

Lather (Interior Systems Mechanic) On-the-Job Training Guide

2018



Online: www.saskapprenticeship.ca

Recognition:

To promote transparency and consistency, portions of this document has been adapted from the 2012 Lather (Interior Systems Mechanic) National Occupational Analysis (Employment and Social Development Canada).

A complete version of the Occupational Standard can be found at www.red-seal.ca

STRUCTURE OF THE ON-THE-JOB TRAINING GUIDE

To facilitate understanding of the occupation, this on-the-job training guide contains the following sections:

Description of the Lather (Interior Systems Mechanic) trade: an overview of the trade's duties and training requirements.

Essential Skills Summary: an overview of how each of the nine essential skills is applied in this trade.

Harmonization: a brief description on the pan-Canadian Harmonization Initiative for the Lather trade.

Task Matrix: a chart which outlines graphically the major work activities, tasks and sub-tasks of this standard detailing the essential skills and the level of training where the content is covered.

Major Work Activity (MWA): the largest division within the standard that is comprised of a distinct set of trade activities.

Task: distinct actions that describe the activities within a major work activity.

Sub-task: distinct actions that describe the activities within a task.

On-the-Job and In-school Training Content for the Lather Trade: a chart which outlines on-the-job examples for apprentices to achieve relevant work experience to prepare for topics of technical training.

DESCRIPTION OF THE LATHER (INTERIOR SYSTEMS MECHANIC) TRADE

Lathers handle, erect and install materials that are components in the construction of all or part of a structure. They lay out and install framework for ceiling systems, interior and exterior walls, floors and roofs. Lathers install various types of ceilings (e.g. suspended, spanned, direct contact), shielded walls (e.g. fire, sound, thermal separation) and various sheathing products. They also perform acoustical installations.

Materials that lathers install include: cold rolled steel components (e.g. steel studs, tracks, and channels), metal door and window frames, stucco wire, vapour barriers and insulation, sheathing products (e.g. gypsum and cement products), specialty architectural products and metal lath.

Lathers are employed by construction companies and drywall contractors. They may also be self-employed. In the residential construction industry, they construct, maintain and renovate from single family housings to multi-story apartments. In the commercial, institutional and industrial construction sectors they build, maintain and renovate structures such as commercial buildings, schools, hospitals and manufacturing complexes.

Lathers work both indoors and outdoors year round. They may specialize in individual aspects of the trade such as layout, wall framing and drywall installation. Lathers use a variety of hand and power tools. The installation of metal stud framing and suspended ceilings often requires the use of lasers and powder-actuated tools.

Key attributes for people in this trade are good eye-hand coordination, the ability to work at heights and the ability to pay attention to detail. Lathers must be able to read and interpret information from drawings, blueprints and specifications. The work may require lifting and positioning heavy building materials in a fast-paced environment. The work is physically demanding and requires the use of personal protective equipment. Workers in this trade carry out their work in teams and independently.

This analysis recognizes similarities and overlaps with the work of carpenters, sheet metal workers, insulators and drywall tapers. With experience, lathers may act as mentors and trainers to apprentices in the trade. They may also advance to positions such as estimators, supervisors, training coordinators and project managers.

Training Requirements: 6000 hours (4 years) including: three 8-week training sessions delivered by NAIT in Edmonton, AB or SAIT in Calgary, AB or Levels One and Two by Prairie Arctic Trades Training in Saskatoon or Regina, SK.

Journeyman to apprentice ratio for this trade is: 1:2

The information contained in this document serves as a guide for employers and apprentices. Apprenticeship training is mutually beneficial to both employer and apprentice. The employer's investment in training apprentices results in skilled and certified workers. The document summarizes the tasks to be covered by the apprentice during their on-the-job portion of apprenticeship training. An apprentice spends approximately 85% of their apprenticeship term training on-the-job.

It is the employer's or journeyman's responsibility to supervise an apprentice's practical skills development until a satisfactory level of proficiency has been reached.

