

Apprenticeship and Industry Training

Painter and Decorator

Apprenticeship Course Outline

004 (2018)



Apprenticeship
and Industry
Training

ALBERTA ADVANCED EDUCATION

Painter and decorator: apprenticeship course outline.

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**Painter and Decorator
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Apprenticeship

Apprenticeship is post-secondary education with a difference. Apprenticeship begins with finding an employer. Employers hire apprentices, pay their wages and provide on-the-job training and work experience. Approximately 80 per cent of an apprentice's time is spent on the job under the supervision of a certified journeyman or qualified tradesperson. The other 20 per cent involves technical training provided at, or through, a post-secondary institution – usually a college or technical institute.

To become certified journeymen, apprentices must learn theory and skills, and they must pass examinations. Requirements for certification—including the content and delivery of technical training—are developed and updated by the Alberta Apprenticeship and Industry Training Board on the recommendation of the Painter and Decorator Provincial Apprenticeship Committee.

The graduate of the Painter and Decorator apprenticeship program is a certified journeyman who will be able to:

- apply coatings by brush, roller and spray to surfaces of wood, metal, brick, concrete, plaster, stucco and stone for decorative and protective purposes. This occurs in residential, commercial, institutional and industrial settings.
- apply wall coverings to surfaces in residential and commercial buildings.
- perform surface preparation on new and existing surfaces.
- be competent and proficient in the safe use of hand tools, power equipment and precision-built machinery.
- be familiar with and able to co-operate in the work of allied trades engaged in construction, building maintenance and home decoration.
- perform assigned tasks in accordance with safety, quality, environmental and production standards required by industry.
- calculate areas and relate these calculations to required material.

Apprenticeship and Industry Training System

Industry-Driven

Alberta's apprenticeship and industry training system is an industry-driven system that ensures a highly skilled, internationally competitive workforce in more than 50 designated trades and occupations. This workforce supports the economic progress of Alberta and its competitive role in the global market. Industry (employers and employees) establishes training and certification standards and provides direction to the system through an industry committee network and the Alberta Apprenticeship and Industry Training Board. The Alberta government provides the legislative framework and administrative support for the apprenticeship and industry training system.

Alberta Apprenticeship and Industry Training Board

The Alberta Apprenticeship and Industry Training Board provides a leadership role in developing Alberta's highly skilled and trained workforce. The board's primary responsibility is to establish the standards and requirements for training and certification in programs under the Apprenticeship and Industry Training Act. The board also provides advice to the Minister of Advanced Education on the needs of Alberta's labour market for skilled and trained workers, and the designation of trades and occupations.

The thirteen-member board consists of a chair, eight members representing trades and four members representing other industries. There are equal numbers of employer and employee representatives.

Industry Committee Network

Alberta's apprenticeship and industry training system relies on a network of industry committees, including local and provincial apprenticeship committees in the designated trades, and occupational committees in the designated occupations. The network also includes other committees such as provisional committees that are established before the designation of a new trade or occupation comes into effect. All trade committees are composed of equal numbers of employer and employee representatives. The industry committee network is the foundation of Alberta's apprenticeship and industry training system.

Local Apprenticeship Committees (LAC)

Wherever there is activity in a trade, the board can set up a local apprenticeship committee. The board appoints equal numbers of employee and employer representatives for terms of up to three years. The committee appoints a member as presiding officer. Local apprenticeship committees:

- monitor apprenticeship programs and the progress of apprentices in their trade, at the local level
- make recommendations to their trade's provincial apprenticeship committee (PAC) about apprenticeship and certification in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- make recommendations to the board about the appointment of members to their trade's PAC
- help settle certain kinds of disagreements between apprentices and their employers
- carry out functions assigned by their trade's PAC or the board

Provincial Apprenticeship Committees (PAC)

The board establishes a provincial apprenticeship committee for each trade. It appoints an equal number of employer and employee representatives, and, on the PAC's recommendation, a presiding officer - each for a maximum of two terms of up to three years. Most PACs have nine members but can have as many as twenty-one. Provincial apprenticeship committees:

- Make recommendations to the board about:
 - standards and requirements for training and certification in their trade
 - courses and examinations in their trade
 - apprenticeship and certification
 - designation of trades and occupations
 - regulations and orders under the Apprenticeship and Industry Training Act
- monitor the activities of local apprenticeship committees in their trade
- determine whether training of various kinds is equivalent to training provided in an apprenticeship program in their trade
- promote apprenticeship programs and training and the pursuit of careers in their trade
- consult with other committees under the Apprenticeship and Industry Training Act about apprenticeship programs, training and certification and facilitate cooperation between different trades and occupations
- consult with organizations, associations and people who have an interest in their trade and with employers and employees in their trade
- may participate in resolving certain disagreements between employers and employees
- carry out functions assigned by the board

Painter and Decorator PAC Members at the time of publication.

