

YOUR TRADE CERTIFICATION GUIDEBOOK



INDUSTRIAL MECHANIC (MILLWRIGHT)

**MILLWRIGHT PROGRAM
HARMONIZED
IMPLEMENTED JANUARY 2018**

ita
YOUR TICKET.

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YOUR TRADES TRAINING

It's an exciting time to be in the skilled trades industry! BC is growing and so is the demand for skilled tradespeople in the province. Almost one million jobs are expected to be created by 2025 in BC, many of them being in the construction industry.

With the increasing number of retirees in the trades community, there is a need for more driven individuals like you to pursue careers in trades. From the building you're sitting in right now to the cars you drove to get there, there are a number of tradespeople that were involved in the design, creation, and maintenance of them.

Congratulations on starting your journey to certification. You are on your way to becoming a key contributor to BC's trade industry and your community.

ABOUT INDUSTRY TRAINING AUTHORITY:

The Industry Training Authority (ITA) leads and coordinates British Columbia's skilled trades system. ITA works with employers, employees, industry, labour, training providers, and government to issue credentials, manage apprenticeships, set program standards, and increase opportunities in the trades.

APPRENTICESHIP RESPONSIBILITIES

Work-Based Hours (WBT) – Reporting your work-based training hours is essential to completing your Apprenticeship. It is your responsibility to confirm with your Sponsor/Employer that your hours have been reported to ITA and applied to your Apprenticeship record.

If your previous Employer has not submitted work based hours for you, the WBT form allows your current Sponsor/Employer to sign off those hours.

You can find a copy of the **work-based training form** here:

www.itabc.ca/sites/default/files/docs/apply/forms/CS005.4-Work-Based-Training-Report.pdf

Sponsor/Employer – If you have changed your employer, it is important to update your Apprenticeship records with this information. Sponsors have the responsibility to sign off work hours and Recommendation for Certification for completion.

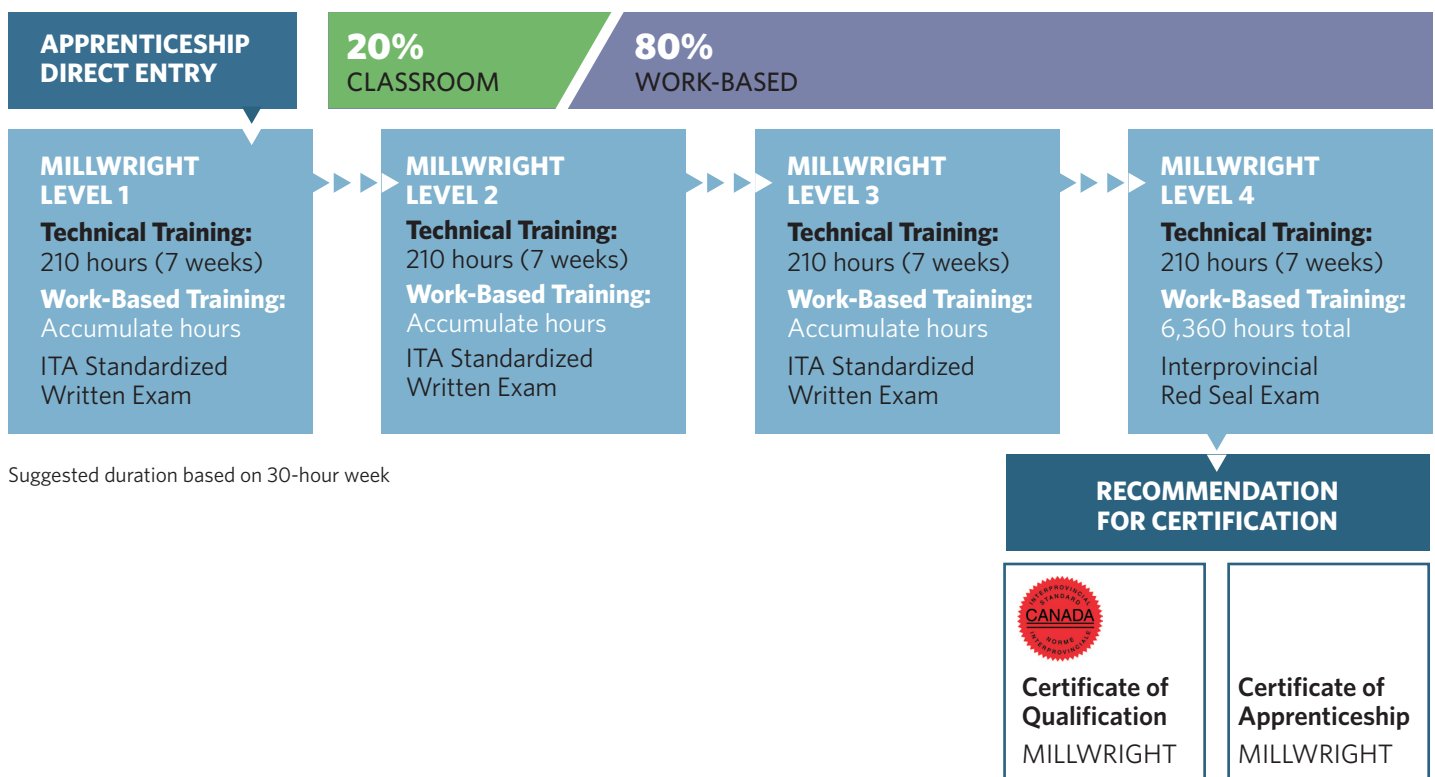
Contact Information – It is your responsibility to ensure your contact information is up to date (address, phone, name changes, etc.) This can be done by logging into Direct Access or phoning Customer Service.