EMPLOYER TRAINING RESPONSIBILITY

- promote a safety-conscious workplace
- provide mentored, hands-on practice in the use of tools and equipment
- demonstrate all practices and procedures for the layout, fabrication, installation, application, preparation and finishing of all components related to the trade
- further the apprentice's ability to interpret technical drawings and perform trade math
- introduce the apprentice to the procedures used for estimating materials and project costs
- ensure that the apprentice can evaluate the end product

Employers should make every effort to expose their apprentices to work experience in as many areas of the trade as possible.

In the On-the-Job Training Guide, in-school instruction is listed first; on-the-job suggestions to help employers assist the apprentice to prepare for in-school training are listed next.

The content of the training components is subject to change without notice.

Entrance Requirements for Apprenticeship Training

Your grade twelve transcript (with no modified classes) or GED 12 is your guarantee that you meet the educational entrance requirements for apprenticeship in Saskatchewan. In fact, employers prefer and recommend apprentices who have completed high school. This ensures the individual has all of the necessary skills required to successfully complete the apprenticeship program, and receive journeyman certification.

Individuals with "modified" or "general" classes in math or science do not meet our entry requirements. These individuals are required to take an entrance assessment prescribed by the SATCC.

English is the language of instruction in all apprenticeship programs and is the common language for business in Saskatchewan. Before admission, all apprentices and/or "upgraders" must be able to understand and communicate in the English language. Applicants whose first language is not English must have a minimum Canadian Language Benchmark Assessment of six (CLB6).

Note: A CLB assessment is valid for a one-year period from date of issue.

Designated Trade Name	Math Credit at the Indicated Grade Level ^❶	Science Credit at Grade Level
Lather (Interior Systems Mechanic)	Grade 10	Grade 10
<p>^❶ - (One of the following) WA – Workplace and Apprenticeship; or F – Foundations; or P – Pre-calculus, or a Math at the indicated grade level (Modified and General Math credits are not acceptable.).</p> <p>*Applicants who have graduated in advance of 2015-2016, or who do not have access to the revised Science curricula will require a Science at the minimum grade level indicated by trade.</p> <p>For information about high school curriculum, including Math and Science course names, please see: http://www.curriculum.gov.sk.ca/#</p> <p>Individuals not meeting the entrance requirements will be subject to an assessment and any required training</p>		

LATHER (INTERIOR SYSTEMS MECHANIC) TASK MATRIX CHART

This chart outlines the major work activities, tasks and sub-tasks from the 2012 Lather (Interior Systems Mechanic) National Occupational Analysis. Each sub-task details the corresponding essential skill and level of training where the content is covered.

A - OCCUPATIONAL SKILLS

A-1 Maintains tools and equipment	1.01 Maintains hand tools 1	1.02 Maintains power tools 1	1.03 Maintains powder-actuated tools 1	1.04 Maintains gas-actuated tools 1	1.05 Maintains pneumatic tools 1
	1.06 Maintains layout and measuring devices 1				
A-2 Organizes work	2.01 Communicates with others 1,2,3	2.02 Uses documentation 1,2,3	2.03 Uses blueprints and drawings 1,2,3	2.04 Plans daily tasks 3	2.05 Estimates materials and supplies 1,2,3
	2.06 Maintains safe work environment 1				
A-3 Performs routine trade activities	3.01 Performs measurements 1,2,3	3.02 Uses scaffolding and access equipment 1	3.03 Uses jigs and templates 2,3	3.04 Prepares work site 1	3.05 Handles materials, supplies and products 1
	3.06 Lays out work 1,2,3	3.07 Applies sealant and gaskets 1,2	3.08 Uses personal protective equipment (PPE) and safety equipment 1		

