



# Bricklayer

# Course Outline

**2023**

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Saskatchewan  
Apprenticeship and  
Trade Certification  
Commission



# TRAINING PROFILE CHART

This Training Profile Chart represents Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training at the topic level.

Level One	Transcript Code	Hours
Construction Documents 1	BRPT 124	18
Tools and Equipment	EQPT 134	24
Masonry Materials	MATE 121	12
Mortars Grouts and Adhesives	MSON 124	24
Layout and Fundamental Tasks	MSON 104	18
Building Enclosure & Substrate Preparation	MSON 105	24
General Safety & Job-site Communication	SFTY 121	18
Scaffolding	SCAF 121	12
Masonry Systems 1	MSON 106	90
		240

Level Two	Transcript Code	Hours
Construction Documents 2	BPRT 221	30
Basic Masonry Arches	CNST 203	42
Stone Masonry	MSON 200	42
Surface Bonded Masonry	MSON 204	30
Masonry Restoration 1	MSON 205	36
Masonry Systems 2	MSON 206	60
		240

Level Three	Transcript Code	Hours
Construction Documents 3	BPRT 320	24
Refractories and Corrosion Resistant Materials	CNST 323	30
Masonry Restoration 2	MSON 327	12
Advanced Masonry Arches	CNST 324	24
Project Planning	PROJ 301	24
Chimney and Fireplace Construction	CNST 325	60
Masonry Systems 3	MSON 330	30
Masonry Review	REV 320	30
Mentoring	MENT 300	6
		240

# TECHNICAL TRAINING COURSE OUTLINE

This chart outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training sequencing. For the harmonized level of training, a cross reference to the Red Seal Occupational Standard (RSOS) apprenticeship technical training sequencing, at the learning outcome level, is provided.

<b>Level One</b>	<b>8 weeks</b>	<b>240 hours</b>
<b>Construction Documents 1</b>		<b>18 hours</b>
<ul style="list-style-type: none"><li>• identify construction documents</li><li>• interpret measurement systems and scales</li><li>• identify construction drawing language</li><li>• compare various types of drawings</li><li>• perform basic math used in construction</li></ul>		
<b>Tools and Equipment</b>		<b>24 hours</b>
<ul style="list-style-type: none"><li>• identify measuring and layout tools</li><li>• identify masonry hand tools</li><li>• identify portable power tools used in the masonry trade</li><li>• identify tools and equipment used to mix mortar and grout</li><li>• identify tools and equipment used for moving materials</li><li>• operate tools and equipment used in the masonry trade</li><li>• describe the safe use of powder actuated tools</li></ul>		
<b>Masonry Materials</b>		<b>12 hours</b>
<ul style="list-style-type: none"><li>• describe clay products</li><li>• describe concrete products</li><li>• describe additional masonry products</li></ul>		
<b>Mortars, Grouts and Adhesives</b>		<b>24 hours</b>
<ul style="list-style-type: none"><li>• identify the characteristics and properties of mortar</li><li>• mix mortar to a workable state</li><li>• perform mortar joint finishes</li><li>• describe concrete design and mixing</li><li>• identify adhesives used in masonry construction</li><li>• identify building code requirements for mortar and concrete</li></ul>		
<b>Layout and Fundamental Tasks</b>		<b>18 hours</b>
<ul style="list-style-type: none"><li>• practice job-site setup</li><li>• perform building layout procedures</li><li>• identify masonry unit positions and bond patterns</li><li>• describe procedures for masonry wall layout</li><li>• describe cleaning and sealing new masonry surfaces</li></ul>		

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**Building Enclosure & Substrate Preparation****24 hours**

- describe substrates, foundations and parging procedures
- identify masonry anchors and ties
- describe the building enclosure
- identify air barriers
- identify vapour barriers
- identify insulations

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**General Safety and Jobsite Communications****18 hours**

- identify occupational health and safety regulations
- select personal protective equipment
- identify fall protection equipment
- identify unsafe working environments and hazard control
- practice hazard identification and control
- identify WHMIS 2015 (GHS)
- use effective communication techniques