Direct Access – By logging into Direct Access you can view your Apprenticeship records (transcripts, exam marks, etc). www.itabc.ca/apply-apprenticeship/direct-access

Technical Training Registration – Speak with your employer about when will be a good time for you to go back to school for your next level of technical training. Once you and your employer have agreed on a time, it is your responsibility to register for technical training. A list of Designated Training Providers can be found here, www.tradetrainingbc.ca.

It is recommended to have the conversation with your employer and register for technical training ahead of time, as classrooms have limited space.

APPRENTICESHIP PATHWAY - MAPPING YOUR WAY TO CERTIFICATION



GAINING COMPETENCIES

Below are skills and knowledge you will gain from technical and hands on training.

Program competencies can change. Check Program Outline, link below, for accuracy.

www.itabc.ca/sites/default/files/docs/millwright-program-outline-march-2017-harmonized_1.pdf

✓ **MILLWRIGHT LEVEL ONE**

Perform Safety Related Functions

- Use Codes, Regulations and Standards
- Use Personal Protective Equipment (PPE) and Safety Equipment
- Maintain Safe Worksite
- Perform Lock-out, Tag-out and Zero Energy Procedures

Use Tools and Equipment

- Use Hand and Portable Power Tools
- Use Shop Machines
- Use Access Equipment

Perform Routine Trade Activities

- Use Mathematics and Science
- Lubricate Systems and Components
- Perform Leveling of Components and Systems
- Use Fastening and Retaining Devices
- Use Manufacturer, Supplier and Reference Documentation
- Use Mechanical Drawings and Specifications

Use Communication and Mentoring Techniques

- Use Communication Techniques

Perform Measuring and Layout of Work Piece

- Prepare Work Area, Tools and Equipment
- Layout and Fabricate Work Piece

Perform Cutting and Welding Operations

- Cut Material with Oxy-fuel and Plasma Arc Cutting Equipment

Perform Rigging, Hoisting/ Lifting and Moving

- Select and Use Sling and Rigging Attachments
- Select and Use Hoisting and Lifting Equipment
- Create a Rigging Plan

✓ **MILLWRIGHT LEVEL TWO**

Perform Routine Trade Activities

- Use Mathematics and Science
- Lubricate Systems and Components
- Perform Leveling of Components and Systems
- Perform Material Identification
- Perform Heat Treatment of Metal
- Use Mechanical Drawings and Specifications

