Apprenticeship and Industry Training

Concrete Finisher

Curriculum Guide

048 (2022)

ALBERTA ADVANCED EDUCATION

Concrete Finisher: apprenticeship education program curriculum guide

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Concrete Finisher
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CURRICULUM GUIDE

Apprenticeship

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding a sponsor. Sponsors guide apprentices, and support on-the-job learning through provision of mentorship. Approximately 80 per cent of an apprentice's time is spent on the job under the supervision of a certified journeyperson or qualified tradesperson. The other 20 per cent involves technical training provided at, or through, a post-secondary institution (PSI) – usually a college or technical institute.

To receive their post-secondary credential, apprentices must learn theory and skills, and they must pass examinations. Criteria for the program—including the content and delivery of technical training—are developed and updated by the Registrar.

The graduate of the Concrete Finisher apprenticeship program is an individual who will be able to:

- perform tests to confirm concrete quality
- interpret building codes, plans and specifications as they apply to the trade
- place and finish concrete in a professional manner
- cut, patch, maintain and repair concrete structures
- perform assigned tasks in accordance with quality and production standards required by industry

Apprenticeship and Industry Training System

Alberta's apprenticeship programs are supported by industry stakeholders that ensures a highly skilled, internationally competitive workforce in the province. The Registrar establishes the educational standards and provides direction to the system supported by industry and the PSI's. The Ministry of Advanced Education provides the legislative framework and administrative support for the apprenticeship and industry training system.

Special thanks are offered to the following industry members who contributed to the development of the standard:

Mr. A. Aronson .....Calgary
Mr. P. Cools.....Irricana
Mr. M. Hrehoruk.....Edmonton
Mr. N. Dodds.....Okotoks
Mr. D. Ossevorth.....Canmore

Alberta Government

Alberta Advanced Education works with industry, sponsor and employee organizations and technical training providers to:

- facilitate industry's development and maintenance of training and certification standards
- provide registration and counselling services to apprentices and sponsors
- coordinate technical training in collaboration with training providers
- certify apprentices and others who meet industry standards

Apprenticeship Safety

Safe working procedures and conditions, incident/injury prevention, and the preservation of health are of primary importance in apprenticeship education programs in Alberta. These responsibilities are shared and require the joint efforts of government, sponsors, employees, apprentices and the public. Therefore, it is imperative that all parties are aware of circumstances that may lead to injury or harm.

Safe learning experiences and healthy environments can be created by controlling the variables and behaviours that may contribute to or cause an incident or injury. By practicing a safe and healthy attitude, everyone can enjoy the benefit of an incident and injury free environment.

Occupational Health and Safety

Persons engaged in, or supporting an individual in an experiential learning environment are often exposed to more worksite hazards than in other forms of traditional post-secondary education and therefore should be familiar with and apply the Occupational Health and Safety Act, Regulations and Code when dealing with personal safety and the special safety rules that apply to all daily tasks.

Occupational Health and Safety-OHS (a division of Alberta Labour and Immigration) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at www.alberta.ca/occupational-health-safety.aspx

Technical Training

Apprenticeship technical training is delivered by the PSI's throughout Alberta. The PSI's are committed to delivering the technical training component of Alberta apprenticeship education programs in a safe, efficient and effective manner. All PSI's place a strong emphasis on safety that complements safe workplace practices towards the development of a culture of safety for all professions.

The PSI's work with industry and Alberta Advanced Education to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship education programs across the province. They develop curriculum from the curriculum guides established by the Registrar in consultation with the PSI's and industry and provide the technical training to apprentices.

The following PSI's deliver Concrete Finisher trade apprenticeship technical training:

Southern Alberta Institute of Technology (Mayland Heights Campus)

Procedures for Recommending Revisions to the Curriculum Guide

Any concerned individual or group in the province of Alberta may make recommendations for change by writing to:

Registrar of Apprenticeship Education Programs

c/o Apprenticeship Delivery and Industry Support Services

Apprenticeship Delivery and Industry Support

Advanced Education

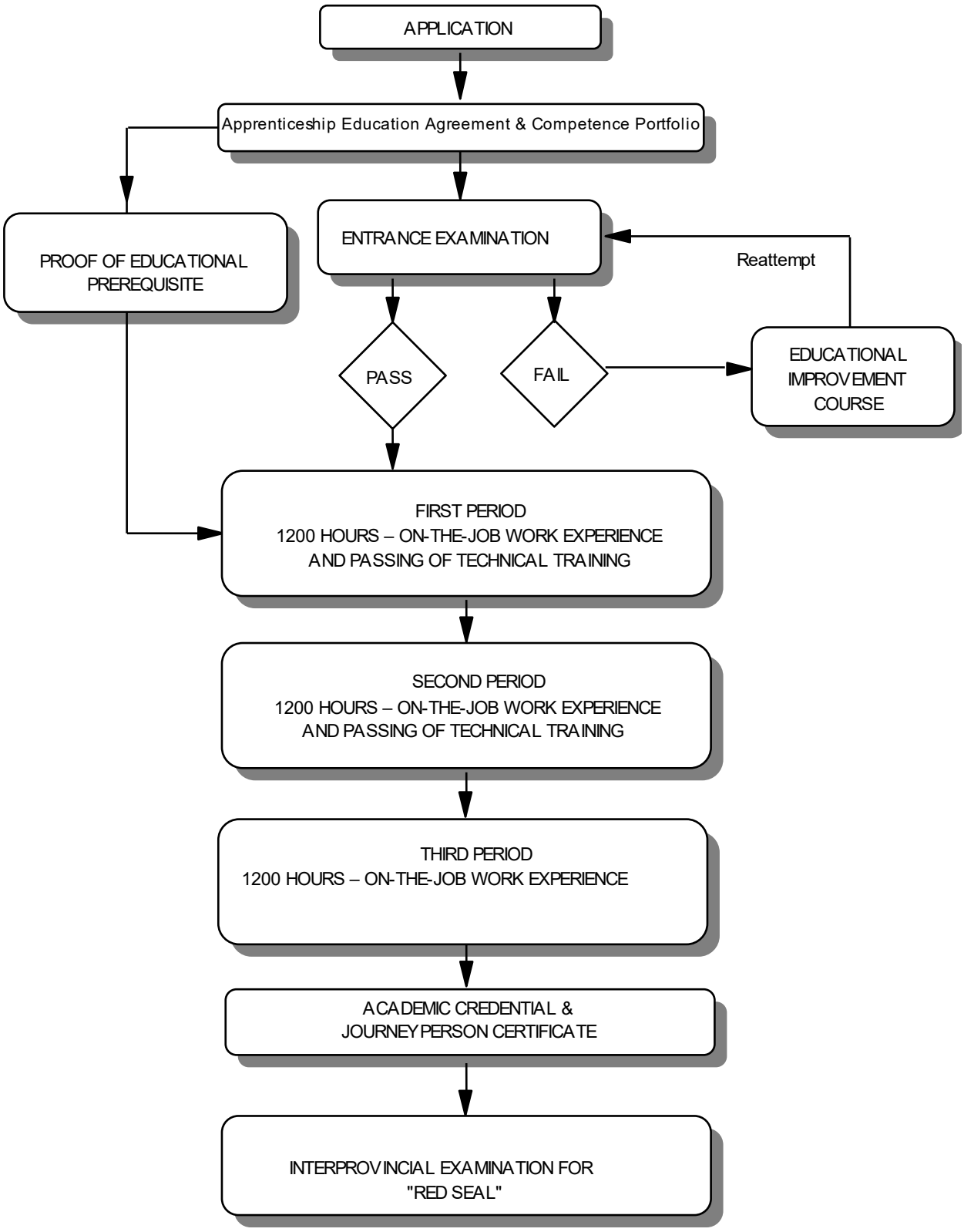
19th floor, Commerce Place

10155 102 Street NW

Edmonton AB T5J 4L5

It is requested that recommendations for change refer to specific areas and state references used.