B – FRAMING

B-4 Erects non load-bearing steel assemblies	4.01 Frames non load-bearing walls	4.02 Frames spanned ceilings	4.03 Frames suspended drywall ceilings	4.04 Frames non load-bearing bulkheads	4.05 Installs metal door and window frames
	1	1	1	1	1
	4.06 Installs backing				
	1				
B-5 Erects load-bearing steel assemblies	5.01 Frames load-bearing walls	5.02 Frames exterior ceilings and soffits	5.03 Frames load-bearing bulkheads	5.04 Frames load-bearing floors	5.05 Frames load-bearing roofs
	2	2	2	2	2

C – INTERIOR SYSTEMS

C-6 Installs wall systems and components	6.01 Installs demountable walls	6.02 Installs drywall	6.03 Finishes drywall	6.04 Installs drywall trims and mouldings	6.05 Installs security mesh
	2,3	1	1	1	2
	6.06 Installs access panels				
	1,2				
C-7 Installs ceiling systems	7.01 Installs suspended component ceilings	7.02 Installs non-suspended ceilings			
	1,3	1,3			
C-8 Installs access flooring systems	8.01 Installs pedestals and supporting hardware	8.02 Installs flooring panels			
	2	2			

C-9 Installs sound barriers and lead radiation shielding

9.01 Installs sound barriers

2

9.02 Installs lead radiation shielding

3

C-10 Installs smoke and fire barriers

10.01 Installs shaft wall systems

2

10.02 Seals penetration

2,3

10.03 Encloses beams, columns and staircases to achieve desired fire rating

2,3

D – EXTERIOR SYSTEMS

D-11 Installs insulation and membranes

11.01 Installs thermal insulation

1,2

11.02 Installs interior/exterior membranes

1,2

D-12 Prepares surface for exterior finishes

12.01 Installs exterior sheathing

1

12.02 Installs lath

2,3

12.03 Installs exterior insulation finish systems (NOT COMMON CORE)

2

D-13 Installs exterior finishes

13.01 Fabricates panels

2

13.02 Installs pre-manufactured panels

2,3

ON-THE-JOB AND IN-SCHOOL TRAINING

CONTENT FOR THE LATHER (INTERIOR SYSTEMS MECHANIC) TRADE

This chart outlines on-the-job examples for apprentices to achieve relevant work experience to prepare for the topics of technical training. Topics of technical training are provided with the associated learning outcomes.

Level One	8 weeks	240 hours
Codes, Regulations and Safety		
<ul style="list-style-type: none">• construction safety• project organization• study of regulations• fire prevention and controls• introduction to WHMIS		
Mentors can assist the apprentice to prepare for this section of technical training by:		
<ul style="list-style-type: none">• <i>having the apprentice identify OH&S Regulations as they pertain to the Lather (Interior System Mechanic) trade</i>• <i>making the use of personal protective equipment mandatory</i>• <i>training in the use of fall arrest equipment and making its use mandatory</i>• <i>describing unsafe working conditions and industrial health hazards and monitoring for actions appropriate to situations</i>• <i>explaining the responsibilities of the employer, the supervisor and the employee with respect to safety</i>• <i>explaining the roles and responsibilities of the owner, the architect, the engineer and the general contractor with respect to project organization</i>• <i>discussing and expecting cooperative interaction with other sub-trades</i>• <i>explaining the role of the Lather (Interior System Mechanic)</i>• <i>outlining regulations and expected procedures regarding general accident prevention such as housekeeping, safety belts and respiratory protective equipment</i>• <i>discussing safety regulations such as for ladders, scaffolds, ramps and stairways; guard rails, powered lifts, asbestos; and electrical safety</i>• <i>having the apprentice identify the classes of fires and acceptable extinguishers</i>• <i>orienting and having the apprentice define the different WHMIS labels; and explaining the use, purpose and limitations of an MSDS</i>		
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Tools, Equipment and Materials		
<ul style="list-style-type: none">• hand and power tools• scaffolding• materials• explosive actuated tools		
Mentors can assist the apprentice to prepare for this section of technical training by:		
<ul style="list-style-type: none">• <i>describing and having the apprentice demonstrate the components, assembly, types, sizes and the care, maintenance and safe use of hand and power tools</i>• <i>demonstrating the safe use and hazards associated with laser levels</i>		

