red Seal” Certified and Apprenticeship trade.

Duties:

Boilermakers build, assemble, erect, test and repair air-tight containers such as boilers, tanks and pressure vessels.

They:

- Read blueprints or specifications to plan operations.
- They lay out plate, sheet steel and other heavy metal and find and mark the bending and cutting lines.
- Set up and operate metal-working machines such as brakes, rolls, shears, flame cutters and drill presses to cut and shape metal into sections.
- Assemble and fit metal plates to form complete units using tack welding, bolting or other methods.
- Erect, install, maintain and repair boilers and other heavy-metal products using hand and power tools.

Work life:

Boilermakers often work outside and sometimes at great heights. They require physical strength and coordination. Many people in this trade work for the federal government in the Department of National Defense. They might also work for private contractors.

Communications Technician (6000 hours)

Duties:

Communication Technicians install, maintain, remove or repair wiring networks, consumer and business communication equipment and specialized equipment such as intercoms, fax machines and computer networks.

They:

- Install and/or maintain electronic communication equipment such as telephone sets, line status indicator or modems.
- Troubleshoot service malfunctions or equipment breakdowns by evaluating, coordinating, and resolving the telecommunications problems.
- Process customer orders for the installation of initial voice, video and/or data communication services as well as service orders for the maintenance and repair of communications equipment and circuits.
- Install cabling or other equipment in accordance with accepted industry standards
- Maintain network documentation and equipment specifications.
- Maintain and modify operating procedures and standards for documentation.

Work life:

Communication Technicians should have mechanical and analytical ability, good communication skills and enjoy doing precision work that sometimes required creativity. They are employed by companies that install, maintain, sell, rent or lease communications equipment. They may also install private communication systems.

Electric Motor System Technician (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Electrical Motor Systems Technicians test, rebuild and repair electric motors, generators, transformers, controllers and related electrical and mechanical equipment used in commercial, industrial and institutional establishments.

They:

- Diagnose problems and dismantle electric motors, transformers, switchgear, electric welders, generators and other electrical and mechanical equipment for servicing, modification or repair.
- Remove and replace shafts, bearings, and other components, referring to blueprints or service manuals as required.
- Wind and assemble various types of coils for electric motors or transformers and reinstall them.
- Balance armatures or rotors, weld and braze or solder electrical connections, and align and adjust parts.

Work life:

Most Electrical Motor Systems Technicians work primarily indoors in large shops and production plants. Those who work for firms that contract their services to other organizations may remove and replace burned out motors on the customer's premises, and may have to travel regularly to perform maintenance on customer equipment.

Electronics Technician (Consumer Products) (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Electronics Technicians (Consumer Products) service and repair radios, televisions, and VCRs.

They:

- Talk to customers and conduct routine checks to find the source of a malfunction.
- Inspect and test electronic equipment, components and assemblies using multimeters, circuit testers, oscilloscopes, logic probes and other test equipment.
- Diagnose and locate circuit, component and equipment faults.
- Follow equipment manuals and drawings to adjust, align, replace or repair parts.
- Keep records such as work orders and test and maintenance reports.
- Access and distribute product information using electronic means such as e-mail, data bases and the Internet.
- May specialize in repairing particular types of electronic equipment such as radio and television receivers, stereo components, video cameras, two-way radio communication systems, video and audio tape recorders, bio-medical systems, computer systems or security systems.

Work life:

Electronic Technicians generally work alone with little supervision. Some technicians travel to customers' locations to make routine repairs and transport faulty equipment back to the shop if necessary, but the work is otherwise indoors.

Gasfitter (4000 hours)

This is an Apprenticeship trade.

Duties:

Gasfitters install piping, appliances, equipment and controls for the use of natural gas or propane as a fuel in residential, commercial and industrial environments.

They:

- Inspect, install, repair and maintain gas lines and gas equipment such as meters, regulators, heating units and appliances.
- Study drawings and specifications to prepare for installations.

- Determine the size and type of pipe, equipment, appliances and devices to use for the project.
- Test piping and other materials.
- Cut, thread and assemble pipes using pipe cutters, pipe threading machines, pipe vices and other tools.
- Install vents and flues and connect gas-consuming appliances such as ranges, dryers, barbeques, furnaces, boilers, space heaters, radiant and forced air heaters.
- Inspect systems and identify and replace faulty components.
- May also install and service propane and natural gas filling stations.

Work life:

Gasfitters work both indoors and outdoors and in a physically-demanding trade. They are mostly employed by the firm who is distributing gas in the province. Others work for companies who are engaged in the installation and maintenance of propane gas delivery systems.

Industrial Electrician (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Industrial Electricians install, repair, and maintain electrical wiring and electrical equipment for industrial settings that provide heat, light, power, control, signal or fire alarms.

