

Construction Craft Labourer Guide to Course Content

2021



Online: www.saskapprenticeship.ca

Recognition:

To promote transparency and consistency, this document has been adapted from the 2015 Construction Craft Worker National Occupational Analysis (Employment and Social Development Canada).

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

STRUCTURE OF THE GUIDE TO COURSE CONTENT

To facilitate understanding of the occupation, this guide to course content contains the following sections:

Description of the Construction Craft Labourer 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.

Elements of harmonization of apprenticeship training: includes adoption of Red Seal trade name, number of levels of apprenticeship, total training hours (on-the-job and in-school) and consistent sequencing of technical training content. Harmonization process to begin in 2022/2023.

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.

Block (NOA): 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.

Training Profile Chart: a chart which outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training.

Technical Training Course Content for the Construction Craft Labourer trade: a chart which outlines the model for SATCC technical training sequencing.

DESCRIPTION OF THE Construction Craft Labourer TRADE

Construction craft workers work mostly on construction sites; their tasks include site preparation and cleanup, setting up and removing access equipment, and working on concrete, masonry, steel, wood and pre-cast erecting projects. They handle materials and equipment and perform demolition, excavation and compaction activities. They may also perform site safety and security checks.

Construction craft workers work on a wide variety of structures such as residential, and industrial, commercial and institutional (ICI) sites, as well as hydroelectric dams, roadways, bridges, tunnels, mines and railways. In some jurisdictions, they may also work on utility, landscape and pipeline projects. Construction craft workers may work for private companies as well as municipal, provincial and federal governments.

With experience, construction craft workers who complete additional training may specialize in different areas of construction. This can include operating off-road vehicles, drilling, blasting, scaling, sandblasting, high-pressure washing, diving, tunnelling and performing emergency rescue. Another common responsibility is the management of pedestrian and vehicular traffic in situations involving potential hazards and public trust.

Construction craft workers work primarily outdoors, in all weather conditions. They are often required to work at heights, over water and in confined spaces and excavations. Their job settings may be in densely-populated urban settings or at remote locations. They often work overtime during peak construction periods.

Key attributes for workers in this trade are mechanical aptitude, manual dexterity and an ability to do hard physical work. They must also be able to work both as team members, and sometimes, to interact directly with the public where considerations such as safety and legal liability are at issue. Organizational, leadership, problem solving and document interpretation skills are assets for anyone wanting to progress in this trade.

This analysis acknowledges similarities with many construction trades. With experience construction craft workers may have opportunities to advance.

Training Requirements: To graduate from each level of the apprenticeship program, an apprentice must successfully complete the required technical training and compile enough on-the-job experience to total at least 1200 hours each year. Total trade time required is 2400 hours and at least 2 years in the trade.

There are two levels of technical training delivered by Saskatchewan Polytechnic in Moose Jaw.

Level One: 4 weeks

Level Two: 4 weeks

The information contained in this guide to course content details the technical training delivered for each level of apprenticeship. An apprentice spends approximately 15% of their apprenticeship term in a technical training institute learning the technical and theoretical aspects of the trade. The hours and percentages of technical and practical training may vary according to class needs and progress.

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

Entrance Requirements for Apprenticeship Training

Your grade twelve transcripts (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 journey person 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
Construction Craft Labourer	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>		

ESSENTIAL SKILLS SUMMARY

Essential skills are needed for work, learning and life. They provide the foundation for learning all other skills and enable people to evolve with their jobs and adapt to workplace change.

Through extensive research, the Government of Canada and other national and international agencies have identified and validated nine essential skills. These skills are used in nearly every occupation and throughout daily life in different ways.

A series of CCDA-endorsed tools have been developed to support apprentices in their training and to be better prepared for a career in the trades. The tools can be used independently or with the assistance of a tradesperson, trainer, employer, teacher or mentor to:

- understand how essential skills are used in the trades;
- learn about individual essential skills strengths and areas for improvement; and
- improve essential skills and increase success in an apprenticeship program.

The tools are available online or for order at: www.esdc.gc.ca/eng/jobs/les/profiles/index.shtml

The application of these skills may be described throughout this document within the skills and knowledge which support each sub-task of the trade. The most important essential skills for each sub-task have also been identified. The following are summaries of the requirements in each of the essential skills, taken from the essential skills profile. A link to the complete essential skills profile can be found at www.red-seal.ca.

READING

Construction craft workers read a variety of material such as safety data sheets (SDS) and pre-job safety instructions (PSI). They also may refer to instructions and procedures for guidelines on mixing mortars and cleaning parts, and manuals for guidelines on inspecting and operating mobile and stationary equipment including load charts. Construction craft workers may read trade journals, brochures and website articles to learn about new products and construction technologies.

DOCUMENT USE

Construction craft workers interpret labels on product packaging and equipment to locate specifications, times, safety information and identification numbers. They also interpret technical drawings such as floor plans, schematics and assembly drawings. They complete documents including orientation and equipment inspection forms.