Apprenticeship Route toward Academic Credential



Concrete Finisher Training Profile
FIRST PERIOD
(4 Weeks 30 Hours per Week – Total of 120 Hours)

SECTION ONE

STANDARD WORKPLACE SAFETY & HAND AND POWER TOOLS

18%

A	B	C
Safety Legislation, Regulations & Industry Policy in the Trades 19%	Climbing, Lifting, Rigging and Hoisting 14%	Hazardous Materials & Fire Protection 9%
D	**E**	**F**
Measuring and Layout Tools 14%	Cutting, Assembling and Dismantling Tools 5%	Concrete Placing Tools 5%
G	**H**	**I**
Tools for the Surface Treatment of Concrete 10%	Mixing and Conveying Equipment 10%	Power Floats and Trowels 14%

SECTION TWO

CONCRETE

13%

A	B	C
Portland Cements 40%	Code Requirements 13%	Air Entrainment 13%
D	**E**	
Concrete Aggregates 20%	Transporting Concrete 14%	

SECTION THREE

CONCRETE PLACEMENT

12%

A	B
Placement of Concrete 60%	Sidewalk Project 40%

SECTION FOUR

CONCRETE PLACING, FINISHING AND CURING

28%

A	B	C
Concrete Finishing 28%	Concrete Joints 15%	Place and Finish Concrete (Project) 36%
D		
Concrete Curing Methods 21%		

SECTION FIVE

TRADE MATHEMATICS **17%**

A	B	C
Introduction to Applied Mathematics 9%	S.I. Metric System 9%	Imperial System 9%

D	E	F
Lineal Measure 10%	Square Measure 10%	Cubic Measure 10%

G	H
Calculating Ratio and Percentage 10%	Required Material 33%

SECTION SIX

DRAWING INTERPRETATION **12%**

A	B	C
Drafting Basics 20%	Drawing Standards 13%	Residential Drawing Interpretation 67%

Concrete Finisher Training Profile
Second Period
(4 Weeks 30 Hours per Week – Total of 120 Hours)

SECTION ONE

CONCRETE PLACEMENT AND RELATED TOOLS/ EQUIPMENT **17%**

A	B	C
Concrete Pavers, Power Screeds, Vibrators, and Sprayers 15%	Grinders, Scabblers and Scarifiers 10%	Cutting and Coring Tools 20%

D	E
Architectural Concrete Finishes 20%	Special Concrete Finishes 35%

SECTION TWO

SAFETY AND APPRENTICESHIP PROGRAM FUNDAMENTALS **13%**

A	B	C
Safety and Maintenance for Power Tools and Equipment 31%	Crew Safety 31%	Workplace Coaching Skills 19%

D
Interprovincial Standards Red Seal Program 19%

SECTION THREE

SITE LAYOUT AND FORMS — **15%**

A	B	C
Levelling and Grading Procedures — 16%	Site Preparation and Form Layout — 17%	Methods of Forming — 17%

D	E
Concrete Reinforcing and Accessories — 17%	Construct a Flat Slab Formwork Project — 33%

SECTION FOUR

CONCRETE MATERIALS — **15%**

A	B	C
Concrete Design and Dry State Characteristics — 22%	Concrete Testing — 17%	Concrete Admixtures — 22%

D	E	F
Concrete Toppings and Grouts — 11%	Concrete Repair — 17%	Precast Concrete — 11%

SECTION FIVE

CONCRETE FINISHING AND CURING — **15%**

A	B
Advanced Concrete Placing and Finishing — 83%	Hot and Cold Weather Curing — 17%

SECTION SIX

ADVANCED MATHEMATIC CALCULATIONS — **10%**

A
Related Calculations — 100%

SECTION SEVEN

COMMERCIAL DRAWING INTERPRETATION — **15%**

A
Commercial Drawing Interpretation — 100%

FIRST PERIOD TECHNICAL TRAINING
CONCRETE FINISHER TRADE
CURRICULUM GUIDE

UPON SUCCESSFUL COMPLETION OF THIS PROGRAM THE APPRENTICE SHOULD BE ABLE TO PERFORM THE FOLLOWING OUTCOMES AND OBJECTIVES.

SECTION ONE: .....STANDARD WORKPLACE SAFETY & HAND AND POWER TOOLS..... 18%

A. Safety Legislation, Regulations & Industry Policy in the Trades 19%

Outcome: Apply legislation, regulations and practices ensuring safe work in this trade.

1. Demonstrate the application of the Occupational Health and Safety Act, Regulation and Code.
2. Describe the sponsor's and employee's role with Occupational Health and Safety (OH&S) regulations, Worksite Hazardous Materials Information Systems (WHMIS), fire regulations, Workers Compensation Board regulations and related advisory bodies and agencies.
3. Describe industry practices for hazard assessment and control procedures.
4. Describe the responsibilities of workers and sponsors to apply emergency procedures.
5. Describe tradesperson attitudes with respect to housekeeping, personal protective equipment and emergency procedures.
6. Describe the roles and responsibilities of sponsors and employees with the selection and use of personal protective equipment (PPE).
7. Maintain required PPE for tasks.
8. Use required PPE for tasks.
9. Select, use and maintain appropriate PPE for worksite applications.

