



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

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Level Structure

Level 1

Code	Self-directed Learning Modules	Code	Self-directed Learning Modules
CFR-100	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
CFR-200	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	
CFR-100	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
CFR-135		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.
		1 Demonstrate knowledge of curing compounds and their applications.
CFR-135	Concrete Curing and Protection	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.
		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.
CFR-140	Concrete Finishing I	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	
CFR-200	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
CFR-235		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
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	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.

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	CFR-100	Mentoring I
		CFR-200	Mentoring II
A-4.02	Uses mentoring techniques	CFR-100	Mentoring I
		CFR-200	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)
D-12.05	Applies evaporation reducers	CFR-225	Surface Treatments (Plastic)

Sub-task		Learning Modules	
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