Mr. S. Adams.....	Edmonton.....	Presiding Officer
Mr. M. Mahfouz	Edmonton.....	Employer
Mr. B. Picken	Edmonton.....	Employer
Mr. G. Rogers.....	Sherwood Park.....	Employer
Mr. M. Diluzio	Calgary.....	Employee
Mr. B. Pointon.....	Calgary.....	Employee
Mr. W. Szucs	Spruce Grove	Employee
Mr. D. Weaselchild	Siksika.....	Employee

Alberta Government

Alberta Advanced Education works with industry, employer 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 employers
- 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 programs in Alberta. These responsibilities are shared and require the joint efforts of government, employers, 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 behaviors 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.

Alberta Apprenticeship and Industry Training Board Safety Policy

The Alberta Apprenticeship and Industry Training Board (board) fully supports safe learning and working environments and emphasizes the importance of safety awareness and education throughout apprenticeship training- in both on-the- job training and technical training. The board also recognizes that safety awareness and education begins on the first day of on-the-job training and thereby is the initial and ongoing responsibility of the employer and the apprentice as required under workplace health and safety training. However the board encourages that safe workplace behavior is modeled not only during on-the-job training but also during all aspects of technical training, in particular, shop or lab instruction. Therefore the board recognizes that safety awareness and training in apprenticeship technical training reinforces, but does not replace, employer safety training that is required under workplace health and safety legislation.

The board has established a policy with respect to safety awareness and training:

The board promotes and supports safe workplaces, which embody a culture of safety for all apprentices, employers and employees. Employer required safety training is the responsibility of the employer and the apprentice, as required under legislation other than the *Apprenticeship and Industry Training Act*.

The board's complete document on its 'Apprenticeship Safety Training Policy' is available at www.tradesecrets.alberta.ca; access the website and conduct a search for 'safety training policy'.

Implementation of the policy includes three common safety learning outcomes and objectives for all trade course outlines. These common learning outcomes ensure that each course outline utilizes common language consistent with workplace health and safety terminology. Under the title of 'Standard Workplace Safety', this first section of each trade course outline enables the delivery of generic safety training; technical training providers will provide trade specific examples related to the content delivery of course outline safety training.

Occupational Health and Safety

A tradesperson is often exposed to more hazards than any other person in the work force 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 (a division of Alberta Human Services) conducts periodic inspections of workplaces to ensure that safety regulations for industry are being observed.

Additional information is available at www.humanservices.alberta.ca

Technical Training

Apprenticeship technical training is delivered by the technical institutes and colleges in the public post-secondary system throughout Alberta. The colleges and institutes are committed to delivering the technical training component of Alberta apprenticeship programs in a safe, efficient and effective manner. All training providers place a strong emphasis on safety that complements safe workplace practices towards the development of a culture of safety for all trades.

The technical institutes and colleges work with the Apprenticeship and Industry Training Board, industry committees and Alberta Advanced Education to enhance access and responsiveness to industry needs through the delivery of the technical training component of apprenticeship programs across the Province. They develop curriculum from the course outlines established by industry and provide technical training to apprentices.

The following institutions deliver Painter and Decorator apprenticeship technical training:

Northern Alberta Institute of Technology

Southern Alberta Institute of Technology

Procedures for Recommending Revisions to the Course Outline

Advanced Education has prepared this course outline in partnership with the Painter and Decorator Provincial Apprenticeship Committee.