They:

- Read and interpret drawings, blueprints, schematics and electrical code specifications to determine wiring layouts for new or existing installations.
- Install, examine, replace or repair electrical wiring, receptacles, switch boxes, conduits, feeders, fiber-optic and coaxial cable assemblies and lighting fixtures.
- Test electrical and electronic equipment and components for continuity, current, voltage and resistance.
- Splice, join and connect wire to fixtures and components to form circuits.
- Maintain, repair, install and test switchgear, transformers, switchboard meters, regulators and reactors.
- Maintain, repair, test and install electrical motors, generators, alternators, industrial storage batteries and hydraulic and pneumatic electrical control systems.
- Test circuits to ensure safety and compatibility of the system.
- Conduct preventive maintenance programs and keep maintenance records.

Work life:

Most Industrial Electricians work for larger companies on a full-time basis to maintain and repair the electrical systems. They mostly work indoors.

Instrumentation and Control Technician (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Industrial Instrument Mechanics repair, maintain, and install industrial measuring and controlling equipment.

They:

- Work with pneumatic, electronic and microcomputer instruments used to measure, control and maintain pressure, flow, temperature, level, motion, force, and chemical composition.
- Repair and maintain system components and remove and replace defective parts when needed.
- Calibrate and maintain industrial instruments.
- Work with engineers on basic design elements.
- Install and maintain instruments on new or existing plant equipment and processes.
- Interpret and use appropriate CSA, ISA and API installation standards and practices.

Work life:

Industrial Instrument Mechanics work in industrial settings in various sectors such as: pulp and paper, hydropower generation, mining and natural gas and industrial and commercial manufacturing. Individuals in this trade sometimes move on to management or sales positions.

Industrial Mechanic (Millwright) (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Millwrights install and maintain stationary machinery and equipment in factories and production plants.

They:

- Read diagrams and schematic drawings to determine work procedures.
- Dismantle and move stationary industrial machinery such as pumps, fans, tanks, conveyors, furnaces and generators, using hand and power tools and rig hoisting and lifting equipment.
- Inspect machinery and equipment to investigate malfunctions.
- Install and maintain power transmission, vacuum, hydraulic and pneumatic systems, and programmable logic controls.
- Fit bearings, align gears and shafts, attach motors, and connect couplings and belts.
- Operate machine tools such as lathes and grinders to fabricate parts as required.
- Clean, lubricate and maintain equipment using preventative procedures such as vibration analysis.
- Are responsible to make and maintain an inventory of replacement parts for the industrial equipment.

Work life:

Millwrights are employed in manufacturing plants and other industrial establishments, often doing construction or plant maintenance work. They work mostly in a team environment of other tradespeople such as Machinists, Electricians and Pipefitters.

Locksmith (8000 hours)

Duties:

Locksmiths install and repair locks, make keys, and change lock combinations. They work on residential, automotive, commercial and institutional locksets and door hardware.

They:

- Repair and service adjusting key machines.
- Repair, adjust, rekey and install locks.
- Reproduce keys for locks and change key combinations.
- Open cylinders when keys are not available.
- Prepare master keys from code.
- Install and design high-security lock and master key control systems, window bars, deadlocks, and keyless entry locks for various companies, including factories and government institutions.
- Repair or replace entrance or exit door security components, such as closers, hinges and release mechanisms.
- Open and make keys for automobiles.
- Change combinations on safes and vaults as needed.

Work life:

Locksmiths tend to work in shops or have a mobile workshop. They need to keep informed about all of the new developments in security systems. They often work with customers for a good portion of their day.

Machinist (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Machinists set up and operate metal cutting and grinding machines such as lathes, milling machines and drills to make parts and products with precise dimensions.

They:

- Read and interpret blueprints, charts and tables or study sample parts to determine the machine operation to be performed.
- Compute dimensions and tolerances and measure by the plans provided, through logic or by using specific tools such as micrometers and vernier calipers.

- Prepare working sketches if needed.
- Install, operate and maintain a variety of machine tools including computer numerically controlled tools to perform precision, non-repetitive machining operations such as sawing, turning, milling, boring, planning, drilling, precision grinding and other operations.
- Fit and assemble machined metal parts and subassemblies using hand and power tools.
- Verify dimensions of products for accuracy and conformance to specifications using precision measuring instruments.

Work life:

Machinists can work in big, industrial settings or smaller job shops. In the job shops, they make parts for various types of machinery, and in industrial settings, they may be part of a large production line, where many of the same parts are made. Machinists work in any environment where equipment is being made or repaired.

Marine Fitter (8000 hours)

Duties:

A Marine Fitter makes and repairs structural metal parts for ships and cuts and shapes metal for shipbuilding purposes.