- *describing and demonstrating the safe use, applications, erection and dismantling of ladders; and stationary and rolling scaffolds*
 - *ensuring the apprentice is familiar with the regulations regarding the operation of motorized scaffolds*
 - *when applicable, providing training on scissor lifts or other mechanized access equipment*
 - *identifying different types and gauges of metal components used in the industry*
 - *explaining temperature requirements for the set-up of gypsum and adhesive products*
 - *showing and describing to the apprentice the types and use of both typical and special fasteners*
 - *discussing common causes of breakage and damage to materials; and proper storage techniques*
 - *explaining the importance of point loading*
 - *describing and demonstrating safe use of explosive actuated tools, their pins and charges and discussing applicable OH&S regulations*
-

Walls

- various types and specifications
- materials and erection
- metal framing
- furring systems on existing walls
- preparations for other trades
- application of insulation in walls and ceilings

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing how to differentiate between bearing, non-bearing, prefabricated and shaft walls*
 - *describing the different types and uses of wall materials such as floor and ceiling channels; stud types and backing systems*
 - *demonstrating installation procedures for these materials including spacing; layout and aligning methods; securing systems, bracing and establishing wall openings*
 - *demonstrating the layout and installation procedures for metal framing including resilient sound bars*
 - *demonstrating the layout and installation procedures for a furring system*
 - *describing, showing examples and having the apprentice install backing and brackets for electrical and plumbing fixtures; wood or metal cabinets, fire hose cabinets and other recessed fixtures*
 - *explaining the different types and thicknesses of insulation and vapour barriers and the installation techniques for these materials*
 - *explaining the process of heat transfer and heat loss*
 - *explaining sound attenuation and absorption*
 - *explaining fire codes and how these codes apply to wall construction*
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Exterior Stucco Preparation

- sheathing and building paper
- stucco wire and coatings

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing how to differentiate between asphalt impregnated and air barrier paper*
 - *explaining the identification of interior and exterior gypsum products*
 - *describing the different stucco wire and building code application requirements*
 - *describing how to differentiate between the scratch, brown and finish coats*
 - *discussing the different finish stucco types such as stone dash and other decorative patterns*
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Drywall Applications

- application, layout and installation
- taping
- drywall ceiling systems

Mentors can assist the apprentice to prepare for this section of technical training by:

- *explaining the different types of drywall materials such as exterior, fire rated, etc.*
- *discussing the use of single-layer drywall and explaining standard lamination procedures*
- *ensuring the apprentice is aware of the code requirements regarding the use of nails and screws and their location and spacing*
- *discussing dimensions of product (thicknesses and lengths)*
- *describing patterns or sequence of joints*
- *showing the various methods to measure and cut to length*
- *demonstrating the various methods to cut out openings and outlets*
- *demonstrating techniques to construct curved walls and rounded bulkheads*
- *describing how and where to apply backing board*
- *describing and demonstrating how to prepare and apply adhesives for laminating drywall*
- *describing the various types and demonstrating the application of joint compounds and trims*
- *outlining and demonstrating the various levels of finishing joints*
- *describing types of sanding paper and sanding equipment; and demonstrating proper sanding methods*
- *exposing the apprentice to projects that include the use of inserts, hangers, eye pins, clips and bolts as used to apply drywall ceiling systems*
- *demonstrating the selection and installation of carrying and secondary channels*
- *demonstrating how to establish elevations using laser and hydro (water) levels*
- *outlining and demonstrating bending and tying techniques*
- *describing how to develop and install bracing systems; how to lift and secure heavy sheets; and how bend and form channels*
- *demonstrating the layout and fabrication required for electrical fixtures, access panels, vertical drops and returns; and false beams*