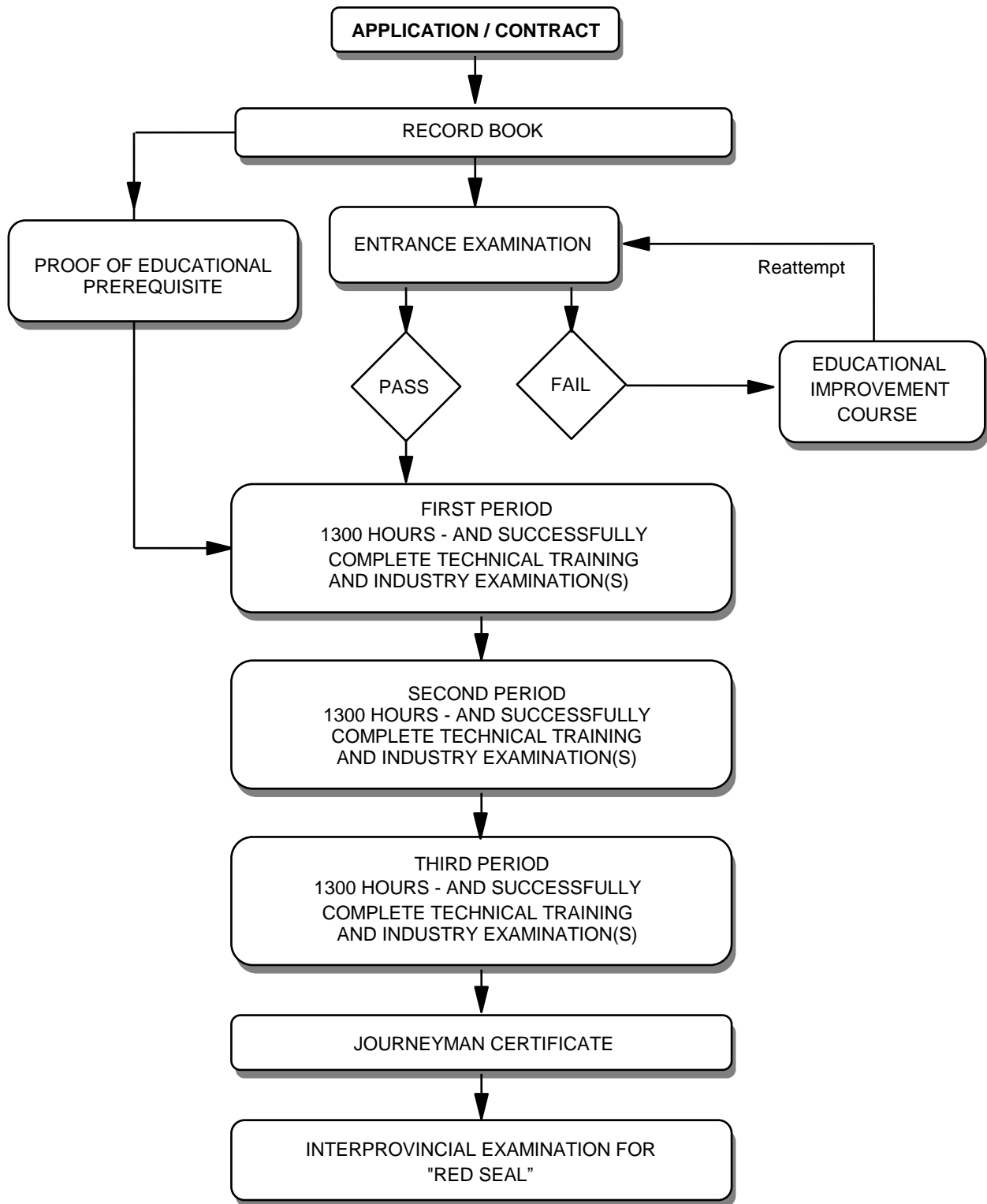
This course outline was approved on December 15, 2017 by the Alberta Apprenticeship and Industry Training Board on a recommendation from the Provincial Apprenticeship Committee. The valuable input provided by representatives of industry and the institutions that provide the technical training is acknowledged.

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

Painter and Decorator Provincial Apprenticeship Committee
c/o Industry Programs and Standards
Apprenticeship and Industry Training
Advanced Education
10th 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. Recommendations for change will be placed on the agenda for regular meetings of the Painter and Decorator Provincial Apprenticeship Committee.

