

# NOVA SCOTIA PROGRAM OF STUDY CONSTRUCTION CRAFT WORKER

Based on the Red Seal Occupational Standard

# Nova Scotia Apprenticeship Program of Study

Construction Craft Worker

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# Program Overview

#### Level 1

Code	Self-directed Learning Modules	Code	Self-directed Learning Modules
CCW-100	Workplace Mentoring I	CCW-130	Site Work
CCW-105	Safety	CCW-135	Excavation, Backfill and Compaction
CCW-110	Tools and Equipment	CCW-140	Enclosures and Fencing
CCW-115	Drawings and Documentation	CCW-145	Masonry Work
CCW-120	Safety Watches	CCW-150	Traffic Control
CCW-125	Rigging, Hoisting, Lifting and Access Equipment		

#### Level 2

Code	Self-directed Learning Modules	Code	Self-directed Learning Modules
CCW-200	Workplace Mentoring II	CCW-215	Utilities and Pipeline
CCW-205	Formwork	CCW-220	Roadwork
CCW-210	Concrete Work	CCW-225	Program Review

### **Program Structure**

#### Level 1

Code	Learning Modules		Learning Outcomes
CCW-100	Mentoring I	1	Demonstrate knowledge of effective communication practices as a learner.
		2	Demonstrate knowledge of strategies for learning skills in the workplace.
CCW-105	Safety	1	Demonstrate knowledge of personal protective equipment (PPE) and safety equipment, their applications, maintenance and procedures for use.
		2	Demonstrate knowledge of maintaining a safe work environment.
		3	Demonstrate knowledge of regulatory requirements pertaining to safety, PPE and safety equipment.
CCW-110		1	Demonstrate knowledge of hand tools, their applications, maintenance and procedures for use.
		2	Demonstrate knowledge of power tools, their applications, maintenance and procedures for use.
		3	Demonstrate knowledge of powder- actuated tools and their applications.
		4	Demonstrate knowledge of stationary tools, their applications, maintenance and procedures for use.

Code	Learning Modules		Learning Outcomes
		5	Demonstrate knowledge of sandblasters, their applications, maintenance and procedures for use.
		6	Demonstrate knowledge of mobile equipment, their applications, maintenance and procedures for use.
CCW-115	Drawings and Documentation	1	specifications and their applications.  Demonstrate knowledge of procedures to interpret and extract information from drawings and specifications.
		2	interpret and extract information from
		3	
		4	Demonstrate knowledge of trade documentation and its use.
CCW-120	Safety Watches	1	Demonstrate knowledge of safety watch requirements and procedures.
CCW-125	Rigging, Hoisting, Lifting and Access Equipment	1	Demonstrate knowledge of rigging equipment, their applications, maintenance and procedures for use.
		2	Demonstrate knowledge of hoisting and lifting equipment, their applications, maintenance and procedures for use.
		3	Demonstrate knowledge of access equipment, their applications, maintenance and procedures for use.
		4	Demonstrate knowledge of regulatory requirements pertaining to rigging, hoisting, lifting and access equipment.

Code	Learning Modules		Learning Outcomes
CCW-130	Site Work	1	Demonstrate knowledge of procedures to clear and prepare sites.
		2	Demonstrate knowledge of procedures to handle and store construction materials.
		3	Demonstrate knowledge of procedures to install membranes and insulating materials.
		4	Demonstrate knowledge of procedures to perform onsite general housekeeping and maintenance activities.
CCW-135	Excavation, Backfill and Compaction	1	Demonstrate knowledge of excavating, backfilling and compacting.
		2	Demonstrate knowledge of precautions to be taken while performing excavation, backfill and compaction.
CCW-140	Enclosures and Fencing	1	Demonstrate knowledge of hoarding/enclosures and fencing and their applications.
		2	Demonstrate knowledge of procedures to erect and dismantle hoarding/enclosures.
		3	Demonstrate knowledge of procedures to install permanent and temporary fencing.
CCW-145	Masonry Work	1	Demonstrate knowledge of masonry materials and products and their applications.
		2	Demonstrate knowledge of procedures to mix mortars and grouts.

Code	Learning Modules	Learning Outcomes	
		3	Demonstrate knowledge of procedures to prepare for and support masonry work.
CCW-150	Traffic Control	1	Demonstrate knowledge of worksite traffic control requirement and procedures.