They:

- Assess and identify what work needs to be done on the boating equipment, after consulting work orders.
- Maintain equipment as needed and according to schedule.
- Estimate the repair cost.
- Operate boats and boat handling equipment.
- Install and maintain engines and components including electrical, hydraulic and drive systems.
- Test the repaired equipment.
- Explain to customers the repair work that needed to be done.

Work life:

Marine Fitters are employed by dealer service shops and by independent boating service establishments.

Metal Fabricator (Fitter) (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Metal Fabricators make and repair metal parts used in the construction of bridges, buildings, and plates for boilers, tanks and pressure vessels.

They:

- Read and interpret drawings and discuss them with the customer.
- Perform metal fabrication calculations.
- Lay out pattern and transfer the features of the drawings to the metal part.
- Develop patterns for sheet metal using Computer Assisted Design and Drafting (CAD) software packages.
- Use metal removal, punching and forming equipment machines and cutting torches to cut steel, drill or punch holes, and roll, bend or press steel into the desired shapes.
- Fasten components together (by mechanical means or tack weld) in preparation for a welder to complete the process.

Work life:

Metal Fabricators work for industrial companies who do precise metal fabrication. They usually work inside factories or in workshops. Structural steel and plate fitters are employed by manufacturing, commercial construction and repair shops in the steel fabrication and oil industries.

Mine Electrician (5000 hours)

Duties:

Mine Electricians install, repair, and maintain electrical equipment and systems used in mining.

They:

- Read and interpret drawings, blueprints, schematics and electrical code specifications to determine layout of industrial electrical equipment installations.
- Install, examine, replace or repair electrical wiring, receptacles, switch boxes, conduits, feeders, fiber-optic and coaxial cable assemblies, lighting fixtures and other electrical components.
- Test electrical and electronic equipment and components for continuity, current, voltage and resistance.
- Maintain, repair, install and test switchgear, transformers, switchboard meters, regulators and reactors.
- Maintain, repair, test and install electrical motors, generators, alternators, industrial storage batteries and hydraulic and pneumatic electrical control systems.
- Troubleshoot, maintain and repair industrial (mine), electrical and electronic control systems and other related devices.
- Conduct preventive maintenance programs and keep maintenance records.
- May install, maintain and calibrate industrial instrumentation and related devices.

Work life:

This is a very specific, industrial trade. Mine Electricians work in mines. However, they will have many transferable skills for an Industrial Electrician. Therefore, if they decide to leave mining, they will be able to work in other industrialized environments.

Mine Mechanic (5000 hours)

Duties:

Mine Mechanics repair, maintain, and, if needed, assemble equipment and machinery used in mining.

They:

- Install and repair any machinery in the mine using specific mechanical hand and power tools.
- Maintain equipment by greasing, oiling, cleaning and routine inspections.
- Dismantle and reassemble mine machinery.
- Read and interpret blueprints and construction and installation instructions.
- May have to conduct processes such as vertical welding.
- Build and install ordinary sheet metal piping.

Work life:

This is a very specific, industrial trade. Mine Mechanics work in mines. However, they will have many transferable skills for an Industrial Instrument Mechanic. These tradespeople work in industrial settings in various sectors such as: pulp and paper, hydropower generation and natural gas and industrial and commercial manufacturing.

Oil Burner Mechanic (6000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Oil Burner Mechanics install, repair, and service oil burning, coal, wood and oil combination burning equipment and appliances.

They:

- Put fuel pipes, air ducts and other components in place following blueprints and design specifications.
- Check equipment.
- Perform routine maintenance.
- Diagnose malfunctions and repair or replace defective or worn parts.

Work life:

Many Oil Burner Mechanics are self-employed. Employment in this field is slower than other trades due to advances in technology that are causing the newer heating systems to become more reliable, reducing maintenance needs.

Power Engineer (4000 – 8000 hours)

This is an Apprenticed trade.

Duties:

Power Engineers maintain equipment, boilers and generators that provide heat, ventilation and power for buildings.

They:

- Inspect, install and test machinery and equipment.
- Discuss machine operation variations with supervisors or other maintenance technicians, to diagnose problem or repair machine.
- Dismantle defective machines and equipment and install new or repaired parts.
- Clean and lubricate shafts, bearings, gears, and other parts of machinery.
- Install and repair electrical and electronic components of machinery and equipment.
- Lay out, assemble, install, and maintain pipe systems and related hydraulic and pneumatic equipment.
- Repair and replace gauges, valves, pressure regulators, and related equipment.
- Install, program or repair automated machinery and equipment, such as computer numerical controls.
- Set up and operate machine tools such as lathe, grinder, drill, and milling machine to repair or fabricate machine parts, jigs and fixtures, and tools.
- Operate cutting torch or welding equipment to cut or join metal parts.
- Fabricate and repair counters, benches, partitions and other structures.