Perform Cutting and Welding Operations

- Weld Material Using Shielded Arc Welding Equipment (SMAW)
- Weld Material with Gas Metal Arc Welding Equipment (GMAW)
- Welding Material with Gas Tungsten Arc Welding (GTAW)

Service Shafts, Bearings and Seals

- Select, Install and Maintain Shafts
- Select, Install and Maintain Bearings
- Select, Install and Maintain Seals

Service Couplings, Clutches and Brakes

- Select, Install and Maintain Couplings
- Select, Install and Maintain Clutches and Brakes

Service Chain and Belt Drive Systems

- Select, Install and Maintain Chain Drive Systems
- Select, Install and Maintain Belt Drive Systems

Service Gear Systems

- Select and Install Gear Systems
- Diagnose, Maintain and Repair Gear Systems

Perform Shaft Alignment Procedures

- Perform Rough Alignment
- Perform Dial Alignment Procedures

✓ MILLWRIGHT LEVEL THREE

Perform Routine Trade Activities

- User Mathematics and Science
- Perform Leveling of Components and Systems
- Use Mechanical Drawings and Specifications

Perform Shaft Alignment Procedures

- Perform Dial Alignment
- Perform Laser Alignment

Service Fans and Blowers

- Select, Install and Maintain Fans
- Select, Install and Maintain Blowers

Service Pumps

- Identify and Select Positive Displacements Pumps
- Install, Maintain and Repair Positive Displacement Pumps
- Identify and Select Non-Positive Displacement Pumps
- Install, Maintain and Repair Non-Positive Displacement Pumps

Service Compressors

- Identify and Select Compressors
- Install, Maintain and Repair Compressors

Service Piping, Tanks and Containers

- Select, Install and Maintain Process Tanks and Containers
- Select, Install and Maintain Piping

Service Hydraulic Systems

- Identify Hydraulic Components
- Assemble Hydraulic Circuits
- Maintain and Repair Hydraulic Systems

Service Pneumatic and Vacuum Systems

- Identify Pneumatic and Vacuum Components
- Assemble Pneumatic and Vacuum Circuits
- Maintain and Repair Pneumatic and Vacuum Systems

✓ MILLWRIGHT LEVEL FOUR

Perform Routine Trade Activities

- Use Mathematics and Science
- Plan Work
- Perform Leveling of Components and Systems
- Use Mechanical Drawings and Specifications

Use Communication and Mentoring Techniques

- Use Communication Techniques
- Use Mentoring Techniques

Service Conveying Systems

- Identify Conveying Systems
- Assemble Conveying Systems
- Maintain and Repair Conveying Systems

Service Prime Movers

- Service Electric Motors
- Service Internal Combustion Engine
- Service Turbines

Perform Preventative and Predictive Maintenance

- Perform Preventative and Predictive Maintenance Activities
- Perform Vibration Analysis Procedures
- Perform Balancing Procedures
- Perform Non-destructive Evaluation (NDE) Procedures

Perform Commissioning and Decommissioning of Equipment

- Commission Systems and Components
- Decommission Systems and Components

Service Robotics and Automated Equipment

- Service Robotics and Automated Equipment

STANDARDIZED LEVEL EXAMS (SLE)

Standardized Level Exams (SLEs) are usually written on the last day of in-school training and will count for 20% of your overall mark.

Below is a list for general areas of competencies covered in SLEs for each level.

The list of competencies covered in the SLEs can change. Check the **Exam Weighting Charts** for accuracy at:

www.itabc.ca/program/industrial-mechanic-millwright

MILLWRIGHT LEVEL 1	MILLWRIGHT LEVEL 2	MILLWRIGHT LEVEL 3
<ul style="list-style-type: none">A. Perform Safety Related FunctionsB. Use Tools and EquipmentC. Perform Routine Trade ActivitiesD. Use Communication and Mentoring TechniquesE. Perform Measuring and Layout of Work PieceF. Perform Cutting and Welding OperationsG. Perform Rigging, Hoisting/ Lifting and Moving	<ul style="list-style-type: none">C. Perform Routine Trade ActivitiesF. Perform Cutting and Welding OperationsH. Service Shafts, Bearings and SealsI. Service Couplings, Clutches and BrakesJ. Service Chain and Belt Drive SystemsK. Service Gear SystemsL. Perform Shaft Alignment Procedures	<ul style="list-style-type: none">C. Perform Routine Trade ActivitiesL. Perform Shaft Alignment ProceduresM. Service Fans and BlowersN. Service PumpsO. Service CompressorsP. Service Piping, Tanks and ContainersQ. Service Hydraulic SystemsR. Service Pneumatic and Vacuum Systems