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**Scaffolding****12 hours**

- describe the safe use of ladders and scaffolding
- describe the erection, maintenance, and dismantling of metal access scaffolds
- identify basic rigging operations

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**Masonry Systems 1****90 hours**

- identify masonry wall systems
- identify masonry wall elements
- identify ornamental bond patterns
- identify building code requirements for masonry wall systems
- describe procedures for laying masonry units
- construct various wall systems

<b>Level Two</b>	<b>8 weeks</b>	<b>240 hours</b>
<b>Construction Documents 2</b> <ul style="list-style-type: none"> <li>• interpret various types of drawings</li> <li>• use residential construction documents</li> <li>• solve geometric problems in the construction industry</li> <li>• perform material estimating procedures</li> </ul>		<b>30 hours</b>
<b>Basic Masonry Arches</b> <ul style="list-style-type: none"> <li>• identify types of arches and their components</li> <li>• calculate arch geometries</li> <li>• construct a temporary arch support</li> <li>• construct a rough masonry arch</li> </ul>		<b>42 hours</b>
<b>Stone Masonry</b> <ul style="list-style-type: none"> <li>• identify classifications of stone</li> <li>• prepare stone for installation</li> <li>• identify techniques for laying stone</li> <li>• construct a natural full bed stone wall</li> </ul>		<b>42 hours</b>
<b>Surface Bonded Masonry</b> <ul style="list-style-type: none"> <li>• identify surface bonded masonry</li> <li>• prepare substrate for surface bonded masonry</li> <li>• apply surface bonded masonry units</li> </ul>		<b>30 hours</b>
<b>Masonry Restoration 1</b> <ul style="list-style-type: none"> <li>• analyze restoration requirements for existing buildings</li> <li>• demonstrate restoration procedures</li> </ul>		<b>36 hours</b>
<b>Masonry Systems 2</b> <ul style="list-style-type: none"> <li>• identify load-bearing masonry assemblies</li> <li>• identify reinforced masonry principles</li> <li>• construct reinforced masonry</li> <li>• identify prefabricated masonry</li> <li>• construct glass block masonry</li> </ul>		<b>60 hours</b>

<b>Level Three</b>	<b>8 weeks</b>	<b>240 hours</b>
<b>Construction Documents 3</b> <ul style="list-style-type: none"> <li>• interpret specifications and contract</li> <li>• interpret drawings and details for renovations</li> <li>• interpret institutional, commercial and industrial type drawings</li> </ul>		<b>24 hours</b>
<b>Refractories and Corrosion Resistant Materials</b> <ul style="list-style-type: none"> <li>• define refractory safety procedures.</li> <li>• identify common refractory vessels and their use</li> <li>• identify refractory materials and accessories</li> <li>• identify corrosion resistant materials and accessories</li> <li>• describe the removal and repair of refractory and corrosion resistant materials</li> <li>• describe installation procedures for refractory and corrosion resistant materials</li> </ul>		<b>30 hours</b>
<b>Masonry Restoration 2</b> <ul style="list-style-type: none"> <li>• describe restoration procedures</li> <li>• perform restoration procedures</li> </ul>		<b>12 hours</b>
<b>Advanced Masonry Arches</b> <ul style="list-style-type: none"> <li>• identify procedures for constructing gauged arches</li> <li>• review arch terminology and arch types</li> <li>• construct a gauged arch</li> </ul>		<b>24 hours</b>
<b>Project Planning</b> <ul style="list-style-type: none"> <li>• identify quantity survey procedures for masonry construction</li> <li>• identify procedures for calculating labour costs</li> <li>• prepare a job cost estimate</li> </ul>		<b>24 hours</b>
<b>Chimney and Fireplace Construction</b> <ul style="list-style-type: none"> <li>• describe chimneys</li> <li>• identify components of masonry fireplaces</li> <li>• identify building code requirements for masonry chimneys and fireplaces</li> <li>• construct a masonry fireplace and chimney</li> </ul>		<b>60 hours</b>
<b>Masonry Systems 3</b> <ul style="list-style-type: none"> <li>• describe horizontal masonry construction</li> <li>• construct horizontal masonry</li> <li>• describe natural stone cladding systems</li> <li>• describe installation procedures for sculpted and ornamental masonry</li> </ul>		<b>30 hours</b>