Work life:

Power Engineers work in industrialized settings. They often work for large companies and on a team.

Powerline Technician (8000 hours)

This is a “Red Seal” Certified and Apprenticed trade.

Duties:

Powerline Technicians build and maintain overhead and underground electrical power transmission and distribution systems, including powerlines, poles, and street lights.

They:

- Install, maintain, troubleshoot and repair electrical distribution and transmission systems including overhead and underground power lines and cables, insulators, conductors, lightning arrestors, switches, transformers and other associated equipment.
- In a power disturbance, failure, or storm damage, Powerline Technicians locate the source of the problem and replace or repair defective power lines and accessories.
- Erect and maintain steel, wood or concrete poles, towers and guy wires.
- Splice, solder and insulate conductors and related wiring to connect power distribution and transmission networks using splicing tools, related electrical equipment and tools.

- Inspect and test overhead and underground power lines and cables and auxiliary equipment using electrical test equipment.
- Climb ladders or operate hydraulic buckets when working aloft on poles and towers, or work in confined spaces such as trenches and tunnels to install power lines and cables and associated equipment.
- Install and maintain street lighting systems.
- Use wiring diagrams, voltage indicating devices, and other electrical-testing instruments to identify defective automatic sectionalizing devices, circuit breakers, fuses, voltage regulators, transformers, switches, relays, or wiring.

Work life:

Powerline Technicians are employed by utility companies and their contractors. Powerline Technicians work outdoors at various work sites, so travelling is often part of the work day. Although a 40-hour work week is normal, in emergencies technicians may be called upon at any hour and in any weather.

Refrigeration and Air Conditioning Mechanic (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Refrigeration and Air Conditioning Mechanics install, maintain, repair and overhaul industrial, commercial and residential refrigeration and air conditioning systems and their component parts.

They:

- Read and interpret blueprints, drawings or other specifications.
- Measure and lay out reference points for installation.
- Assemble and install refrigeration or air conditioning components such as motors, controls, gauges, valves, circulating pumps, condensers, humidifiers, evaporators and compressors using hand and power tools.
- Measure, cut and connect piping using welding and brazing equipment.
- Install, troubleshoot and overhaul entire heating, ventilation, air handling, refrigeration and air conditioning systems.
- Start up system and test for leaks using testing devices.
- Recharge system with refrigerant and perform routine maintenance or servicing.
- Prepare work estimates for clients.

Work life:

Refrigeration and Air Conditioning Mechanics usually work for companies that install and service air-conditioning and refrigeration systems. They work in compressor rooms and on roof tops as well as in computer rooms. They normally work 40 hours a week on a year-round basis. Work is performed in restaurants, supermarkets, hospitals or anywhere cooling systems are required.

Rig Technician

This is a “Red Seal” Certified trade.

Duties:

Rig technicians operate the drawworks, rotary equipment and pumps; inspect rig; maintain records of drilling operations; are able to perform all duties performed by any crew member; and are responsible for the safety, training and supervision of the crew members.

They:

- Work with a variety of hand tools, as well as motorized equipment, lifting and hoisting equipment, and personal protective and safety equipment.
- Disassemble and assemble rigs.
- Inspect and maintain rig equipment.
- Run air, fuel and hydraulic lines, and power cables.
- Set up boiler and steam circulating systems.
- Perform drilling, tipping and casing activities.
- Perform specialized drilling and well operations.
- Prepare for rig moves.

Work life:

Rig crew often travel to remote locations and work in all weather conditions. Good physical condition is important because the work often required considerable lifting, long hours and repetitive movement. Shift work is an expectation, with drilling taking place on a 24-hours schedule.

Sheet Metal Worker (8000 hours)

This is a “Red Seal” Certified and Apprenticeship trade.

Duties:

Sheet Metal Workers design, fabricate, assemble, install, and repair the sheet metal products required in a wide variety of industries and settings. They use many types of metal including black and galvanized steel, copper, brass, nickel, stainless steel, aluminum and tin plate.

They:

- Lay out, measure and mark sheet metal according to drawings or templates.
- Develop patterns for sheet metal using Computer-Assisted Design and Drafting (CAD) software packages.
- Operate light metalworking machines such as shears, brakes, punches, and drill presses, including Computer Numerical Control (CNC) equipment to cut, bend, punch, drill, shape or straighten sheet metal and operate computerized laser or plasma cutting equipment to cut sheet metal.
- Fabricate, assemble, install and repair sheet metal products.
- Fit and join sheet metal parts using riveter, welding, soldering to fabricate ventilation shafts, eaves troughs, partition frames, air and heat ducts, roof decking and sheet metal buildings.