WRITING

Construction craft workers use writing skills to complete logbooks to record the outcome of safety inspections and write notes to co-workers concerning items such as defective equipment. They may be required to prepare short reports, such as describing events leading up to a workplace accident.

ORAL COMMUNICATION

Construction craft workers exchange information with co-workers and other tradespeople. They talk to supervisors to learn about job assignments and to coordinate activities and schedules.

Construction craft workers participate in staff meetings to discuss safety, goals, procedures, job time-frames and projects. They speak to suppliers to determine policies, prices and delivery schedules.

NUMERACY

Construction craft workers take measurements using a range of tools and compare measurements to specifications. They estimate quantities and weights. Construction craft workers perform calculations including calculating material requirements.

THINKING

Construction craft workers use thinking skills to organize their work. They decide on the order of tasks and how to work around issues that can arise such as material shortages and equipment breakdowns. They evaluate the safety of worksites by identifying hazards. They evaluate the quality of work by taking measurements and checking alignment. Construction craft workers may attempt to troubleshoot equipment problems. They may also recommend whether parts are reusable or can be rebuilt.

WORKING WITH OTHERS

Construction craft workers may work independently or with a journeyman or apprentice to accomplish their assigned tasks. On large jobs, they may work as a member of a team.

DIGITAL TECHNOLOGY

Construction craft workers use digital tools such as multimeters and scan tools to measure current, voltage and resistance. They use calculators to complete numeracy related tasks. Construction craft workers use communication software/devices to exchange information. They may access online information such as bulletins and training courses. They may also use computers to complete topographical surveys and generate diagrams as well as to view blueprints.

CONTINUOUS LEARNING

Construction craft workers have a recurring requirement to learn. This includes learning about new work materials and construction procedures. They may take part in company or jobsite safety training and training to remain up to date in first aid practice.

Construction Craft Labourer TASK MATRIX CHART

This chart outlines the major work activities, tasks and sub-tasks from the 2015 Construction Craft Labourer Red Seal National Occupational Analysis

A - COMMON OCCUPATIONAL SKILLS

A-1 Performs safety-related functions	1.01 Maintains safe work environment.	1.02 Uses personal protective equipment (PPE) and safety equipment.			
A-2 Uses and maintains tools and equipment	2.01 Maintains hand, power and powder-actuated tools.	2.02 Uses rigging and hoisting equipment.	2.03 Uses stationary equipment.	2.04 Uses sandblaster.	2.05 Uses mobile equipment.
A-3 Organizes work	3.01 Uses documentation.	3.02 Communicates with others.			
A-4 Performs routine trade activities	4.01 Handles construction materials.	4.02 Performs site housekeeping and maintenance.	4.03 Erects hoarding and enclosures.	4.04 Installs membranes.	4.05 Installs insulating materials.
	4.06 Establishes grades and elevations.	4.07 Performs traffic control.	4.08 Installs permanent and temporary fencing.		

B – SITE WORK

B-5 Prepares site	5.01 Clears site.	5.02 Sets up site facilities.	5.03 Assists in installation of pilings.	5.04 Builds access and egress roads.	
B-6 Performs ground work	6.01 Locates underground utilities.	6.02 Performs excavation.	6.03 Installs excavation shoring.	6.04 Performs backfill and compaction.	
B-7 Services site	7.01 Addresses suspected hazardous materials.	7.02 Controls water runoff.	7.03 Sets up temporary lighting.	7.04 Sets up generators and compressors.	7.05 Performs site restoration.
	7.06 Manages tool crib.	7.07 Recycles materials.			
B-8 Performs basic demolition.	8.01 Cuts materials.	8.02 Dismantles existing structures and components			
B-9 Performs safety watches.	9.01 Monitors hazardous gases.	9.02 Performs fire watch.	9.03 Performs bottle watch.	9.04 Performs confined space watch.	9.05 Monitors heaters.

C – SCAFFOLDING AND ACCESS EQUIPMENT

C-10 Uses scaffolding.	10.01 Erects scaffolding.	10.02 Inspects scaffolding.	10.03 Maintains scaffolding.	10.04 Tends to scaffold erectors.	10.05 Dismantles scaffolding.
C-11 Uses access equipment	11.01 Uses ladders.	11.02 Uses power-elevated work platforms.	11.03 Inspects access equipment.	11.04 Maintains access equipment.	

D – CONCRETE WORK

D-12 Forms concrete	12.01 Installs formwork and shoring.	12.02 Inspects assembled formwork.	12.03 Dismantles formwork.	12.04 Maintains formwork.	
D-13 Places and finishes concrete	13.01 Mixes concrete.	13.02 Transports concrete on site.	13.03 Places concrete.	13.04 Installs components in concrete.	13.05 Assist with finishing concrete.
	13.06 Controls concrete curing process.				
D-14 Modifies concrete	14.01 Drills/cores concrete.	14.02 Prepares concrete for resurfacing.	14.03 Performs concrete repair and refinishing.	14.04 Creates expansion, control and isolation joints.	
D-15 Places/Applies grout, epoxies and caulking	15.01 Places/Applies grout.	15.02 Places/Applies epoxies.	15.03 Applies caulking.		

