



NOVA SCOTIA
APPRENTICESHIP
AGENCY

NOVA SCOTIA

PROGRAM OF STUDY

CONCRETE FINISHER

Based on the Red Seal Occupational Standard

Nova Scotia Apprenticeship Program of Study

Concrete Finisher

Acknowledgements

The Nova Scotia Apprenticeship Agency (Agency) wishes to acknowledge the contributions of trade advisory committee members, tradespersons, industry establishments, professional associations, labour organizations, training providers, government departments and agencies, and all others who contributed to this publication.

Special thanks are offered to the following representatives who contributed greatly to the original draft of the standard and provided expert advice throughout its development.

Matt DeLeon	Techno Hard Surfaces Ltd.
Kenny Gordon	Techno Hard Surfaces Ltd.
John Ferguson	Techno Hard Surfaces Ltd.
Kevin Nickerson	Quality Concrete Inc.
Allan Macquarrie	Precision Concrete Services Ltd.
Danny Chediac	Precision Concrete Services Ltd.

Table of Contents

Acknowledgements.....	1
Level Structure	3
Program Content (Overview).....	4
2017 Occupational Standard Sub-task to Learning Module Comparison	10

Level Structure

Level 1

Code	Self-directed Learning Modules	Code	Self-directed Learning Modules
MENT-700	Mentoring I	CFR-125	Site Preparation
CFR-105	Safety	CFR-130	Formwork
CFR-110	Tools and Equipment	CFR-135	Concrete Curing and Protection
CFR-115	Drawings and Documentation	CFR-140	Concrete Finishing I
CFR-120	Concrete Materials		

Level 2

Code	Self-directed Learning Modules	Code	Self-directed Learning Modules
MENT-701	Mentoring II	CFR-225	Surface Treatments (Plastic)
CFR-205	Concrete Placement and Levelling	CFR-230	Surface Treatments (Hardened)
CFR-210	Concrete Finishing II	CFR-235	Grout
CFR-215	Concrete Cutting	CFR-240	Program Review
CFR-220	Concrete Repair		

Program Content (Overview)

Level 1

Code	Learning Modules		Learning Outcomes
MENT-700	Mentoring I	1	Demonstrate knowledge of effective communication practices as a learner.
		2	Demonstrate knowledge of strategies for learning skills in the workplace.
CFR-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.
CFR-110	Tools and Equipment	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 measuring tools, their applications, maintenance and procedures for use.
CFR-115	Drawings and Documentation	1	Demonstrate knowledge of drawings and specifications and their applications.

Code	Learning Modules	Learning Outcomes
CFR-120	Concrete Materials	2 Demonstrate knowledge of procedures to interpret and extract information from drawings and specifications.
		3 Demonstrate knowledge of trade documentation and its use.
		1 Demonstrate knowledge of concrete, its properties, characteristics, and applications.
		2 Demonstrate knowledge of concrete mix design.
		3 Demonstrate knowledge of concrete reinforcement and embedded materials, their characteristics and applications.
CFR-125	Site Preparation	4 Demonstrate knowledge of calculations relating to material selection.
		1 Demonstrate knowledge of site inspection procedures and factors that impact site preparation.
		2 Demonstrate knowledge of sub-grade preparation procedures and requirements.
		3 Demonstrate knowledge of procedures to place concrete on-site.
CFR-130	Formwork	4 Demonstrate knowledge of procedures to spread concrete.
		1 Demonstrate knowledge of concrete formwork, its components and applications.

Code	Learning Modules	Learning Outcomes
		2 DK of procedures to layout, construct and inspect formwork.
		3 Demonstrate knowledge of procedures to install and inspect reinforcement.
		4 DK of procedures to install construction, isolation and expansion joints.
		5 Demonstrate knowledge of procedures to remove forms.
CFR-135	Concrete Curing and Protection	1 Demonstrate knowledge of curing compounds and their applications.
		2 Demonstrate knowledge of procedures to wet-cure concrete.
		3 Demonstrate knowledge of procedures to chemical-cure concrete.
		4 Demonstrate knowledge of procedures to create contraction joints.
		5 Demonstrate knowledge of procedures to adjust curing procedures according to environmental conditions.
CFR-140	Concrete Finishing I	6 Demonstrate knowledge of methods to protect plastic and hardened concrete during setting and hardening.
		1 Demonstrate knowledge of procedures to float concrete by hand.
		2 Demonstrate knowledge of procedures to edge perimeter of a slab.