B. Climbing, Lifting, Rigging and Hoisting 14%

Outcome: Use industry standard practices for climbing, lifting, rigging and hoisting in this trade.

1. Describe manual lifting procedures.
2. Describe rigging hardware and associated safety factors.
3. Select equipment for rigging loads.
4. Describe hoisting and load moving procedures.
5. Maintain personal protective equipment (PPE) for climbing, lifting and load moving equipment.
6. Use PPE for climbing, lifting and load moving equipment.

C. Hazardous Materials & Fire Protection 9%

Outcome: Apply industry standard practices for hazardous materials and fire protection in this trade..

1. Describe roles, responsibilities, features and practices related to the Workplace Hazardous Materials Information System (WHMIS) program.
2. Describe three key elements of WHMIS.
3. Describe handling, storing and transporting procedures for hazardous material.
4. Describe venting procedures when working with hazardous materials.
5. Describe hazards, classes, procedures and equipment related to fire protection.

D. Measuring and Layout Tools 14%

Outcome: Describe measuring and layout tools.

1. Describe the use of measuring and marking tools.
2. Describe the use of hand levels, line level and plumb bob.
3. Describe the use of string lines, chalk lines and accessories.
4. Describe layout, aligning and squaring tools.

E. Cutting Assembling and Dismantling Tools 5%

Outcome: Describe cutting assembling and dismantling tools.

1. Describe the use of edge cutting tools.
2. Describe the use of assembling tools.
3. Identify different types, functions and applications of fasteners, adhesives and caulking commonly used in construction.
4. Describe the use of dismantling and demolition tools.
5. Describe the use of chipping and abrading tools.

F. Concrete Placing Tools 5%

Outcome: Describe concrete placing tools.

1. Describe conveying and distributing tools.
2. Describe vibrators and consolidating tools.

G. Tools for the Surface Treatment of Concrete 10%

Outcome: Describe tools for the surface treatment of plastic concrete.

1. Describe the use of floats and darbies.
2. Describe the use of trowels, edgers and jointers.
3. Describe the use of brushes and finishing brooms.
4. Describe clean up and maintenance procedures for hand tools.

H. Mixing and Conveying Equipment 10%

Outcome: Describe mixing and conveying equipment.

1. Describe types of concrete and grout mixers.
2. Describe the principles of mixing concrete.
3. Describe the principles of concrete transport.
4. Describe concrete conveying equipment.
5. Describe cleaning and maintenance of equipment.

I. Power Floats and Trowels..... 14%

Outcome: Describe power floats and trowels.

1. Describe the use of different types of power floats.
2. Describe the use of different types of power trowels.
3. Describe the safe operation and regular maintenance of power trowels.

SECTION TWO: ..... CONCRETE 13%

A. Portland Cements 40%

Outcome: Describe Portland cement.

1. Describe the types and the classes of Portland cements.
2. Describe the applications for the different types of Portland cements.
3. Describe supplementary cementing materials.

B. Code Requirements 13%

Outcome: Interpret code requirements.

1. Interpret CSA- A23.1.2 and the National Building Code requirements for specific applications such as interior and exterior surface treatment.

C. Air Entrainment 13%

Outcome: Describe air entrainment.

1. Describe air entrainment admixtures and effects on concrete.
2. Describe the proper handling, placing and finishing of air entrained concrete.

D. Concrete Aggregates 20%

Outcome: Describe concrete aggregates.

1. Describe coarse aggregates.
2. Describe fine aggregates.
3. Describe the effect of aggregates on concrete for workability and performance.
4. Describe speciality aggregates for light and heavy weight concrete.

E. Transporting Concrete 14%

Outcome: Describe the transporting of concrete.

1. Describe knowledge of time restrictions and CSA requirements for transporting of concrete from supplier.
2. Describe concrete transporting and its effects on placement with reference to consolidation and integration
3. Describe the cause of segregation and the use of chutes, vibrators, tremies and pumps.