Apprenticeship Route toward Certification



**Painter and Decorator Training Profile
FIRST PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)**

SECTION ONE

**STANDARD WORKPLACE
SAFETY AND GENERAL
PAINTING**

43 HOURS



A

Safety Legislation,
Regulations & Industry Policy
in the Trades
3 Hours

B

Climbing, Lifting, Rigging &
Hoisting
3 Hours

C

Hazardous Materials & Fire
Protection
3 Hours

D

Apprenticeship Training
Program
2 Hours

E

Painter and Decorator Health
and Safety
8 Hours

F

Scope of the Painting and
Decorating Industry
2 Hours

G

Surface Analysis and
Remedies
6 Hours

H

Liquid Coatings Material
Selection
16 Hours

SECTION TWO

SURFACE PREPARATION

70 HOURS



A

Surface Preparation
64 Hours

B

Drywall Finishing
6 Hours

SECTION THREE

**MANUAL APPLICATIONS OF
COATINGS AND PAINT**

40 HOURS



A

Manual Applications of
Coatings and Paint
40 Hours

SECTION FOUR

**CONVENTIONAL AND AIRLESS
SPRAY SYSTEMS**

40 HOURS



A

Conventional and Airless
Spray Systems
40 Hours

SECTION FIVE

**RESIDENTIAL DRAWING
INTERPRETATION**

47 HOURS



A

Calculations
35 Hours

B

Residential Drawing
Interpretation
12 Hours

SECOND PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)

SECTION ONE

WOOD FINISHING
 55 HOURS



A

Conventional Wood Finishing
 40 Hours

B

Specialized Wood Finishing
 15 Hours

SECTION TWO

COLOUR
 30 HOURS



A

Colour Matching
 15 Hours

B

Custom Colour Mixes
 15 Hours

SECTION THREE

INDUSTRIAL AND COMMERCIAL ABRASIVE BLASTING
 58 HOURS



A

Industrial Abrasive Blasting
 50 Hours

B

Commercial Abrasive Blasting
 8 hours

SECTION FOUR

AIR ASSISTED AIRLESS AND ELECTROSTATIC SPRAY SYSTEMS
 57 HOURS



A

Air Assisted Airless Spray Systems
 30 Hours

B

Electrostatic Spray Systems
 15 Hours

C

Spray Booths
 12 Hours

SECTION FIVE

COMMERCIAL DRAWING INTERPRETATION
 40 HOURS



A

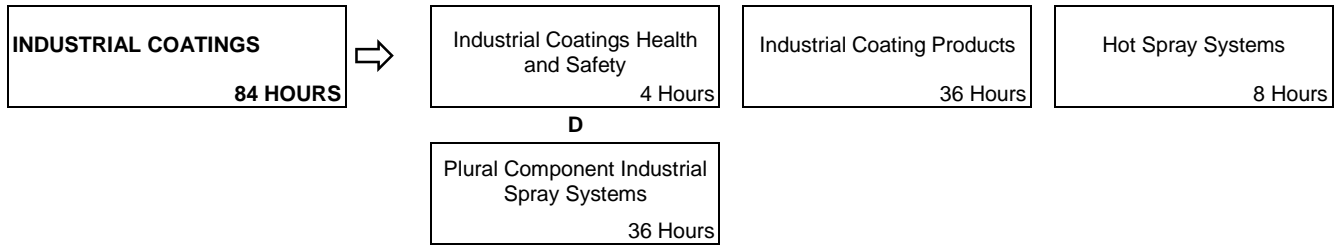
Calculations
 20 Hours

B

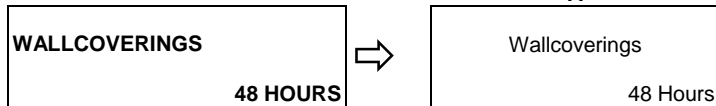
Commercial Drawings and Specifications
 20 Hours

THIRD PERIOD
(8 Weeks 30 Hours per Week – Total of 240 Hours)