Component Ceiling Systems

- component ceilings
- component baffles

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing ceiling board and tile with reference to composition types, edge details, physical properties (noise reduction, coefficient and sound transmission class); and fire hazard and fire resistive ratings*
- *explaining suspension systems with exposed grid*
- *describing specialty ceilings such as luminous, axiom, curved, etc.*
- *describing cement-up preparation and applications (layout and technique for adhesion application)*
- *demonstrating an exposed modular grid layout, vertical drops and returns and open peripheral details*
- *discussing the determination of fire resistive requirements for fixture enclosures and duct openings*
- *describing and demonstrating the installation of steel studs, insulation, caulking and gypsum board for baffle systems*

Air and Moisture Barriers

- application of air and moisture barriers
- barrier failures
- Exterior Insulation Finish Systems (EIFS)

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing the principles and fundamentals of air and moisture barriers*
- *describing the types of barriers including conventional polyethylene, self-adhesive modified; asphalt peel and stick sheet; and torch-on*
- *describing tools and equipment used for the preparation and application of barriers*

- *demonstrating barrier application procedures*
 - *detailing the function and importance of acoustical caulking*
 - *describing the softening point of bitumen, the effects of overheating barriers and the compatibility of materials*
 - *describing the identification and layout for EIFS systems - panelization, on-site fabrication, exterior sheathing and fasteners; and purpose of flashing*
 - *demonstrating the installation of insulation board to sheathing with adhesives and/or mechanical fasteners*
 - *demonstrating the procedure to embed reinforcing mesh to insulation board*
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Blueprint Reading

- drawing instruments and techniques
- freehand sketching
- drawing to specifications
- blueprint interpretation

Mentors can assist the apprentice to prepare for this section of technical training by:

- *explaining the different lines used on drawings such as object, extension, centre, hidden and break*
 - *demonstrating how to make freehand sketches*
 - *showing the apprentice orthographic and isometric drawings and explaining the differences*
 - *demonstrating how to draw plan and elevation views for projects*
 - *working with the apprentice to interpret simple plan, elevation and section views*
 - *demonstrating how to isolate the Lather (Interior System Mechanic) work on plans*
 - *explaining how a full set of blueprints work including how to find details*
 - *describe the scope and responsibilities of other trades*
 - *demonstrating how to interpret a reflected ceiling plan*
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Trade Mathematics

- basic applied mathematics
- trade problems from basic plans and specifications
- metric systems

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice clearly understands both the metric and imperial systems of measurement and can convert dimensions from one system to the other*
- *continuously having the apprentice perform calculations on the jobsite: addition, subtraction, division, multiplication, common and decimal fractions; linear, area and volume measurements; ratios and proportions; and percentages; and then verifying correctness/showing mistakes*
- *demonstrating the calculation of material requirements for studs, channels, fasteners, bracing, rough openings, etc. in wall layouts of various types and spacing*
- *demonstrating the calculation of requirements for the number of gypsum sheets and pounds of fasteners*
- *demonstrating proper cutting layout to avoid waste*
- *demonstrating how to convert stated elevations into feet and inches; how to perform the 3-4-5 method of squaring*
- *demonstrating how to calculate locations and quantity requirements for hangers, inserts, eye pins, carrying and secondary channels, bracing, etc. for typical suspended ceilings*

Level Two

8 weeks

240 hours

Fire Resistive and Acoustical Ratings

27 hours

- fire and sound ratings
- wall and ceiling designs

Mentors can assist the apprentice to prepare for this section of technical training by:

- *explaining decibels, sound transmission, flame spread, heat transmission and smoke controls*
 - *describing non-combustible materials; the treatment of wall cavities; sound bars and barriers; and sealants*
 - *describing how to recognize future probable causes of smoke and sound leakage through minute cracks, access openings, etc.*
 - *describing the difference between 1-hour and 2-hour fire rated walls, including who is responsible to seal different penetrations*
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Wind/Load Bearing Wall and Floor Systems

47 hours

- wind bearing framing systems
- composite metal floor systems and load bearing walls
- access floor systems

Mentors can assist the apprentice to prepare for this section of technical training by:

- *reviewing components used for axial loads, web crippling, etc.*
 - *describing and demonstrating the layout and installation of wind or load bearing framing including framing at openings; bracing and channels with clips; slip track; and fasteners*
 - *describing how to identify and construct metal floor panels or framing systems with fasteners; end closures, perimeter trims and straps*
 - *describing shoring and its application*
 - *describing load bearing roof systems*
 - *describing the identification and construction of access floor systems*
 - *describing the installation of ramps, handrails, steps and cutting methods*
 - *describing the installation of 1800/600 rigid grid system including layout, pedestals and stringers; field panels and peripheral cut panels*
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Metal Lath Partitions, Walls and Ceilings

27 hours

- fabrication of metal lath partitions, walls and ceilings

Mentors can assist the apprentice to prepare for this section of technical training by:

- *explaining how to identify where metal lath is specified on drawings*
 - *describing the installation of ceiling and floor runners; plumbing and aligning procedures; vertical members; metal lath; and bead stops and expansion joints*
 - *demonstrating the installation of control joints, expansion joints, corner beads and plaster stops*
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Shaft Wall Systems

42 hours

- shaft wall fabrications
- plenum barriers

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing the fire rating value of a shaft wall system*
- *demonstrating layout, plumbing and aligning; and how to treat openings and frames*
- *demonstrating how to install core board and finish layer to specifications*
- *describing types and function of plenum barriers*
- *discussing and monitoring the installation of double layered gypsum board, fibrous rigid insulation and metal lath or security mesh*

Component and Specialty Ceiling Systems

- concealed suspension ceiling system
- reveal grid and ceiling tile system
- metal linear ceiling systems
- specialty ceilings

Mentors can assist the apprentice to prepare for this section of technical training by:

- *describing a concealed suspension system including T and metal pans*
- *describing an exposed reveal grid and ceiling tile system*
- *ensuring the apprentice is familiar with the components of an exposed reveal grid and ceiling tile system including exposed T, reveal grid and reveal edge ceiling board; and can determine the differences between various grid systems and profiles*
- *demonstrating how to lay out a system with peripheral details, grid and ceiling board, vertical ceiling drops and slope returns*
- *explaining and demonstrating how to interface with electrical and mechanical components*
- *describing a metal linear ceiling system including suspension system, beams, steel and plastic filler strips; and insulation pads*
- *demonstrating correct and safe cutting techniques using a power mitre saw and metal cutting tools*
- *describing vertical ceiling returns, framing and furring of wall surfaces; and the difference between interior and exterior applications*
- *describing specialty ceilings such as Axiom, Compasso and Curvatura*
- *explaining reflective finishes with reference to cutting, handling and storage*
- *describing and demonstrating the installation of curved ceilings with reference to sub-framing, templates and jigs*
- *describing and demonstrating the installation of angular ceilings with reference to layout and suspension system framing*
- *discussing and locating penetrations for the interfacing with electrical and mechanical*

Demountable Partition Systems

- components and installation

Mentors can assist the apprentice to prepare for this section of technical training by:

- *discussing and emphasizing that these systems are usually installed after the finished floor and ceiling are in place, and how to protect these finished surfaces*
- *describing and demonstrating battenless progressive and non-progressive systems with respect to framing, patent fasteners, board and trimming materials*
- *discussing batten systems referring to framing, board and trimming materials*
- *emphasizing physical properties such as sound transmission, class, gasketing and fire resistive applications*
- *describing and installing ceiling track details, steel and aluminum door frames; steel and aluminum glazed frames; corners, terminations, intersections, vinyl and fabric panels; and base details*

Specialized Systems

- pre-cast plaster, glass fibre and reinforced gypsum
- component wall treatment and baffles
- jigs and templates

Mentors can assist the apprentice to prepare for this section of technical training by:

- *discussing the properties, delivery, storage and handling of precast plaster systems*
- *explaining the tolerances for erected units*
- *describing and demonstrating the installation techniques and methods for patching and cleaning; caulking, and finishing precast plaster columns, coffers and cornices and valances*
- *demonstrating the installation of component wall treatment and baffle systems*

- *discussing the types and uses of wall panels, ceiling panels, baffles and screens; and special panels including layout, elevations and mounting*
 - *demonstrating how to fasten component baffles to existing ceiling systems and structures*
 - *demonstrating how to develop and use temporary and reusable jigs and templates used for beams, columns, pilasters, soffits, coves and curved surfaces*
-

Blueprint Reading

- blueprints for commercial building
- isolating the lather – drywall and acoustical mechanic work
- amplifying drawings with notes
- freehand pictorial drawings
- specified shop projects

Mentors can assist the apprentice to prepare for this section of technical training by:

- *having the apprentice assist in the sizing of low and high pressure gas piping systems*
 - *explaining the combustions process for natural and propane gases*
 - *continuing to further the apprentices ability to interpret the gas codes for both natural and propane gases*
 - *demonstrating the operation, adjustment and servicing of atmospheric burners*
 - *explaining series and parallel circuits*
 - *assisting the apprentice to understand meter use while testing domestic controls and electrical systems*
 - *exposing the apprentice to various flame safeguard systems*
 - *having the apprentice assist in the installation of domestic appliances*
 - *having the apprentice assist in the start-up of domestic appliances*
-

Exterior Insulation Finish Systems (EIFS)

- panelization
- on-site application
- air and moisture barriers

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice can explain, fabricate and install pre-manufactured panels*
 - *discussing winter applications, including hoarding and heating requirements*
 - *having the apprentice select and install the components of an EIFS system*
 - *demonstrating the process to apply a finish coat referencing thickness, type of finish and colouring*
 - *monitoring the apprentice when installing air and moisture barriers of all types*
 - *ensuring the tools and equipment used for preparation and application are used correctly*
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Trade Mathematics

- trade calculations

Mentors can assist the apprentice to prepare for this section of technical training by:

- *having the apprentice lay out a project and calculate material quantity requirements*
- *ensuring demonstrations have been provided for the layout and calculation of material quantities for control joints, expansion joints, patented ceilings, stepped ceilings, fire rated walls and sound rated walls including applications for domed ceilings, groined ceilings, arches, angles and curves*

Level Three**7 weeks****210 hours**

Advanced Ceiling Systems

- adjustments and adaptations from regular layouts
- component ceilings
- groined drywall and domed metal lath ceiling
- specialty ceilings
- development and use of jigs and templates
- trim and finish components

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice can adjust and adapt in order to compensate for irregular jobsite conditions such as mechanical concealment, vertical steps; sloping and curved surfaces; extra securing and reinforcing for special loads; valences and recesses for electrical fixtures; and access openings, sky lights, false beams and chases*
- *explaining the installation of integrated coffered ceilings at columns and drywall peripheral suspended ceilings*
- *ensuring the apprentice is able to size, fit and install all components for groined drywall and domed metal lath ceilings*
- *ensuring the apprentice is able to develop and use complex jigs and templates for rectangular, curved, circular and irregular applications*
- *having the apprentice demonstrate the application of trim and finishing components used for curved, circular and irregular surfaces such as beads, perimeter moulds, casings, stops; and expansion and control joints*

Renovations, Walls and Fireproofing**25 hours**

- demountable partition systems
- fireproofing
- renovations and additions

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice can identify and install advanced pre-manufactured wall systems*
- *having the apprentice describe a cornice height partition with reference to the framing, bracing; and door and glazing header details*
- *making the apprentice learn and describe curved radii corner details*
- *ensuring the apprentice can identify the differences between non-progressive flush batten; and non-progressive flush batten with recessed base and head systems*
- *testing the apprentice to ensure understanding of components such as panel, honeycomb core, panel frame, panel spline, drywall membrane, glazing units, and door units challenging the apprentice to ensure ability to recognize, comprehend and install specified fireproofing systems with respect to referencing ULC or other code requirements; and the ability to fabricate and prepare gypsum coverings for structural steel*
- *having the apprentice identify, comprehend and deal with normal and unique situations during renovations and additions including asbestos and abatement situations; existing services, cautions and disconnections; protection of existing flooring, cabinets, etc.; the removal of existing material and housekeeping; layout and connection to existing walls; temporary shores, bracing, hoarding, etc.; recognizing existing site conditions; and how jobs proceed in stages*