SECTION THREE: ..... CONCRETE PLACEMENT 12%

A. Placement of Concrete 60%

Outcome: Describe the placement of concrete.

1. Identify site preparation (substrate) and its effect on the placement of concrete.
2. Describe the placement of concrete and its starting point.
3. Explain screeding to finish grade.
4. Describe the methods of consolidating concrete.

B. Sidewalk Project 40%

Outcome: Construct a sidewalk project using a given specification.

1. Layout a sidewalk using appropriate measuring and layout tools.
2. Prepare and construct forms for a sidewalk using appropriate cutting and fastening tools.
3. Place concrete in sidewalk forms using appropriate conveying, consolidating, and placing tools.
4. Perform surface treatment to achieve desired finish.
5. Perform proper curing using appropriate methods.

SECTION FOUR: ..... CONCRETE PLACING, FINISHING AND CURING 28%

A. Concrete Finishing 28%

Outcome: Describe concrete finishing.

1. Identify surface treatments on plastic concrete.
2. Describe how to create various surface treatments by hand or power equipment such as pressure applications, angle of float and pattern of floating.
3. Describe how to finish extruded concrete surfaces such as curbs and gutters and sidewalks.

B. Concrete Joints 15%

Outcome: Describe concrete joints.

1. Compare the basic types of functional joints.
2. Attain knowledge of depth and joint placement.

C. Place and Finish Concrete Project 36%

Outcome: Perform concrete placement.

1. Layout for flat slab.
2. Prepare forms and set elevation for a concrete slab.
3. Place and consolidate concrete in slab forms.
4. Perform surface treatment to achieve a desired finish.
5. Place, consolidate and finish concrete stairs.

D. Concrete Curing Methods 21%

Outcome: Describe curing methods.

1. Explain the importance of curing to the hydration process.
2. Describe chemical cure.
3. Describe wet-cure.

SECTION FIVE: ..... TRADE MATHEMATICS 17%

A. Introduction to Applied Mathematics 9%

Outcome: Solve trade related math problems.

1. Solve problems in rounding off numbers.

2. Solve whole number problems using single arithmetic principles.
3. Solve problems using combined arithmetic principles.

B. S.I. Metric System 9%

Outcome: Calculate metric lengths, capacity and mass.

1. Apply the metric system to measuring lengths.
2. Apply the metric system to measuring capacity and mass.

C. Imperial System 9%

Outcome: Calculate imperial math operations.

1. Apply the imperial system to measuring lengths.
2. Apply the imperial system to measuring capacity and weight.
3. Use fractions in addition, subtraction, multiplication and division.
4. Convert between fractions and decimals.

D. Lineal Measure 10%

Outcome: Calculate lineal measure.

1. Use formulas to calculate perimeters and circumferences.
2. Apply the Pythagorean Theorem to right triangles problems.

E. Square Measure 10%

Outcome: Calculate areas.

1. Correctly use formulas dealing with areas.

F. Cubic Measure 10%

Outcome: Calculate Volume.

1. Correctly use formulas dealing with volumes.

G. Calculating Ratio and Percentage..... 10%

Outcome: Calculate various problems involving ratio and percentages.

1. Convert between decimals and percentages.
2. Perform percentage calculations.
3. Perform ratio calculations.

H. Required Material 33%

Outcome: Calculate required material.

1. Calculate material requirements for formwork.
2. Calculate concrete volumes for flat work and foundations.

SECTION SIX: .....DRAWING INTERPRETATION..... 12%

A. Drafting Basics..... 20%

Outcome: Apply the use of basic drawing instruments.

1. Describe the functions of basic drawing instruments.
2. Use drafting equipment to complete geometric exercises.
3. Describe the applications of geometry in trade situations.
4. Practice producing shapes, angles and drawing to scale with the basic drafting instruments.

B. Drawing Standards 13%

Outcome: Develop a detailed trade related project.

1. Apply the line types used in orthographic drawings.
2. Demonstrate correct dimensioning methods and techniques.
3. Apply page layout and centering techniques.
4. Apply section and details and the use of material symbols.

C. Residential Drawing Interpretation 67%

Outcome: Interpret residential drawings.

1. Interpret a set of detailed residential drawings.
2. Interpret the foundation plan.
3. Interpret the floor plan.
4. Interpret the elevation.
5. Interpret sections and detail.
6. Interpret other trade responsibilities.