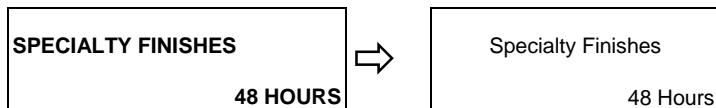
SECTION ONE



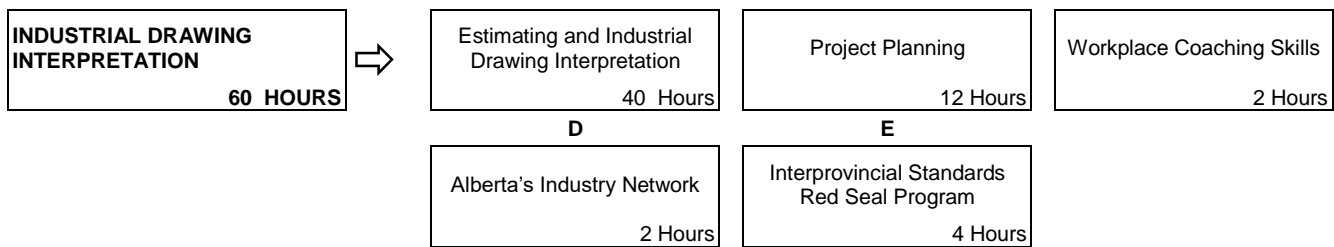
SECTION TWO



SECTION THREE



SECTION FOUR



NOTE: The hours stated are for guidance and should be adhered to as closely as possible. However, adjustments must be made for rate of apprentice learning, statutory holidays, registration and examinations for the training establishment and Apprenticeship and Industry Training

**FIRST PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE**

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

SECTION ONE:STANDARD WORKPLACE SAFETY AND GENERAL PAINTING.....43 HOURS

A. Safety Legislation, Regulations & Industry Policy in the Trades..... 3 Hours

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 employer'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 employers 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 employers and employees with the selection and use of personal protective equipment (PPE).
7. Maintain required PPE for tasks.
8. Use required PPE for tasks.

B. Climbing, Lifting, Rigging and Hoisting 3 Hours

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 3 Hours

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. Apprenticeship Training Program 2 Hours**Outcome: *Manage an apprenticeship to earn journeyman certification.***

1. Describe the contractual responsibilities of the apprentice, employer and Alberta Apprenticeship and Industry Training.
2. Describe the purpose of the apprentice record book.
3. Describe the procedure for changing employers during an active apprenticeship.
4. Describe the purpose of the course outline.
5. Describe the procedure for progressing through an apprenticeship.
6. Describe advancement opportunities in this trade.

E. Painter and Decorator Health and Safety 8 Hours**Outcome: *Demonstrate safe work practices.***

1. Describe requirements related to painting and decorating equipment and their safety measures.
2. Detail the effects of LEEDS on the painting and decorating trade.
3. Discuss environmental hazards including asbestos, lead and mold.
4. Apply general Occupational Health and Safety Regulations pertaining to industrial coatings.

F. Scope of the Painting and Decorating Industry 2 Hours**Outcome: *Identify the scope of the painting and decorating industry.***

1. Outline the scope of the trade.
2. Describe painting and decorating terminology.
3. Describe quality control programs for the residential, commercial and industrial painting and coatings industry.

G. Surface Analysis and Remedies 6 Hours**Outcome: *Analyze substrates in preparation for painting or coating.***

1. Identify substrates found in the painting and coating industry.
2. Describe types of substrate defects.
3. Describe causes of substrate defects.
4. Develop a course of remedial action for substrate defects.

H. Liquid Coatings Material Selection 16 Hours**Outcome: *Select liquid coatings for specific applications.***

1. Identify types of coatings and their primary functions.
2. Identify prime, extender, colour pigments and their functions.
3. Identify natural and synthetic resins and binders and their functions.
4. Identify driers, catalysts, converters and their functions.
5. Identify solvents, diluents and their functions.
6. Interpret product technical data sheets.

SECTION TWO SURFACE PREPARATION70 HOURS

A. Surface Preparation 64 Hours

Outcome: *Prepare surfaces for coating and painting.*

1. Explain the functions of the tools used in the surface preparation process.
2. Select from natural and synthetic abrasives for each surface preparation process.
3. Describe removal of coatings and wall coverings from various substrates.
4. Describe types and uses for patching compounds.
5. Describe the surface preparation process and the finishing sequence for new and previously coated drywall surfaces.
6. Describe the surface preparation process and the finishing sequence for new and previously coated plaster surfaces.
7. Describe the surface preparation process and the finishing sequence for new and previously coated masonry surfaces.
8. Describe the surface preparation process and the finishing sequence for new and previously coated wood surfaces.
9. Describe the surface preparation process and the finishing sequence for new and previously coated ferrous and non-ferrous metal surfaces for industrial applications.
10. Identify causes of corrosion on substrates.
11. Describe surface preparation methods on damaged industrial coatings.
12. Perform surface preparation using solvents and chemicals.
13. Perform surface preparation using hand and power tools.
14. Prepare previously painted surfaces for the application of paint or coatings.
15. Prepare unpainted surfaces for the application of paint or coatings.
16. Prepare ferrous and non-ferrous surfaces for the application of paint or coatings.
17. Repair surface defects.
18. Remove coatings and wall coverings from various substrates.