#### Level 2

Code	Learning Modules		Learning Outcomes
CCW-200	CCW-200 Mentoring II	1	Demonstrate knowledge of effective communication practices as a mentor.
		2	Demonstrate strategies for teaching workplace skills.
CCW-205	Formwork	1 Demonstrate knowledge of concrete formwork, its components and applications.	formwork, its components and
	2	2	Demonstrate knowledge of procedures to install and inspect formwork and shoring.
CCW-210	4 Concrete Work 1	3	Demonstrate knowledge of expansion, control and isolation joints and their application.
		Demonstrate knowledge of procedures to remove and maintain formwork.	
		1	Demonstrate knowledge of concrete, its properties, characteristics and applications.
		2	Demonstrate knowledge of concrete components and mixtures.

Code	Learning Modules		Learning Outcomes
		3	Demonstrate knowledge of procedures to place, finish and cure concrete.
		4	Demonstrate knowledge of procedures to modify concrete.
		5	Demonstrate knowledge of procedures to apply grout, epoxies and caulking.
CCW-215	Utilities and Pipeline	1	Demonstrate knowledge of utilities and pipeline, their components and applications.
		2	Demonstrate knowledge of procedures to install pipe and components for water and sewer systems.
		3	Demonstrate knowledge of procedures to test for and repair water breaks and leaks.
		4	Demonstrate knowledge of environmental considerations and procedures for constructing right of ways.
		5	Demonstrate knowledge of pipeline construction and maintenance.
CCW-220	Road Work	1	Demonstrate knowledge of procedures to place, lay or spread road surface materials.
		2	Demonstrate knowledge of procedures to repair road surfaces.
		3	Demonstrate knowledge of culverts, barriers and signage, their applications and procedures for use.

Code	Learning Modules	Learning Outcomes	
CCW-225	Program Review	1	Demonstrate knowledge of the Occupational Standard and its relationship to the Red Seal Exam.
		2	Demonstrate knowledge of overall comprehension of the trade in preparation for the Red Seal Exam.

# 2015 Occupational Standard Sub-task to Learning Module Comparison

Sub-task		Learning I	Modules
Task A-1 -	Performs Safety Related Functions		
A-1.01	Maintains safe work environment	CCW-105	Safety
A-1.02	Uses personal protective equipment (PPE) and safety equipment	CCW-105	Safety
Task A-2 -	- Uses and maintains tools and equip	ment	
A-2.01	Maintains hand, power and powder-actuated tools.	CCW-110	Tools and Equipment
A-2.02	Uses rigging and hoisting equipment.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment
A-2.03	Uses stationary equipment.	CCW-110	Tools and Equipment
A-2.04	Uses sandblaster.	CCW-110	Tools and Equipment
A-2.05	Uses mobile equipment.	CCW-110	Tools and Equipment
Task A-3 -	- Organizes work		
A-3.01	Uses documentation.	CCW-115	Drawings and Documentation
A-3.02	Communicates with others.	CCW-100	Mentoring I
		CCW-200	Mentoring II
Task A-4 -	Performs routine work practices		
A-4.01	Handles construction materials.	CCW-130	Site Work
A-4.02	Performs site housekeeping and maintenance.	CCW-130	Site Work
A-4.03	Erects hoarding/enclosures.	CCW-140	Enclosures and Fencing
A-4.04	Installs membranes.	CCW-130	Site Work
A-4.05	Installs insulating materials.	CCW-130	Site Work
A-4.06	Establishes grades and elevations.	CCW-115	Drawings and Documentation
		N/A	Integrated throughout
A-4.07	Performs traffic control.	CCW-150	Traffic Control
A-4.08	Installs permanent and temporary fencing.	CCW-140	Enclosures and Fencing
Task B-5 -	Prepares site		
B-5.01	Clears site.	CCW-130	Site Work
B-5.02	Sets up site facilities.	CCW-130	Site Work
B-5.03	Assists in installation of pilings.	CCW-130	Site Work
B-5.04	Builds access and egress roads.	CCW-130	Site Work

Sub-task		Learning Modules				
Task B-6 – Performs ground work						
B-6.01	Locates underground utilities.	CCW-135	Excavation, Backfill and Compaction			
B-6.02	Performs excavation.	CCW-135	Excavation, Backfill and Compaction			
B-6.03	Installs excavation shoring.	CCW-135	Excavation, Backfill and Compaction			
B-6.04	Performs backfill and compaction.	CCW-135	Excavation, Backfill and Compaction			
Task B-7 -	Services site					
B-7.01	Addresses suspected hazardous materials.	CCW-130	Site Work			
B-7.02	Controls water runoff.	CCW-130	Site Work			
B-7.03	Sets up temporary lighting.	CCW-130	Site Work			
B-7.04	Sets up generators and compressors.	CCW-130	Site Work			
B-7.05	Performs site restoration.	CCW-130	Site Work			
B-7.06	Manages tool crib.	CCW-130	Site Work			
B-7.07	Recycles materials.	CCW-130	Site Work			
Task B-8 -	Performs basic demolition					
B-8.01	Cuts materials.	CCW-125	Site Work			
B-8.02	Dismantles existing structures and components.	CCW-125	Site Work			
Task B-9- Performs safety watches						
B-9.01	Monitors hazardous gases.	CCW-120	Safety Watches			
B-9.02	Performs fire watch.	CCW-120	Safety Watches			
B-9.03	Performs bottle watch.	CCW-120	Safety Watches			
B-9.04	Performs confined space watch.	CCW-120	Safety Watches			