SECOND PERIOD TECHNICAL TRAINING
CONCRETE FINISHER TRADE
CURRICULUM GUIDE

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SECTION ONE:..... CONCRETE PLACEMENT AND RELATED TOOLS/ EQUIPMENT..... 17%

A. Concrete Pavers, Power Screeds, Vibrators and Sprayers 15%

Outcome: Describe concrete pavers, power screeds, vibrators and sprayers.

1. Describe the use of concrete paving equipment.
2. Describe the use of power screeds.
3. Describe the use of vibrators.
4. Describe the use of hand held pump sprayers.

B. Grinders, Scabblers and Scarifiers 10%

Outcome: Describe grinders, scabbers and scarifiers.

1. Describe the use of grinders.
2. Describe the use of scabblers.
3. Describe the use of scarifiers.

C. Cutting and Coring Tools 20%

Outcome: Describe cutting and coring tools.

1. Describe the tools, method and time to cut green and cured concrete.
2. Describe saw blades types used to cut green and cured concrete.
3. Describe the tools used to drill and core cured concrete.

D. Architectural Concrete Finishes 20%

Outcome: Describe architectural concrete and finishes.

1. Describe rubbed and floated finishes.
2. Describe parged and sack rub finishes.
3. Describe the use of white and coloured concrete.
4. Describe exposed aggregate finishes.
5. Describe the use of specialized stamped and decorative forming tools.
6. Describe how to achieve F_L and F_F floor levelness.

E. Special Concrete Finishes..... 35%

Outcome: Describe special concrete finishes.

1. Describe the dry shake pigment method of finishing concrete.
2. Describe surface hardeners and slip resistance.
3. Describe non-slip finishes.

4. Describe seeded exposed aggregate finishes.
5. Describe the use of epoxies.
6. Explain the application of polyurethane and polyester coatings.
7. Describe other specialty finishes.

SECTION TWO: ..... SAFETY AND APPRENTICESHIP PROGRAM FUNDAMENTALS 13%

A. Safety and Maintenance for Power Tools and Equipment 31%

Outcome: Describe safety and maintenance practices for power tools and equipment.

1. Describe the safety and maintenance requirements of electrically operated tools.
2. Describe the safety and maintenance requirements of gasoline powered tools.
3. Describe the ventilation requirements for gasoline and diesel powered engines.
4. Describe the safe operation and maintenance requirements for pneumatic tools and compressors.

B. Crew Safety 31%

Outcome: Demonstrate the safety responsibility for leading a concrete finishing crew.

1. Describe the direct and indirect safety responsibilities for members of a crew.
2. Complete a hazard assessment and control procedure for a crew.

C. Workplace Coaching Skills 19%

Outcome: Use coaching skills when training an apprentice.

1. Describe the process for coaching an apprentice.

D. Interprovincial Standards Red Seal Program 19%

Outcome: Use Red Seal products to challenge an Interprovincial examination.

1. Identify Red Seal products used to develop Interprovincial examinations.
2. Use Red Seal products to prepare for an Interprovincial examination.

SECTION THREE: ..... SITE LAYOUT AND FORMS 15%

A. Levelling and Grading Procedures 16%

Outcome: Describe levelling and grading procedures.

1. Describe zoning, bylaws and permits required before preparing site.
2. Describe how to obtain locations of utilities on a property.
3. Interpret soil analysis reports for slabs on grade.
4. Describe the procedures for cut and fill.
5. Apply knowledge of sub-grade compaction requirements.
6. Apply the ability to check uniformity of sub-base grade as specified.
7. Describe flowable fill and its uses.

B. Site Preparation and Form Layout 17%

Outcome: Describe site preparation and form layout.

1. Describe initial site procedures and requirements.
2. Describe form layout procedures.
3. Describe builders' levels: their parts, accessories and uses.
4. Transfer elevations using different set ups.
5. Describe cut and fill of grades or slopes.
6. Apply laser level setup procedures to transfer elevations.
7. Describe the use of hand levels, line levels and string line to determine elevations.

C. Methods of Forming 17%

Outcome: Describe methods of forming.

1. Describe formwork for structures such as slabs-on-grade and curbs and gutters.
2. Describe beam and girder form systems, and structural forming systems.
3. Describe the types of forces transmitted during placement of concrete.
4. Identify critical form areas to prevent failure.
5. Describe form watching with the ability to inspect bracing, shoring and supports.
6. Describe concrete stairs and forming methods.