B. Drywall Finishing 6 Hours

Outcome: *Finish drywall surfaces for painting and coating.*

1. Describe tools required for drywall finishing.
2. Describe materials and procedures used for drywall finishing.
3. Demonstrate drywall finishing.

SECTION THREE:MANUAL APPLICATIONS OF COATINGS AND PAINT..... 40 HOURS

A. Manual Applications of Coatings and Paint 40 Hours

Outcome: *Apply coatings and paint using manual application methods.*

1. Describe methods of mixing coatings and paint.
2. Describe types, uses and components of brushes.
3. Describe types, uses and components of rollers.

4. Describe types of alternate application tools and methods.
5. Apply coatings and paint using brushes to various substrates.
6. Apply coatings and paint using rollers to various substrates.
7. Apply coatings and paint using alternate application tools to various substrates.

SECTION FOUR:CONVENTIONAL AND AIRLESS SPRAY SYSTEMS..... 40 HOURS

A. Conventional and Airless Spray Systems 40 Hours

Outcome: *Operate conventional and airless spray equipment.*

1. Identify the components of a conventional spray system.
2. Describe the operation and principles of conventional spray equipment.
3. Outline maintenance requirements for conventional spray equipment.
4. Identify the components of an airless spray system.
5. Describe the operation and principles of airless spray equipment.
6. Outline maintenance requirements for airless spray equipment.
7. Perform start up and shut down procedures for conventional spray equipment.
8. Demonstrate spraying techniques with conventional spray equipment.
9. Perform maintenance and troubleshooting on conventional spray equipment.
10. Perform start up and shut down procedures for airless spray equipment.
11. Demonstrate spraying techniques with airless spray equipment.
12. Perform maintenance and troubleshooting on airless spray equipment.

SECTION FIVE..... RESIDENTIAL DRAWING INTERPRETATION47 HOURS

A. Calculations 35 Hours

Outcome: *Solve trade calculations in the Imperial and Metric systems.*

1. Convert between the metric and imperial systems.
2. Utilize equations for projects.
3. Calculate the perimeter of two-dimensional geometric shapes.
4. Calculate the surface area of two-dimensional geometric shapes.
5. Estimate material quantities for surfaces.

B. Residential Drawing Interpretation 12 Hours

Outcome: *Interpret residential drawings.*

1. Perform calculations derived from line drawings.
2. Interpret residential drawings.

**SECOND PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE**

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

SECTION ONE:..... WOOD FINISHING 55 HOURS

A. Conventional Wood Finishing 40 Hours

Outcome: *Finish wood surfaces.*

1. Identify soft and hard woods.
2. Describe the physical properties of hard and soft woods.
3. Describe surface preparation procedures for wood surfaces.
4. Describe finishing procedures for wood surfaces.
5. Identify wood finishing materials.
6. Prepare an unfinished wood surface for finishing.
7. Use colourants to match putty to stained wood samples.
8. Apply finishes to prepared wood surfaces.
9. Clean and store tools used for surface preparation and application.

B. Specialized Wood Finishing 15 Hours

Outcome: *Demonstrate specialized wood finishing procedures.*

1. Describe procedures used to repair damaged wood surfaces.
2. Describe procedures used to refinish previously finished wood surfaces.
3. Discuss procedures used to obtain a specialty finish on a wood surface.
4. Demonstrate specialty finishing procedures including glazing, shading, and coloured lacquer.
5. Repair damaged wood surfaces.
6. Refinish previously finished wood surfaces.

SECTION TWO COLOUR 30 HOURS

A. Colour Matching 15 Hours

Outcome: *Match and mix colours for specific applications.*

1. Define colour terms.
2. Explain the additive theory of colour.
3. Explain the spectrum theory of colour.
4. Explain the subtractive theory of colour.
5. Discuss the psychological effects of colour.
6. Design colour schemes using the MacDonal colour theory.
7. Mix colours to match wet and dry colour samples.