Code	Learning Modules	Learning Outcomes	
		3	Demonstrate knowledge of procedures to tool contraction joints.
		4	Demonstrate knowledge of procedures to trowel concrete by hand.

Level 2

Code	Learning Modules	Learning Outcomes	
MENT-701	Mentoring II	1	Demonstrate knowledge of effective communication practices as a mentor.
		2	Demonstrate knowledge of strategies for teaching workplace skills.
CFR-205	Concrete Placement and Levelling	1	Demonstrate knowledge of procedures to consolidate concrete.
		2	Demonstrate knowledge of procedures to establish elevations.
		3	Demonstrate knowledge of procedures to screed concrete.
		4	Demonstrate knowledge of procedures to bull float concrete.
CFR-210	Concrete Finishing II	1	Demonstrate knowledge of equipment and procedures to float concrete by machine.
		2	Demonstrate knowledge of procedures to finish extruded concrete surfaces.
		3	Demonstrate knowledge of procedures to trowel concrete by machine.

Code	Learning Modules	Learning Outcomes	
CFR-215	Concrete Cutting	1	Demonstrate knowledge of procedures to cut concrete.
		2	Demonstrate knowledge of procedures to core concrete.
CFR-220	Concrete Repair	1	Demonstrate knowledge of concrete defects and their causes.
		2	Demonstrate knowledge of procedures to remove and dispose of materials.
		3	Demonstrate knowledge of procedures to prepare surface for repair or restoration.
		4	Demonstrate knowledge of procedures to repair and restore concrete.
CFR-225	Surface Treatments (Plastic)	1	Demonstrate knowledge of procedures to apply dry-shake aggregate surfaces hardeners.
		2	Demonstrate knowledge of procedures to apply exposed aggregate finish.
		3	Demonstrate knowledge of procedures to texture concrete surfaces.
		4	Demonstrate knowledge of procedures to apply stamped concrete surface finishes.
		5	Demonstrate knowledge of procedures to apply evaporation reducers.
CFR-230	Surface Treatments (Hardened)	1	Demonstrate knowledge of procedures to clean and prepare existing concrete surfaces.

Code	Learning Modules	Learning Outcomes
		2 Demonstrate knowledge of procedures to abrade surfaces to achieve architectural finish.
		3 Demonstrate knowledge of procedures to apply seamless systems.
		4 Demonstrate knowledge of procedures to apply toppings to concrete.
		5 Demonstrate knowledge of procedures to parge vertical surfaces.
		6 Demonstrate knowledge of procedures to apply chemical surface treatments.
		CFR-235 Grout
		2 Demonstrate knowledge of procedures to prepare surfaces for grouting.
		3 Demonstrate knowledge of the procedures to mix and install grout.
		4 Demonstrate knowledge of the procedures to finish exposed grout surfaces.
		CFR-240 Program Review
		2 Demonstrate knowledge of overall comprehension of the trade in preparation for the Red Seal Exam.

2017 Occupational Standard Sub-task to Learning Module Comparison

Sub-task		Learning Modules	
Task A-1 – Performs safety-related functions			
A-1.01	Uses personal protective equipment (PPE) and safety equipment	CFR-105	Safety
A-1.02	Maintains safe work environment	CFR-105	Safety
Task A-2 – Uses tools and equipment			
A-2.01	Uses hand tools	CFR-110	Tools and Equipment
A-2.02	Uses power tools	CFR-110	Tools and Equipment
A-2.03	Uses measuring equipment	CFR-110	Tools and Equipment
Task A-3 – Organizes work			
A-3.01	Uses documentation	CFR-105	Safety
		CFR-115	Drawings and Documentation
A-3.02	Determines material requirements and quantities	CFR-120	Concrete Materials
A-3.03	Sequences work procedures	N/A	Integrated throughout
Task A-4 – Uses communication and mentoring techniques			
A-4.01	Uses communication techniques	MENT-700	Mentoring I
		MENT-701	Mentoring II
A-4.02	Uses mentoring techniques	MENT-700	Mentoring I
		MENT-701	Mentoring II
Task B-5 – Prepares site			
B-5.01	Inspects site	CFR-125	Site Preparation
B-5.02	Prepares sub-grade and elevations	CFR-125	Site Preparation
Task B-6 – Uses formwork			
B-6.01	Constructs concrete formwork	CFR -130	Formwork
B-6.02	Installs reinforcements	CFR -130	Formwork
B-6.03	Inspects formwork and reinforcement	CFR -130	Formwork
B-6.04	Installs construction, isolation and expansion joints	CFR -130	Formwork