D. Concrete Reinforcing and Accessories 17%

Outcome: Describe concrete reinforcing and accessories.

1. Describe the gauges and types of welded wire fabric.
2. Identify type and sizes of deformed bars.
3. Identify reinforcing placement for concrete stairs.
4. Describe various fibres and their application.
5. Apply the ability to check reinforcing placement as specified.

E. Construct a Flat Slab Formwork (Project) 33%

Outcome: Construct flat slab formwork.

1. Establish the bench mark.
2. Establish corners.
3. Erect batter boards.
4. Set edge forms to elevation.
5. Set screed stakes.

SECTION FOUR: ..... CONCRETE MATERIALS 15%

A. Concrete Design and Dry State Characteristics 22%

Outcome: Describe concrete design and dry state characteristics.

1. Define normal and special purpose aggregates and how normal density aggregate quality is controlled.

2. Identify the range of compressive strengths of concrete design and the typical demands in industry.
3. Compare batching by weight and by volume.
4. Describe the hydration process and how to retain moisture.

B. Concrete Testing 17%

Outcome: Describe concrete testing.

1. Describe tests conducted on plastic concrete including air, slump and temperature.
2. Describe tests conducted on hardened concrete, including compressive, tensile, and flexural strength.

C. Concrete Admixtures 22%

Outcome: Describe concrete admixtures.

1. Define admixtures for concrete.
2. Identify admixtures, their uses and limitations.
3. Describe commonly used water reducing admixtures
4. Describe commonly used air entraining admixtures.
5. Describe commonly used accelerating admixtures.
6. Describe commonly used hardeners.

D. Concrete Toppings and Grouts..... 11%

Outcome: Describe concrete toppings and grouts.

1. Describe where and how topping finishes are used and applied.
2. Identify the basic composition of cementitious grouts and mortars.
3. Describe the application of cementitious grouts and mortars.
4. Describe patching and bonding materials.
5. Describe the composition and application of epoxy and polyurethane grouts.

E. Concrete Repair 17%

Outcome: Describe concrete repair.

1. Identify types of (Installation and Stress) defects such as scaling, spalling, crazing and honeycombs.
2. Determine the cause of defects such as stress, efflorescence and improper placing or finishing.
3. Describe the procedures to remove defects with abrading tools.
4. Describe the procedures to prepare a surface with bonding agents such as latex modified, slurry mix and epoxy.
5. Develop the ability to apply a new finish.

F. Precast Concrete 11%

Outcome: Describe precast concrete.

1. Compare post-tensioned and pre-tensioned precast members.
2. Describe tilt up panels.

SECTION FIVE: .....CONCRETE FINISHING AND CURING..... 15%

A. Advanced Concrete Placing and Finishing 83%

Outcome: Complete a Concrete Project

1. Finish a coloured slab with a stamped surface pattern.
2. Apply a coloured hardener using the dry shake method.
3. Use the water washing and brushing method to achieve an exposed aggregate finish.
4. Use the seeding method to achieve an exposed aggregate finish.
5. Patch and repair concrete curb.

B. Hot and Cold Weather Curing 17%

Outcome: Describe hot and cold weather curing.

1. Explain cold weather curing procedures as per CSA specifications.
2. Explain hot weather curing procedures as per CSA specifications.

SECTION SIX:.....ADVANCED MATHEMATIC CALCULATIONS..... 10%

A. Related Calculations 100%

Outcome: Solve calculation problems.

1. Solve problems using arithmetic concepts.
2. Solve problems relating to percentage.
3. Solve problems relating to ratio and proportion.
4. Solve problems relating to perimeters areas and volumes.
5. Solve problems relating to the Pythagorean Theorem.
6. Calculate foundation concrete volumes.

SECTION SEVEN: ..... COMMERCIAL DRAWING INTERPRETATION 15%

A. Commercial Drawing Interpretation..... 100%

Outcome: Interpret commercial drawings.

1. Interpret a set of drawings and specifications of a commercial building.
2. Identify all information related to the Concrete Finisher trade.
3. Identify all information not related to the Concrete Finisher trade.
4. Describe alphabet of lines.

Apprenticeship and Industry Training

Alberta Trades. World Ready.

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