- Grind and buff seams, joints and rough surfaces.
- Inspect product quality and installation to ensure conformance to specifications.

Work life:

Most Sheet Metal Workers are employed by sheet metal, air-conditioning and heating contractors involved in residential, commercial and industrial construction. Some are employed by roofing contractors to install flashing and coping. Sheet Metal Workers work indoors and outdoors in all types of weather. Experienced Sheet Metal Workers may become specialists in design and layout work or in estimating the cost of installations.

Sprinkler System Installer (8000 hours)

This is a “Red Seal”, Compulsory Certified and Apprenticeable trade.

Duties:

Sprinkler System Installers fabricate, install, test, maintain and repair water, foam, carbon dioxide and dry chemical sprinkler systems in buildings for fire protection purposes.

They:

- Read and interpret drawings and specifications to determine layout requirements.
- Install clamps, brackets and hangers to support piping systems as well as sprinkler and fire protection equipment using hand and power tools.
- Fabricate, install, test, maintain and repair water, foam, carbon dioxide and dry chemical sprinkler systems in buildings for fire protection purposes.
- Join and connect pipes and piping sections to related piping systems, tanks, mains, pumps, compressors and control equipment using various pipe joining methods including soldering and welding.
- Install valves, alarms and associated equipment.
- Test system for leaks using air or liquid pressure equipment.
- Inspect, maintain and repair piping, fixtures and controls including hydrant, pump and sprinkler head connections.
- Prepare cost estimates for clients.

Work life:

Sprinkler Systems Installers work in industrial operations, department stores, office buildings, hotels, schools, hospitals and residences. Sprinkler Systems Installers are employed in the construction industry by contractors and companies that specialize in fire protection. Sprinkler Systems Installers work primarily indoors, often in temporarily heated or unheated spaces.

Steamfitter-Pipefitter (8000 hours)

This is a “Red Seal” Certified and Apprenticeable trade.

Duties:

Steamfitter – Pipefitters lay out, assemble, fabricate, maintain and repair piping systems which carry water, steam, chemicals or fuel used in heating, cooling, lubricating and other processes.

They:

- Study blueprints, drawings and specifications to determine the type of pipe and tools to use, and lay out the sequence of tasks.
- Make detailed sketches for pipe and equipment fabrication and installation, as required.
- Cut openings for pipes in walls, floors and ceilings using hand or power tools.
- Select type and size of pipe required; measure, cut, thread and bend pipe to required shape using hand and power tools.
- Weld, braze, cement, solder and thread joints to connect pipes and fabricate sections of piping systems.
- Use testing equipment to check systems for leaks.
- Clean and maintain pipe units and fittings.
- Remove and replace worn components.
- Prepare cost estimates for clients.

Work life:

Steamfitter – Pipefitters are employed by pipeline construction contractors and sub-contractors, thermal or steam generating plants, manufacturers, utility companies, oil refineries, gas plants, pulp mills and chemical plants. Employment prospects change with the seasonal and economic climates. Construction contractors may require employees to travel and live in rented accommodation or at a company “on-site” camp.

Tool and Die Maker (8000 hours)

This is a “Red Seal” Certified trade.

Duties:

Tool and Die Makers use precision metal-working machines and hand tools to build and repair special tools, dies, (metal forms used to shape metal in stamping and forging operations), metal moulds, press tools, various types of small mechanical devices and patterns used in manufacturing.

They:

- Read and interpret engineering drawings and specifications of tools, dies, prototypes or models.
- Prepare templates and sketches, and determine work processes.
- Choose, measure and mark metal stock or castings.
- Set up, operate and maintain a variety of conventional and Computer Numerically Controlled (CNC) machine tools to cut, turn, mill, plane, drill, bore, grind or otherwise shape work piece to prescribed dimensions and finish.

- Use a variety of machine tools to machine parts to close tolerances, and may apply heat treatments.
- Check the accuracy of the work and assemble the parts.
- Fit and assemble or disassemble parts using hand tools.
- Test the completed device for proper operation.

Work life:

Tool and Die Makers are employed primarily in large and small companies in manufacturing industries such as automobile, aircraft, metal fabrication, electrical machinery and plastics, and in tool and die, mould making and machine shops. Tool and Die Makers usually work indoors in “tool rooms” or machine shops. Some become tool designers and/or open their own tool and die shops.

Service Trades

Baker (6000 hours)

This is a “Red Seal” Certified trade.

Duties:

Bakers prepare breads, pastries, cookies, cakes and other baked goods.

They:

- Follow and create recipes for baked goods.
- They prepare bread, rolls, muffins, pies, cookies and cakes for sale in retail food establishments or in restaurants.
- They decorate baked goods.
- They are in charge of the inventory of ingredients and baking tools and must ensure that the finished products are up to industry standards.
- They often oversee the sale of the baked goods.
- Bakers are often in charge of hiring and training baking personnel.