E – MASONRY WORK

E-16 Prepares for masonry work	16.01 Sets up masonry materials.	16.02 Mixes mortars and grouts.			
E-17 Tends to bricklayers	17.01 Cuts masonry units.	17.02 Installs lintels and rough bucks.	17.03 Washes masonry units.	17.04 Installs refractory materials.	17.05 Uses fireproofing materials.

F – UTILITIES AND PIPELINE

F-18 Installs utility piping for water and sewer installations.

18.01 Installs pipe for water systems.

18.02 Installs pipe for sewer systems.

18.03 Installs catch basins and manholes.

18.04 Modifies existing pipe.

18.05 Assists with testing water and sewer lines.

F-19 Performs pipeline activities

19.01 Constructs right of ways.

19.02 Performs pipeline installation.

19.03 Performs pipeline maintenance.

G – ROADWORK

G-20 Installs road surface materials

20.01 Place road surface materials.

20.02 Repairs road surfaces.

G-21 Installs roadwork components

21.01 Installs barriers.

21.02 Installs road markings and signs.

21.03 Installs culverts.

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
Safe Work Practices		12
Occupational Skills		10
Tools and Equipment		12
Routine Trade Activities		12
Site Work		22
Scaffolding and Access Equipment		12
Concrete Work		22
Utilities and Pipeline Tasks		12
Roadwork		6
		120

Level Two	Transcript Code	Hours
Safe Work Practices		6
Occupational Skills		14
Grades and Elevations		12
Site Work		22
Scaffolding		16
Concrete Work		24
Masonry Work		12
Utilities and Pipeline Tasks		14
		120

TECHNICAL TRAINING COURSE CONTENT

This chart outlines the model for Saskatchewan Apprenticeship and Trade Certification Commission (SATCC) technical training sequencing.

Level One	4 weeks	120 hours
Safe Work Practices		12 hours
<ul style="list-style-type: none">• Describe workplace hazards• Identify OHS regulations• Describe fall protection systems and equipment• Describe personal protective equipment• Describe fire safety procedures• Describes procedures for performing a safety watch		
Occupational Skills		10 hours
<ul style="list-style-type: none">• Identify construction documents and specifications• Describe various methods of communication• Use basic trade math		
Tools and Equipment		12 hours
<ul style="list-style-type: none">• Use hand tools• Use power tools• Use powder-actuated tools• Describe the use of rigging and hoisting equipment• Describe the use of portable equipment• Describe the use of mobile equipment• Describe the use of sand blasters• Describe the use of packers		
Routine Trade Activities		12 hours
<ul style="list-style-type: none">• Describe procedures for installing fencing• Describe procedures to erect and dismantle hoarding• Describe procedures to control traffic• Describe procedures to establish grades and elevations• Describe methods to safely handle various materials• Describe procedures for installing membranes• Describe procedures for installing insulating materials		
Site Work		22 hours
<ul style="list-style-type: none">• Describe procedures for preparing a jobsite• Describe procedures for performing ground work• Describe demolition procedures• Describe excavation and shoring practices• Describe procedures for servicing a jobsite		

Scaffolding and Access Equipment	12 hours
<ul style="list-style-type: none"> • Use scaffolding • Describe the use of access equipment 	
Concrete Work	22 hours
<ul style="list-style-type: none"> • Install concrete formwork • Perform the placement and finishing of concrete 	
Utilities and Pipeline	12 hours
<ul style="list-style-type: none"> • Describe procedures for installing utility piping 	
Road Work	6 hours
<ul style="list-style-type: none"> • Describe procedures for installing paving materials • Describe procedures for installing roadwork components 	

Level Two	4 weeks	120 hours
Safe Work Practices		6 hours
<ul style="list-style-type: none"> • Describe workplace hazards • Describe the purpose of safety committees 		
Occupational Skills		14 hours
<ul style="list-style-type: none"> • Interpret construction documents and specifications • Use basic trade math 		
Grades and Elevations		12 hours
<ul style="list-style-type: none"> • Establish grades and elevations 		
Site Work		22 hours
<ul style="list-style-type: none"> • Describe procedures for preparing a jobsite • Describe procedures for performing ground work • Describe demolition procedures 		
Scaffolding		16 hours
<ul style="list-style-type: none"> • Use Scaffolding 		
Concrete Work		24 hours
<ul style="list-style-type: none"> • Install concrete formwork • Perform the placement and finishing of concrete • Describe concrete maintenance and repair • Install grout, epoxies and caulking 		
Masonry Work		12 hours
<ul style="list-style-type: none"> • Describe procedures for masonry work preparations • Describe procedures for assisting bricklayers 		
Utilities and Pipeline		14 hours
<ul style="list-style-type: none"> • Describe procedures for installing utility piping • Describe pipeline right of ways and installation • Describe pipeline maintenance 		