Sub-task		Learning Modules	
B-6.05	Removes forms	CFR-130	Formwork
Task C-7 – Places concrete			
C-7.01	Transports concrete on-site	CFR-125	Site Preparation
		CFR-205	Concrete Placement and Levelling
C-7.02	Spreads concrete	CFR-125	Site Preparation
		CFR-205	Concrete Placement and Levelling
C-7.03	Consolidates concrete	CFR-205	Concrete Placement and Levelling
Task C-8 – Levels concrete			
C-8.01	Establishes elevation	CFR-205	Concrete Placement and Levelling
C-8.02	Screeds concrete	CFR-205	Concrete Placement and Levelling
C-8.03	Bull floats concrete	CFR-205	Concrete Placement and Levelling
Task D-9 – Floats concrete			
D-9.01	Floats concrete by Hand	CFR-140	Concrete Finishing I
D-9.02	Floats concrete by machine	CFR-210	Concrete Finishing II
Task D-10 – Hand-tools concrete			
D-10.01	Edges perimeter of slab	CFR-140	Concrete Finishing I
D-10.02	Finishes extruded concrete surfaces	CFR-210	Concrete Finishing II
D-10.03	Tools contraction joints	CFR-140	Concrete Finishing I
Task D-11 – Trowels concrete			
D-11.01	Trowels concrete by hand	CFR-140	Concrete Finishing I
D-11.02	Trowels concrete by machine	CFR-210	Concrete Finishing II
Task D-12 – Applies surface treatments to concrete			
D-12.01	Applies dry-shake aggregate surface hardeners	CFR-225	Surface Treatments (Plastic)
D-12.02	Applies exposed aggregate finish	CFR-225	Surface Treatments (Plastic)
D-12.03	Textures concrete surface	CFR-225	Surface Treatments (Plastic)
D-12.-04	Applies stamped concrete surface finish	CFR-225	Surface Treatments (Plastic)

Sub-task		Learning Modules	
D-12.05	Applies evaporation reducers	CFR-225	Surface Treatments (Plastic)
Task E-13 – Cures concrete			
E-13.01	Wet-cures concrete	CFR-135	Concrete Curing and Protection
E-13.02	Chemical cures concrete	CFR-135	Concrete Curing and Protection
Task E-14 – Creates contraction joints			
E-14.01	Saw cuts contraction joints	CFR-135	Concrete Curing and Protection
E-14.02	Fills joints	CFR-135	Concrete Curing and Protection
Task E-15 – Protects concrete			
E-15.01	Protects plastic concrete	CFR-135	Concrete Curing and Protection
E-15.02	Protects hardened concrete	CFR-135	Concrete Curing and Protection
Task F-16 – Repairs and restores concrete			
F-16.01	Inspects concrete	CFR-220	Concrete Repair
F-16.02	Removes materials	CFT-220	Concrete Repair
F-16.03	Prepares surface for repair or restoration	CFR-220	Concrete Repair
F-16.04	Installs repair materials	CFR-220	Concrete Repair
Task F-17 – Applies surface treatments to hardened concrete			
F-17.01	Prepares surface for surface treatments	CFR-230	Surface Treatments (Hardened)
F-17.02	Abrades surface to achieve architectural finish	CFR-230	Surface Treatments (Hardened)
F-17.03	Applies seamless systems	CFR-230	Surface Treatments (Hardened)
F-17.04	Applies bonded and non-bonded toppings to concrete	CFR-230	Surface Treatments (Hardened)
F-17.05	Parges vertical surfaces	CFR-230	Surface Treatments (Hardened)
F-17.06	Applies chemical surface treatment	CFR-230	Surface Treatments (Hardened)
Task F-18 – Grouts			
F-18.01	Prepares surface for grouting	CFR-235	Grout
F-18.02	Mixes grout	CFR-235	Grout
F-18.03	Installs grout	CFR-235	Grout
F-18.03	Finishes exposed grout surfaces	CFR-235	Grout
Task F-19 – Performs cutting and coring			
F-19.01	Performs cutting	CFR-215	Concrete Cutting
F-19.02	Performs coring	CFR-215	Concrete Cutting