Work life:

Bakers will often work in restaurants, hotels, grocery stores, catering companies, or bakeries, as well as in public or private food service operations.

Cook (6000 hours)

This is a “Red Seal” Certified and Apprenticeship trade.

Duties:

Cooks plan and direct food preparation, organize menus and ingredients for people in institutions, restaurants, hotels and other establishments.

They:

- Plan menus according to requests and number of people.
- Measure and order ingredients.
- Carve cooked meats, poultry and game.
- Keep their work environments up to health and safety standards.
- Clean and maintain cooking utensils.
- Oversee kitchen staff in preparation, handling and cooking of the food.
- Monitor and order supplies for the kitchen.
- Operate stoves and ovens.
- Evaluate the quality of the products used in the preparation of the food.

Work life:

Cooks work in the accommodation and food services industry. They work in hotels, institutions, restaurants, and other establishments. They often work shift work and sometimes move on to own their own restaurants.

Hairstylist (4000 hours)

This is a “Red Seal” Certified trade.

Duties:

Hairstylists cut and style hair according to the client’s lifestyle, preference and physical features.

They:

- Cut and style hair according to the client’s preferences.
- Recommend hair styling to clients according to their physical features.
- Shampoo and rinse hair.
- Use permanent wave solutions.
- Straighten or wave hair.
- Apply bleach, colour, dyes, rinses and highlights.
- Work with wigs, hairpieces and extensions.

Unique Training Path:

Hairdressing is a skilled trade that might require private certification in order to work in specific salons in Nova Scotia. Contact a local salon to find out the specific requirements if you want to work in a salon in Nova Scotia.

Work life:

Hairstylists often work in privately owned salons or are self-employed. They work on their feet for most of the day and like to work with people.

TERMS AND DEFINITIONS

Apprentice

A person who is employed and working in a trade under the supervision and direction of a certified journey person. An apprentice learns the knowledge and skills and becomes familiar with the tools and materials of a trade through on-the-job training and in-school instruction.

Apprentice Log Book

A booklet issued to registered apprentices and youth apprentices in which acquired skills, knowledge and time worked in a trade are recorded. The booklet becomes the apprentice's achievement record. The name given to the booklet may differ between provinces and territories.

Apprenticeship

Apprenticeship is an agreement between an apprentice and an employer that combines on-the-job experience with technical training. Apprentices who complete all practical and technical training requirements, receive competence verification by a qualified trade person and successfully pass the certification exam, are awarded a Certificate of Apprenticeship and a Certificate of Qualification, and become certified journeypersons of a trade.

Apprenticeship Agreement

A document signed by the employer, sponsor or joint apprenticeship training committee and the apprentice outlining the roles and responsibilities of both parties to the term of apprenticeship. The agreement is usually co-signed by the government department that has responsibility for the *Apprenticeship Trades and Qualifications Act and Regulations*.

Apprenticeship Registration

A formal process requiring an individual to meet all the requirements for apprenticeship, including signing an apprenticeship contract, agreement or memorandum of understanding with an employer and the provincial/territorial agency responsible for apprenticeship. The term "registered" is now being regularly substituted for indentured. For specific information respecting the requirements for registering an apprentice in Nova Scotia, refer to the following website www.nsapprenticeship.ca.

Apprenticeship Technical Training

A period of training/instruction provided to apprentices in a classroom setting away from the job site. It usually takes place in a vocational school, community college, technical institute or private training institute, but could be delivered in-house by an employer. The emphasis is on teaching the theory component of the trade or occupation, reinforced where appropriate, with shop/lab training. This training is intended to supplement the on-the-job training.

Canadian Council of Directors of Apprenticeship (CCDA)

An organization comprised of provincial and territorial directors of apprenticeship and representatives from HRSDC. CCDA is responsible for the management of the Interprovincial Standards “Red Seal” Program and works with industry in the development of a skilled labour force.

Certificate of Apprenticeship

A certificate or document issued to a person who has successfully completed a formalized apprenticeship training program.

Certificate of Qualification

A certificate issued to an apprentice who has successfully passed a certification examination for a designated trade. The certificate is also issued to a tradesperson who has the required work experience and skills and has attained the prescribed pass mark on the certification examination to qualify as a journeyman.

Certification

A trade certification exam is the last step of an apprenticeship program. A person who passes the exam becomes a journeyman.

Cooperative Education (Co-Op)

A program for persons who are enrolled in a school or community college and who, through a cooperative agreement between the training institution and employers, receive part of their instruction in the institution and part on-the-job through an employment agreement.