B. Custom Colour Mixes 15 Hours

Outcome: *Use colourants to develop custom mixes.*

1. Discuss colour tint systems.
2. Explain the physical characteristics of colourants.
3. Compare the toptone and undertone of colourants.
4. Discuss emerging colour matching systems.
5. Mix samples to match existing samples.
6. Construct a chart with colourants to compare toptones and undertones.
7. Use colourants to develop custom mixes.

SECTION THREE INDUSTRIAL AND COMMERCIAL ABRASIVE BLASTING..... 58 HOURS

A. Industrial Abrasive Blasting 50 Hours

Outcome: *Prepare surfaces for industrial coatings using abrasive blasting.*

1. Describe codes, specifications and industry standards as they relate to surface preparation for industrial coatings.
2. Describe quality control and inspection as it applies to the industrial coatings industry.
3. Describe industrial abrasive blasting equipment.
4. Describe types of industrial abrasives and their applications.
5. Perform surface preparation using blast cleaning.
6. Perform maintenance on abrasive blasting equipment.

B. Commercial Abrasive Blasting 8 Hours

Outcome: *Prepare surfaces for industrial coatings using abrasive blasting.*

1. Describe codes, specifications and industry standards as they relate to surface preparation for commercial coatings.
2. Describe quality control and inspection as it applies to the commercial coatings industry.
3. Describe commercial abrasive blasting equipment.
4. Describe types of commercial abrasives and their applications.
5. Perform surface preparation using commercial blast cleaning.
6. Perform maintenance on abrasive blasting equipment.

SECTION FOURAIR ASSISTED AIRLESS AND ELECTROSTATIC SPRAY SYSTEMS57 HOURS

A. Air Assisted Airless Spray Systems 30 Hours

Outcome: *Operate air assisted airless spray equipment.*

1. Identify the components of an air assisted airless system.
2. Describe the operation of air assisted airless spray equipment.
3. Describe the uses of air assisted airless spray equipment.
4. Outline maintenance requirements for air assisted airless spray equipment.
5. Perform start up and shut down procedures for air assisted airless spray equipment.

- 6. Demonstrate spraying techniques for air assisted airless spray equipment.
- 7. Perform maintenance and troubleshooting on air assisted airless spray equipment.

B. Electrostatic Spray Systems 15 Hours

Outcome: Operate electrostatic spray equipment.

- 1. Identify the components of an electrostatic system.
- 2. Describe the operation of electrostatic spray equipment.
- 3. Describe the uses of electrostatic spray equipment.
- 4. Outline maintenance requirements for electrostatic spray equipment.
- 5. Perform start up and shut down procedures for electrostatic spray equipment.
- 6. Demonstrate spraying techniques for electrostatic spray equipment.
- 7. Perform maintenance and troubleshooting on electrostatic spray equipment.

C. Spray Booths..... 12 Hours

Outcome: Operate spray booth systems.

- 1. Describe the components of spray booth equipment.
- 2. Describe the operation and maintenance of spray booth equipment.
- 3. Operate and maintain a spray booth.

SECTION FIVE COMMERCIAL DRAWING INTERPRETATION..... 40 HOURS

A. Calculations..... 20 Hours

Outcome: Perform perimeter and area calculations on three-dimensional geometric shapes.

- 1. Calculate the perimeter of three-dimensional geometric shapes.
- 2. Calculate the surface area of three-dimensional geometric shapes.
- 3. Calculate the volumetric capacity of three-dimensional geometric shapes.
- 4. Complete wallcovering estimates using area and strip methods.

B. Commercial Drawings and Schedules 20 Hours

Outcome: Interpret information found in schedules and commercial drawings.

- 1. Identify line types, symbols and notations used on drawings.
- 2. Relate the information from schedules.
- 3. Complete quantity take-offs from commercial drawings and schedules.

**THIRD PERIOD TECHNICAL TRAINING
PAINTER AND DECORATOR TRADE
COURSE OUTLINE**

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

SECTION ONE:..... INDUSTRIAL COATINGS..... 84 HOURS

A. Industrial Coatings Health and Safety 4 Hours

Outcome: **Apply safety regulations for industrial coatings.**

1. Fit respiratory protection for industrial coatings applications.
2. Explain confined space entry regulations.
3. Describe Provincial hazardous waste disposal regulations.
4. Review the Alberta Environmental Protection and Enhancement Act.