Sub-task		Learning Modules			
B-9.05	Monitors heaters.	CCW-120	Safety Watches		
Task C-10 – Uses scaffolding					
C-10.01	Erects scaffolding.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-10.02	Inspects scaffolding.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-10.03	Maintains scaffolding.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-10.04	Tends to scaffold erectors.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-10.05	Dismantles scaffolding.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
Task C-11	Task C-11 – Uses Access Equipment				
C-11.01	Uses ladders.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-11.02	Uses power-elevated work platforms.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-11.03	Inspects access equipment.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
C-11.04	Maintains access equipment.	CCW-125	Rigging, Hoisting, Lifting and Access Equipment		
Task D-12	– Forms concrete				
D-12.01	Installs formwork and shoring.	CCW-205	Formwork		
D-12.02	Inspects assembled formwork.	CCW-205	Formwork		
D-12.03	Dismantles formwork.	CCW-205	Formwork		
D-12.04	Maintains formwork.	CCW-205	Formwork		
Task D-13 – Places and finishes concrete					
D-13.01	Mixes concrete.	CCW-210	Concrete Work		
D-13.02	Transports concrete on site.	CCW-210	Concrete Work		
D-13.03	Places concrete.	CCW-210	Concrete Work		
D-13.04	Installs components in concrete.	CCW-210	Concrete Work		
D-13.05	Assists with finishing concrete.	CCW-210	Concrete Work		
D-13.06	Controls concrete curing process.	CCW-210	Concrete Work		
Task D-14 – Modifies concrete					
D-14.01	Drills/cores concrete.	CCW-210	Concrete Work		
D-14.02	Prepares concrete for resurfacing.	CCW-210	Concrete Work		

Sub-task Learning Modules						
D-14.03	Performs concrete repair and refinishing.	CCW-210	Concrete Work			
D-14.04	Creates expansion, control and	CCW-205	Formwork			
	isolation joints.	CCW-210	Concrete Work			
Task D-15 – Places/applies grout, epoxies and caulking						
D-15.01	Places/applies grout.	CCW-210	Concrete Work			
D-15.02	Places/applies epoxies.	CCW-210	Concrete Work			
D-15.03	Applies caulking.	CCW-210	Concrete Work			
Task E-16	– Prepares for masonry work					
E-16.01	Sets up masonry materials.	CCW-145	Masonry Work			
E-16.02	Mixes mortars and grouts.	CCW-145	Masonry Work			
Task E-17	<ul> <li>Tends to bricklayers</li> </ul>					
E-17.01	Cuts masonry units.	CCW-145	Masonry Work			
E-17.02	Installs lintels and rough bucks.	CCW-145	Masonry Work			
E-17.03	Washes masonry units.	CCW-145	Masonry Work			
E-17.04	Installs refractory materials.	CCW-145	Masonry Work			
E-17.05	Uses fireproofing materials.	CCW-145	Masonry Work			
Task F-18	<ul> <li>Installs utility piping for water and</li> </ul>	l sewer insta	allations			
F-18.01	Installs pipe for water systems.	CCW-215	Utilities and Pipeline			
F-18.02	Installs pipe for sewer systems.	CCW-215	Utilities and Pipeline			
F-18.03	Installs catch basins and manholes.	CCW-215	Utilities and Pipeline			
F-18.04	Modifies existing pipe.	CCW-215	Utilities and Pipeline			
F-18.05	Assists with testing water and sewer lines.	CCW-215	Utilities and Pipeline			
Task F-19 – Performs pipeline activities						
F-19.01	Constructs right of ways.	CCW-215	Utilities and Pipeline			
F-19.02	Performs pipeline installation.	CCW-215	Utilities and Pipeline			
F-19.03	Performs pipeline maintenance.	CCW-215	Utilities and Pipeline			
Task G-20 – Installs road surface materials						
G-20.01	Places road surface materials.	CCW-220	Roadwork			
G-20.02	Repairs road surfaces.	CCW-220	Roadwork			
Task G-21 – Installs roadwork components						
G-21.01	Installs barriers.	CCW-220	Roadwork			
G-21.02	Installs road markings and signs.	CCW-220	Roadwork			

Sub-task		Learning Modules	
G-21.03	Installs culverts.	CCW-220	Roadwork