Compulsory Certified Trade

A compulsory certified trade is one in which a person employed in the trade must either have a current Certificate of Qualification, be a registered apprentice or a youth apprentice, have a current Certificate of Qualification from another jurisdiction bearing a “Red Seal” endorsement, or have a temporary work permit.

Designated Trade

A trade that has been formally recognized through provincial or territorial legislation for apprenticeship training and/or certification. The requirements for in-school and on-the-job training, as well as certification examinations are outlined in the trade regulations.

For a current list of Nova Scotia designated and compulsory trades, refer to the following website www.nsapprenticeship.ca/trades.shtml.

Employer

An individual or company, for the purposes of apprenticeship, who agrees to provide on-the-job training to a registered apprentice or youth apprentice. In many cases the employer may not be the journeyman responsible for training and evaluating skills.

Industrial Training and Certification Officer (ITCO)

ITCOs work for the Apprenticeship Training and Skill Development division, Skills and Learning branch, Nova Scotia Department of Labour and Workforce Development. Their duties include:

- Register Apprentices & Employers
- Assess & Refer Clients
- Arrange Training
- Monitor Work Place
- Liaise with Industry
- Promote the Apprenticeship Training System

Interprovincial (IP) Examination

An examination used to determine whether completing apprentices and experienced journeymen meet the national standard in a designated “Red Seal” trade or occupation. Examinations are based on the national occupational analysis (NOA) for that trade or occupation.

Interprovincial Standards “Red Seal” Program

A program designed to bring together provincial, territorial and federal governments to achieve increased workforce mobility by establishing common standards for certification in individual trades and occupations. Through the program, apprentices who have completed their training and become certified journeymen are able to obtain a “Red Seal” endorsement on their Certificate of Qualification by successfully completing an Interprovincial Examination. For complete list of “Red Seal” trades refer to the following website www.red-seal.ca.

Journeyman

A person who has acquired the knowledge and skills in a trade or occupation and has been issued a Certificate of Qualification as attested to by a provincial or territorial authority.

National Occupational Analysis (NOA)

A document that lists the blocks, tasks and sub-tasks performed by workers in a designated trade or occupation in jurisdictions across Canada. The NOA for “Red Seal” designated trades are prepared by industry experts under the guidance of the federal government and the assistance provincial/territorial jurisdictions in which the trade or occupation is designated. It is used as the base document in the development of an interprovincial “Red Seal” examination or examination item bank.

Occupational Health and Safety (OH&S)

Occupational Health and Safety programs and policies are required by law for all workplaces in Nova Scotia. Each employer, in consultation with their employees, will develop activities appropriate to the workplace. Safety training requirements may include first aid, WHMIS, safety orientation and the use of PPE. More information on Health and Safety laws and regulations are available from the NS Department of Environment and Labour at www.gov.ns.ca/enla/ohs/ and the Workers' Compensation Board of Nova Scotia at www.wcb.ns.ca/new/index.php?menu=main.

On-the-Job Training

The component or portion of an apprenticeship training program where apprentices spend time working on the job site learning the skills of the trade under the supervision of a journeyman.

Pre-Apprenticeship Training

A training program that provides intensive instruction designed to prepare an individual for entry into employment in a specific trade or occupation and which may articulate with an apprenticeship program. In Nova Scotia, this training is provided by the Nova Scotia Community College (NSCC). For a full list of programs, visit www.nsc.ca.

Graduates of pre-apprenticeship programs must still complete an apprenticeship program to become a journeyman. Training provided through NSCC pre-apprenticeship programs is granting credit for apprenticeable hours and some technical training.

Prior Learning Assessment and Recognition (PLAR)

A process under which recognition is extended towards completion of an apprenticeship for skills, knowledge or competencies that have been acquired experientially through work experience, previous education and training or self studies. In order to determine if a person qualifies for PLAR, they must meet with an Industrial Training and Certification Officer (ITCO) from the Apprenticeship Training and Skill Development division.

Provincial Apprenticeship Board

A provincial or territorial government appointed Board whose primary function is to advise the Minister responsible for labour market matters on issues related to training and certification of persons in designated trades. Board membership usually consists of equal numbers of persons representing employers and employees, one or more members at large and in most cases a representative of training agencies in the jurisdiction.

Ratio - Journeyperson/Apprentice

The number of qualified/certified journeypersons that an employer must employ in a designated trade or occupation in order to be eligible to register an apprentice. Generally, in most designated trades in Nova Scotia, a ratio of one apprentice to one journeyperson is used. This is to ensure that the employer has enough capacity to properly train an apprentice. In specific cases, an employer in Nova Scotia can ask the Director of the Apprenticeship Training and Skill Development division for an exemption to this ratio.