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**Masonry Review****30 hours**

- review common occupational skills
- review general masonry practices
- review masonry systems
- review natural stone systems
- review chimneys and fireplaces
- review refractories and corrosion resistant materials
- review restoration
- review additional masonry

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**Mentoring****6 hours**

- describe mentoring techniques
- use mentoring techniques



# BRICKLAYER TASK MATRIX

This chart outlines the major work activities, tasks and sub-tasks from the 2021 Bricklayer Red Seal Occupational Standard. Each sub-task details the corresponding essential skill and level of training where the content is covered. \*

\*Sub-tasks with numbers in the boxes are where the content will be delivered in training.

## A - Performs common occupational skills 12%

<b>Task A-1 Performs safety-related functions</b>	<b>A-1.01 Maintains safe work environment</b>  1	<b>A-1.02 Uses personal protective equipment (PPE) and safety equipment</b>  1		
<b>Task A-2 Uses and maintains tools and equipment</b>	<b>A-2.01 Maintains tools and equipment</b>  1	<b>A-2.02 Uses rigging, hoisting and lifting equipment</b>  1	<b>A-2.03 Uses access equipment</b>  1	
<b>Task A-3 Uses scaffolding</b>	<b>A-3.01 Erects scaffolding</b>  1	<b>A-3.02 Dismantles scaffolding</b>  1	<b>A-3.03 Maintains scaffolding</b>  1	
<b>Task A-4 Organizes work</b>	<b>A-4.01 Uses drawings and specifications</b>  1, 2, 3	<b>A-4.02 Plans daily tasks and activities</b>  1	<b>A-4.03 Prepares jobsite and materials</b>  1	<b>A-4.04 Protects surrounding areas</b>  1
<b>Task A-5 Uses communication and mentoring techniques</b>	<b>A-5.01 Uses communication techniques</b>  1	<b>A-5.02 Uses mentoring techniques</b>  3		



## B - Performs general masonry practices

19%

<b>Task B-6 Performs substrate preparation</b>	<b>B-6.01 Prepares vertical substrates and foundations</b>  1	<b>B-6.02 Applies parging</b>  1	<b>B-6.03 Installs anchoring/tie systems</b>  1	<b>B-6.04 Installs membrane and flashing</b>  1	<b>B-6.05 Installs insulation</b>  1
<b>Task B-7 Performs fundamental masonry tasks</b>	<b>B-7.01 Lays out wall and coursing</b>  1	<b>B-7.02 Finishes joints</b>  1	<b>B-7.03 Cleans new masonry surfaces</b>  1	<b>B-7.04 Seals masonry surfaces</b>  1	
<b>Task B-8 Uses mortars, grouts and adhesives</b>	<b>B-8.01 Mixes mortar, concrete, grout and adhesives</b>  1, 2, 3	<b>B-8.02 Uses mortars</b>  1, 2, 3	<b>B-8.03 Uses concrete and grout</b>  1, 2, 3	<b>B-8.04 Uses adhesives</b>  1, 2, 3	

## C - Builds masonry systems

22%

<b>Task C-9 Builds masonry walls</b>	<b>C-9.01 Builds non-load-bearing walls</b>  1	<b>C-9.02 Builds load-bearing walls</b>  2
<b>Task C-10 Builds horizontal masonry surfaces</b>	<b>C-10.01 Prepares horizontal substrate</b>  3	<b>C-10.02 Lays masonry units on horizontal surfaces</b>  3
<b>Task C-11 Builds and installs prefabricated masonry</b>	<b>C-11.01 Builds prefabricated masonry</b>  2	<b>C-11.02 Erects prefabricated masonry</b>  2