REMINDERS

- You must bring a piece of Government PHOTO identification. The ID must be VALID and CURRENT. Expired IDs and IDs with no expiry date will not be accepted.
- Your Training Provider will inform you of the time and location of the exam. Arrive early.

RED SEAL INTER-PROVINCIAL EXAM (IP)

The Red Seal Inter-Provincial Exam covers a whole range of competencies from all your levels of technical training.

The table below is a general breakdown of areas of competencies covered in the Red Seal IP exam.

The areas of competencies covered in the Red Seal IP exam can change. Check **IP Table** for a detailed exam breakdown: www.itabc.ca/sites/default/files/program-information/industrial-mechanic-millwright-ip-table-2017_0.pdf for accuracy.

TASK A Performs Common Occupational Skills	Task 1	Performs Safety-Related Functions
	Task 2	Uses and Tools and Equipment
	Task 3	Performs Routine Trade Tasks
	Task 4	Uses Communication and Mentoring Techniques
	Task 5	Performs Measuring and Layout
	Task 6	Performs Cutting and Welding Operations
TASK B Performs Rigging, Hoisting/Lifting and Moving	Task 7	Plans Rigging, Hoisting/Lifting and Moving
	Task 8	Rigs, Hoists/Lifts and Moves Load
TASK C Services Mechanical Power Transmission Components and Systems	Task 9	Services Prime Movers
	Task 10	Services Shafts, Bearings and Seals
	Task 11	Services Couplings, Clutches and Brakes
	Task 12	Services Chain and Belt Drive Systems
	Task 13	Services Gear Systems
	Task 14	Performs Shaft Alignment Procedures
TASK D Services Material Handlings / Process Systems	Task 15	Services Robotics and Automated Equipment
	Task 16	Services Fans and Blowers
	Task 17	Services Pumps
	Task 18	Services Compressors
	Task 19	Services Process Piping, Tanks and Containers
	Task 20	Services Conveying Systems
TASK E Services Fluid Power Systems	Task 21	Services Hydraulics Systems
	Task 22	Services Pneumatic and Vacuum Systems
TASK F Performs Preventative and Predictive Maintenance, Commissioning and Decommissioning	Task 23	Performs Preventative and Predictive Maintenance
	Task 24	Commissions and Decommissions Equipment

Note: Based on the Millwright Red Seal Occupational Standard (RSOS).

A copy of the Millwright RSOS is available at www.red-seal.ca

FINAL PIECE FOR YOUR RED SEAL INTER-PROVINCIAL CERTIFICATION

Once you pass your red seal exam these are the next steps:

1. Ensure your work-based training hours have been submitted and reached achieved status.
Check your status in Direct Access.
2. The Recommendation for Certification (RFC) will be automatically emailed to your Sponsor/Employer.
Once received, both the Sponsor and Journeyperson will sign the form and submit to ITA for processing.
3. ITA will verify and process the RFC, the Certificates will then be printed for mailing.
 - Certificates are mailed to your Sponsor.
 - If your Sponsor had indicated on the RFC form to send Certificates to the Apprentice, they will be mailed to the address noted on your Apprenticeship record in Direct Access.



ITA Customer Service
800 8100 Granville Avenue,
Richmond, BC V6Y 3T6
Tel 778-328-8700
Toll Free: 1-866-660-6011
Fax 778-328-8701
customerservice@itabc.ca

RECOMMENDATION FOR CERTIFICATION FORM

This form is to recommend for certification an apprentice who has completed the requirements of a program. Please complete section A and return the completed signed form to us at customerservice@itabc.ca. Missing information may delay the process.