Ratio – Variance

Employers may apply for a variance of ratio to employ a higher ratio of apprentices to journeypersons. It may be obtained as a result of an insufficient number of journeypersons in the area where the employer carries on business, or in the case of a youth apprentice who is enrolled full-time in a secondary educational institution.

“Red Seal”

A nationally registered trademark symbol adopted for the Interprovincial Standards Program to signify interprovincial qualification of tradesperson at the journeyperson level. It is affixed to the provincial and territorial Certificate of Qualification of those apprentices and tradespersons who have met the national standard in a “Red Seal” trade.

“Red Seal” Trade

A trade or occupation that has been designated by the Canadian Council of Directors of Apprenticeship (CCDA) for inclusion in the Interprovincial Standards “Red Seal” Program. The training and certification is based on a national occupational standard, and provinces and territories participating in the program for that trade or occupation are permitted to affix a “Red Seal” to the certificates of candidates who meet the standard.

Skilled trade

Skilled practice of a practical occupation. There are over 200 general skilled trades in Canada.

Technical Training

A period of training and instruction provided to apprentices in a classroom setting away from the job site. It typically takes place in a vocational school, community college, technical institute or private training institution. The emphasis is on teaching the theory component of the trade and is intended to supplement the on-the-job training.

Trade

An occupation for which a provincial or territorial apprenticeship program is available.

Workplace Hazardous Materials Information System (WHMIS)

Workplace Hazardous Materials Information System regulation establishes requirements for labeling as well as safe storage and usage information for a number of substances. The regulation requires that employers ensure this information is available for materials in their workplace and that employees are appropriately trained. WHMIS training can be accessed through the NS Community College's online training facilities at www.access.nsc.ca/safety/index as well as other public and private training institutions. See also the Workers' Compensation Board of Nova Scotia Health and Safety 101 web site at www.hs101.ca.

Workers' Compensation

Provincial legislation that assists the employer or employee when a work-related injury occurs. Benefits cover the injured employee's medical costs, hospitalization, rehabilitation, disability, pension and lost time. Apprentices and youth apprentices are covered under Workers' Compensation for such work-related injury.

Youth Apprenticeship

Youth apprenticeship is for youth between the ages of 16 and up to and including the age of 19. It involves the same process as regular apprenticeship, including being paid by an employer and mentored by a certified journeyman. Youth apprenticeship requires a long-term commitment from an employer who is willing to track and provide on-the-job training for youth, with most youths' work experience taking place outside regular school hours. Youth apprenticeship allows young people to accumulate hours and commit to a training path at a younger age, while continuing to go to school.

For complete details on youth apprenticeship, see our website at www.workitns.ca.

FORMS

SECTION 6



CO-OP PLACEMENT RECORD OF WORKPLACE HOURS AND COMPETENCIES

Provide this form to the Industrial Training and Certification Officer upon registration in apprenticeship.

Student Information		
Last Name	First Name	Middle Initial
School Attended	Co-op Teacher Name	

Record of Workplace Hours and Competencies	
Trade Name	# of Trade-related Hours Worked
Work Placement Start Date:	Work Placement End Date:
Tasks/duties performed under supervision:	

Employer Information		
Company Name		
Employer Contact Name	Title	
Supervising Journeyperson's Name	Title	
Company Mailing Address	City/Town	
Province	Postal Code	Fax #
Business Phone	E-mail	

Declaration	
Please sign and date to confirm that the information provided is true and complete in all respects.	
Signature of Student _____	Date _____
Signature of Employer _____	Date _____



YOUTH APPRENTICESHIP - EXPRESSION OF INTEREST

PLEASE PRINT - Return completed form by mail to the above address or by fax.

SECTION A: To be completed by the Youth Apprenticeship Coordinator

Trade: _____

Received by: _____ Date: _____

Referred to: _____ Date Referred: _____

SECTION B: To be completed by the applicant

Mr/Ms _____
First Name Middle Name Last Name

Mailing Address _____

City/Town _____ County _____ Province _____ Postal Code _____

Home Phone _____ Email _____

Gender M F Date of Birth _____

Parent/Guardian Name _____ Work Phone _____

Are you currently enrolled in school? Yes No School Name: _____

If **yes**, present grade level 9 10 11 12
If **no**, highest grade level achieved _____

Check the following career exploration programs, if currently enrolled. Co-Op
 Options & Opportunities (O2)
 Other _____

What trade are you exploring/working in? _____

Have you completed any work placements in this trade? Yes No How many? _____

Are you presently a paid employee in this trade either part or full-time? Yes No
If **yes**, name of employer _____

How did you hear about WorkIt Youth Apprenticeship? _____

*The Department will disclose personal information only with written consent of the individual,
or in accordance with the Freedom of Information and Protection of Privacy Act.*

NOVA SCOTIA



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