B. Industrial Coating Products.....36 Hours

Outcome: **Apply knowledge of industrial coatings prior to use.**

1. Discuss methods for preparation, mixing, handling and storage of industrial coatings.
2. Describe chemical compositions of industrial coatings.
3. Detail the physical characteristics and uses for industrial coatings.
4. Describe non-liquid industrial coatings.
5. Describe technical data sheets and industry standards that apply to the preparation and mixing of industrial coatings.

C. Hot Spray Systems8 Hours

Outcome: **Operate hot spray systems.**

1. Discuss the principles of viscosity control.
2. Describe the components of hot spray equipment.
3. Describe the operation and maintenance of hot spray equipment.
4. Perform start up and shut down procedures for a hot spray system.
5. Demonstrate spraying techniques for a hot spray system.
6. Perform maintenance and troubleshooting on a hot spray system.

D. Plural Component Industrial Spray Systems.....36 Hours

Outcome: **Use plural component spray equipment for industrial coatings applications.**

1. Discuss the principles of viscosity control.
2. Identify the components of plural component spray systems.
3. Describe the operation of plural component spray systems.
4. Outline maintenance requirements for plural component spray systems.
5. Perform start up and shut down procedures for plural component spray systems.
6. Demonstrate spraying techniques with plural component spray systems.
7. Inspect applied coatings for specification compliance.
8. Perform maintenance and troubleshooting on plural component spray systems.

SECTION TWO:..... WALLCOVERINGS..... 48 HOURS

A. Wallcoverings..... 48 Hours

Outcome: *Apply wall coverings.*

1. Describe surface preparation procedures.
2. Discuss types, patterns and dimensions of wallcoverings.
3. Describe differences between residential and commercial wallcoverings.
4. Discuss physical properties of adhesives.
5. List tools used for wallcovering applications.
6. Describe wallcovering application procedures.
7. Prepare surfaces for the application of wallcovering.
8. Apply wallcoverings to ceilings and walls.
9. Clean, maintain and store wallcovering tools.

SECTION THREE: SPECIALTY FINISHES..... 48 HOURS

A. Specialty Finishes..... 48 Hours

Outcome: *Create specialty finishes.*

1. Describe preparations required for specialty finishing.
2. Identify specialized tools.
3. Explain the process for completing individual specialty finishes.
4. Prepare surfaces for specialty finishes.
5. Apply specialty finishes to prepared surfaces.
6. Clean and store tools used for surface preparation and application.

SECTION FOUR: INDUSTRIAL DRAWING INTERPRETATION 60 HOURS

A. Estimating and Industrial Drawing Interpretation 40 Hours

Outcome: *Develop estimates from industrial drawings and specifications.*

1. Estimate quantities of wallcovering.
2. Estimate surface area from drawings.
3. Calculate the amount of abrasive needed for surface preparation.
4. Estimate coating material requirements based on drawings.
5. Estimate production levels based on specific projects.
6. Identify details from drawings.
7. Identify details from project specifications.
8. Correlate specifications with drawings.
9. Describe the linear relationship between drawings, specifications and industrial and architectural standards.

B. Project Planning..... 12 Hours

Outcome: *Identify resources required for project completion.*

1. Identify equipment requirements for specific projects.
2. Determine manpower requirements.
3. Determine material quantities and types.
4. Generate a scheduling sequence for a project.
5. Develop a tiered cost estimate for a project.
6. Describe the Alberta Blue Seal Program.

C. Workplace Coaching Skills 2 Hours

Outcome: *Use coaching skills when training an apprentice.*

1. Describe the process for coaching an apprentice.

D. Alberta’s Industry Network 2 Hours

Outcome: *Describe the role of the industry committees that represent trades and occupations in Alberta.*

1. Describe Alberta’s Apprenticeship and Industry Training system.
2. Describe roles and responsibilities of the Alberta Apprenticeship and Industry Training Board, the Government of Alberta and post-secondary institutions.
3. Describe roles and responsibilities of the Provincial Apprenticeship Committees (PACs), Local Apprenticeship Committees (LACs) and Occupational Committees (OCs).

E. Interprovincial Standards Red Seal Program..... 4 Hours

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.



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