Sponsor Information:

Organization: ABC123 Electrical LTD. Org ID: 123456
Primary Contact: Pat Jones
Address: 4321 ABEC Street Vancouver, V3B2G2 Email Address: patjones@abccemail.com

Apprentice Information:

Full Legal Name: Jessie Lee ITA ID# 654321
Program: Residential Electrician Email Address: leejessie@123email.com

Section A: Recommendation for Certification By Sponsor (and Certified Journeyperson or individual with Supervision and Sign-off Authority)

RELEASE OF CERTIFICATES sent to the sponsor directly unless indicated otherwise. Apprentice check address in DA.
☐ Send to Sponsor ☐ Send to Apprentice

SPONSOR	JOURNEYPEPERSON
<p>I/We hereby confirm that the trainee/apprentice named above is working at the skill and competency level of a certified journeyperson and recommend certification.</p> <p><u>Bob Smith</u> (Signed) Name</p> <p><u>Jan 1, 2016</u> Date Signed</p> <p>Please note: The Certified Journeyperson or the individual with Supervision and Sign-off Authority (who supervised this apprentice) must always sign this form. The Certified Journeyperson or the individual with Supervisor and Sign-off Authority must provide all the details requested in the box to the right and must be certified at the same level or higher than the apprentice or in another approved trade that is recognized by ITA as having similar competencies.</p> <p>CERTIFICATION NOT RECOMMENDED BY SPONSOR: I/We hereby confirm that the apprentice named above is NOT recommended for certification at this time. Please fill out an RFC Form B to complete this recommendation.</p> <p><u>[Signature]</u> Sponsor Signature</p> <p>_____ Date</p>	<p>Print Full Name of the Certified Journeyperson or individual with Supervision and Sign-Off Authority who has supervised this apprentice and is recommending him/her certification (may be same as Sponsor, or a different individual)</p> <p><u>Jason Jones</u> Name</p> <p><u>[Signature]</u> Signature</p> <p><u>Jan 1, 2016</u> Date Signed</p> <p><u>Residential Electrician</u> Trade Name</p> <p>_____ Province Issued</p> <p>Certificate Number (below): <u>12345AB01</u></p> <p><input type="checkbox"/> Certificate of Qualification <input type="checkbox"/> ITA Sign-off Authority <input type="checkbox"/> Interprovincial (Red Seal)</p> <p>If the Journeyperson's credential was awarded outside of BC attach a copy of the certificate or wallet card.</p>

FREQUENTLY ASKED QUESTIONS

HOW DOES MY SPONSOR/EMPLOYER SUBMIT HOURS?

The sponsor/employer will submit Work Based Training Hours via Direct Access, email, mail, or fax.

WHAT IF I WORKED FOR A SPONSOR/EMPLOYER AND THEY DID NOT SUBMIT MY HOURS?

You can talk to your current sponsor to see if they are willing to submit the hours for the work you did previously on a work based training report.

DOES MY SPONSOR/EMPLOYER HAVE TO LET ME GO TO SCHOOL?

You need to discuss your plans for school with your sponsor/employer to see if they are able to release you to go to school. Let them know of upcoming training locations and dates.

HOW DO I KNOW WHAT MY GRADES ARE FOR SCHOOL?

The Trades Training school will submit your marks to ITA. You and your sponsor/employer will receive a notice by email.

WHERE DO I GET MY PROGRESSION LETTER?

Upon completion of your technical training and required work-based hours for Level 1 and 2, ITA will send you the Progression Letter by email. Required number of work place hours by level can be found at

www.itabc.ca/grants-tax-credits/grants

You will need this Progression Letter to apply for your Apprenticeship Incentive Grant.

www.servicecanada.gc.ca/eng/goc/apprenticeship/incentivegrant/program.shtml

WHEN I FINISH ALL MY TRAINING AND REQUIRED HOURS, AM I CERTIFIED?

No, first ITA will email the Employer Recommendation for Certification document to your sponsor after you have passed the Red Seal Inter-Provincial Exam. This must be signed by a certified tradesperson (your trade) and returned to ITA. ITA will send your Certificate of Apprenticeship, Certificate of Completion and Interprovincial Red Seal Endorsement certificates to your sponsor/employer.