**Task C-12 Installs surface-bonded masonry units**

**C-12.01 Prepares substrate for surface-bonded masonry units**

2

**C-12.02 Applies surface-bonded masonry units**

2

## D – Builds natural stone systems

**10%**

**Task D-13 Builds natural stone walls**

**D-13.01 Prepares natural stone**

2

**D-13.02 Lays natural stone**

2

**D-13.03 Damp cures walls**

2

**Task D-14 Performs mechanically-fastened natural stone cladding procedures**

**D-14.01 Prepares substrate for cladding**

3

**D-14.02 Prepares natural stone for cladding**

3

**D-14.03 Installs natural stone cladding**

3

## E – Builds chimneys and fireplaces

**10%**

**Task E-15 Builds chimneys**

**E-15.01 Builds foundation supports for chimneys**

3

**E-15.02 Lays masonry units to build chimneys**

3

**E-15.03 Installs flue lining**

3

**E-15.04 Installs related flashings**

3

**E-15.05 Installs caps**

3

**Task E-16 Builds fireplaces**

**E-16.01 Builds foundation for hearth, firebox, backup material and veneer**

3

**E-16.02 Builds hearth, firebox and backup**

3

**E-16.03 Installs damper**

3

**E-16.04 Builds smoke chamber**

3

**E-16.05 Prepares existing fireplace for insert**

3

**E-16.06**  
**Faces fireplaces and inserts**  
 3

## F - Installs refractories and corrosion resistant materials

**9%**

<b>Task F-17 Installs and maintains refractories</b>	<b>F-17.01 Prepares for installation of refractories and accessories</b> 3	<b>F-17.02 Prepares mortar for refractories</b> 3	<b>F-17.03 Removes existing refractories</b> 3	<b>F-17.04 Installs refractories</b> 3	<b>F-17.05 Repairs refractories</b> 3
<b>Task F-18 Installs and maintains corrosion resistant materials</b>	<b>F-18.01 Prepares for installation of corrosion resistant materials and accessories</b> 3	<b>F-18.02 Prepares mortar for corrosion resistant materials</b> 3	<b>F-18.03 Removes existing corrosion resistant materials</b> 3	<b>F-18.04 Installs corrosion resistant materials</b> 3	<b>F-18.05 Repairs corrosion resistant materials</b> 3

## G - Performs restoration

**11%**

<b>Task G-19 Rebuilds masonry work</b>	<b>G-19.01 Disassembles unit masonry</b> 2	<b>G-19.02 Prepares restoration work area</b> 2	<b>G-19.03 Reinstalls masonry and accessories</b> 2		
<b>Task G-20 Repairs and cleans existing masonry work</b>	<b>G-20.01 Removes deteriorated masonry units</b> 2, 3	<b>G-20.02 Repoints joints</b> 2, 3	<b>G-20.03 Repairs masonry units</b> 2, 3	<b>G-20.04 Reinstalls masonry units and accessories</b> 2, 3	<b>G-20.05 Cleans existing masonry surfaces</b> 2, 3

## H – Performs additional masonry

7%

<b>Task H-21 Installs glass blocks</b>	<b>H-21.01 Prepares work area for installation of glass blocks</b>  2	<b>H-21.02 Lays glass blocks</b>  2			
<b>Task H-22 Installs ornamental and sculpted masonry</b>	<b>H-22.01 Prepares for installation of ornamental and sculpted masonry units</b>  3	<b>H-22.02 Installs ornamental and sculpted masonry units</b>  3			
<b>Task H-23 Builds arches</b>	<b>H-23.01 Prepares location for installation of arch</b>  2,3	<b>H-23.02 Builds template</b>  2,3	<b>H-23.03 Places template</b>  2,3	<b>H-23.04 Installs arch masonry units</b>  2,3	<b>H-23.05 Removes template</b>  2,3

*\*The Bricklayer Red Seal Occupational Standard (RSOS), describing the “full scope” of the trade, can be found at [www.red-seal.ca](http://www.red-seal.ca).*

*For more detailed information on course content, please refer to the Bricklayer Guide to Course Content at [www.saskapprenticeship.ca](http://www.saskapprenticeship.ca)*