Specialized Environments

- introduction to specialized environments
- radiation protective systems

Mentors can assist the apprentice to prepare for this section of technical training by:

- *discussing how to recognize hazards associated with specialized environments*

- *discussing biological and genetic effects of radiation; types of radiation (leakage, primary and scatter); personnel monitoring and measures to minimize radiation exposure; and regulations and protection recommendations*
- *reviewing and describing a radiation protective system with respect to lead protective shielding; framing and furring members; fasteners, adhesives and accessories*
- *discussing the particulars of a radiation protective system with respect to layout, corner details; wall, ceiling and base intersections; and door, window and transfer cabinet openings*
- *explaining the testing procedures used to ensure lead protective shielding is complete and effective*

Blueprint Reading

50 hours

- specifications
- blueprints with emphasis on drywall and acoustical mechanic
- working drawings
- job organization

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice can interpret specifications in order to determine the scope of work*
- *ensuring the apprentice can interpret and use a complete set of blueprints to complete a project*
- *having the apprentice prepare and then reviewing working drawings used to assist with layout and construction of special items such as domed or groined ceilings; recesses, troughs and steps*
- *stressing the importance of addendum documents and applications of these changes*
- *allowing the apprentice opportunities to use estimating and job coordination skills to manage daily job flow*
- *exposing the apprentice to computer estimation and allowing to estimate a project using this process*

Business Fundamentals

14 hours

- documents and forms
- trade math
- workplace coaching skills
- interprovincial standards

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice can prepare and/or accept typical documents such as delivery slips, time sheets, expense information, injury reports and purchase orders*
- *ensuring the apprentice can perform all necessary calculations from specifications and plans relating to screens and hoarding; removal of old work, temporary shoring, new materials, reusable materials, scaffolding, housekeeping, off-site preparations, and penalty clauses*
- *demonstrating and having the apprentice perform estimates with unit costs*
- *allowing the apprentice opportunities to direct newer apprentices in order to display coaching skills*
- *discussing the National Occupational Analysis for the Lather (Interior Systems Mechanic) trade and how it relates to the Interprovincial certification examination*
- *describing sources of information that can be found on trade certification and examination procedures such as www.red.seal.ca and www.saskapprenticeship.ca*

Final Period Practical Project

- Final period practical examination

Mentors can assist the apprentice to prepare for this section of technical training by:

- *ensuring the apprentice reviews all materials from all levels of training in order to feel confident prior to attending the final level of technical training*
- *reviewing this document completely with the apprentice to ensure understanding of all aspects of the trade*

Consider apprenticeship training as an investment in the future of your company and in the future of your workforce. Ultimately, skilled and certified workers increase your bottom line.

Get involved in the apprenticeship training system. Your commitment to training helps to maintain the integrity of the trade.

Do you have employees who have been working in the trade for a number of years but don't have trade certification? Contact your local apprenticeship office for details on how they might obtain the certification they need.

Saskatchewan Apprenticeship & Trade Certification Commission

2140 Hamilton St Regina SK S4P 2E3

Tel: (306) 787-2444

Fax: (306) 787-5105

Toll Free: 1-877-363-0536

Website: www.saskapprenticeship.ca

District Offices

Estevan (306) 637-4930

La Ronge (306) 425-4385

Moose Jaw (306) 694-3735

North Battleford (306) 446-7409

Prince Albert (306) 953-2632

Saskatoon (306) 933-8476

Swift Current (306) 778-8945

Yorkton (306) 786-1394