ARE THERE ANY GRANTS FOR FINISHING MY CERTIFICATION?

Yes. You can apply for the Apprenticeship Completion Grant once you receive your Red Seal Inter-Provincial Endorsement Certificate. You will need a copy of your certificates to apply.

www.servicecanada.gc.ca/eng/goc/apprenticeship/completiongrant/application.shtml

ARE THERE ANY INCENTIVES FOR MY EMPLOYER?

Employers can apply for Tax Credits as their apprentice progresses through the trade. The tax information letter can be found on Direct Access.

FINANCIAL SUPPORT FOR APPRENTICES

As a registered apprentice, you can apply for financial support. You're also eligible to apply for Employment Insurance. Federal and provincial financial support information can be found in the two links below:

www.itabc.ca/grants-tax-credits/grants

www.esdc.gc.ca/en/reports/apprentices/support_brochure.page

Apprentice Supports*	Direct Entry Apprenticeship Hired and registered by Sponsor without prior Foundation/ apprentice training	Foundation Training (a.k.a: pre-apprentice)	Apprentice Technical Training (Levels 1, 2, 3, 4)
Skills Training Funding Tuition* See Notes A+C		✓	
Indigenous Skills Training Funding Tuition* (eligible Indigenous applicants) ISETS agencies See Notes A+C		✓	✓
Student Aid/Loans* Only Foundation Training over 12 weeks long BC ACCESS Grant (only for training in high demand trades) Bursaries and Scholarships		✓	
Canada Apprentice Loan			✓
Wage Subsidy (new hires)* WorkBC / ISETS agencies	✓		
Other Resources* STEP See Note D	✓		
EI and AOP: Apprentice Financial Benefits for Apprentice Training * (Apprentice Supports Online Portal) WorkBC and Service Canada (for EI-eligible clients) ²			✓
Training Tax Credits Non-Red Seal and Red Seal* Credit amount varies, please refer to CRA			✓
Incentive and Completion Grants, Red Seal Trades* Service Canada		✓	✓
ITA Website Resources* (www.itabc.ca) Direct Access Online Apprenticeship Reporting Trade Profile	✓	✓	✓

*Support is dependent on eligibility and varies by trade, level of training, and whether or not it is a Red Seal or Non-Red Seal trade.

Note A: WorkBC and Indigenous resources: ISETS agencies, Victoria Foundation, Bands, bursaries, scholarships, STEP

Note B: Bursaries may be available through individual training institutions

Note C: Youth Work in Trades and Youth Train in Trades coordinated through School Districts

Note D: Skilled Trades Employment Program (STEP) is available in several communities to assist Canadians in entering trade careers.

CONNECT WITH US!

www.itabc.ca



CONTACT EMAIL OR CALL

778.328.8700 or call TOLL FREE in BC: 1.866.660.6011

customerservice@itabc.ca

Our customer experience representatives are accessible, from 8:00 a.m. to 4:30 p.m. PT, Monday to Friday, and can provide you with quick and easy access to information regarding all of ITA's services. Call or email us today for information on training and apprenticeship, including registration, examinations and certification, or to answer any other questions you may have.



CONNECT LOCALLY

Looking for someone to help you in your community? ITA has regional Apprenticeship Advisors across the province to support local skilled trades apprentices and employers. Find the Apprenticeship Advisor closest to you—all you need is your postal code.

Do you want to learn more about how ITA works with industry? Feel free to contact any of our Industry Relations Team to better understand each industry's needs in BC and to learn more about how they are working to ensure we have the right skilled workers where they are needed.



VISIT CUSTOMER CENTRE

ITA's Customer Support Centre

8th Floor - 8100 Granville Avenue, Richmond, BC V6Y 3T6

We are happy to serve you in-person at our Richmond Customer Support Centre, and through our regional Apprenticeship Advisors, who are available to serve you in communities across the province.



SUBSCRIBE TO TRADES TALK

Keep up to date on ITA in action as well as other trades and industry news by subscribing to our quarterly newsletter, Trades Talk.



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