

# Painter and Decorator Level 1

## Painter and Decorator

**Unit:** A1 Introduction to Painter and Decorator Industry

**Level:** One

**Duration:** 7 hours

Theory: 7 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge of the Painter and Decorator trade and the Painter and Decorator industry. Topics in this unit include: the scope of the trade, the apprentice portfolio, Painter and Decorator Regulation, job and career opportunities, Federal and Legislative Acts (i.e., Workplace Safety, Fair Wages Act, Employment Standards), requirements of a Painter and Decorator and procedures within Acts that affect tradespeople.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Describe the importance of the painter and decorator industry.</b>	<b>10%</b>
a. History	
b. Job and career opportunities	
c. Construction terms and construction industry	
<b>2. Examine the scope of the painter and decorator industry.</b>	<b>10%</b>
a. National occupational analysis	
• Observations and trends	
• Tasks and sub-tasks	
• Pie chart	
<b>3. Review the apprentice portfolio</b>	<b>5%</b>
a. Overview of Apprenticeship Program	
• Journey to certification	
b. Practical Training Record Book	
c. Technical Training	
• Profile Chart	
• Level Chart	
• Courses	
• Units	
<b>4. Discuss the Manitoba Regulation for the trade of Painter and Decorator.</b>	<b>5%</b>
<b>5. Describe and identify building components.</b>	<b>10%</b>
a. Commercial	
b. Industrial	
c. Residential	

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|--|------------|
| <b>6. Job and career opportunities.</b>  | <b>10%</b> |
| <b>7. Discuss requirements of a Painter and Decorator.</b>                     | <b>40%</b> |
| a. Professionalism   |            |
| b. Attitude  |            |
| c. Work ethic  |            |
| d. Teamwork  |            |
| e. Eagerness to learn  |            |
| f. Dedication to quality   |            |
| g. Customer service and satisfaction   |            |
| h. Professional attire   |            |
| <b>8. Interpret the National Building Code and the Manitoba Building Code.</b> | <b>10%</b> |

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## Painter and Decorator

**Unit: A2 Trade Safety Awareness**

**Level:** One

**Duration:** 7 hours

Theory: 7 hours

Practical: 0 hours

### Overview:

Safe working procedures and conditions, injury prevention, and the preservation of health are of primary importance to industry in Canada. These responsibilities are shared and require the joint efforts of government, employers, and employees. It is imperative that all parties become aware of circumstances that may lead to injury or harm. Safe learning experiences and environments can be created by controlling the variables and behaviours that may contribute to incidents or injury. It is generally recognized that safety-conscious attitudes and work practices contribute to a healthy, safe, and accident-free working environment. It is imperative to apply and be familiar with the Workplace Safety and Health Act and Regulations. As well, it's essential to determine workplace hazards and take measures to protect oneself, co-workers, the public, and the environment. Safety education is an integral part of Insulator apprenticeship training both in school and on-the-job. Unit content is supplemented throughout Technical Training by trade-specific information about Insulator safety hazards and precautions presented in the appropriate contexts of discussion and study. **Note: No percentage-weightings for test purposes are prescribed for this unit's objectives. Instead, a 'Pass/Fail' grade will be recorded for the unit in its entirety.**

### Objectives and Content:

**Percent of  
Unit Mark (%)**

#### 1. Identify safety and health requirements.

- a. Overview of The Workplace Safety and Health Act
  - Rights and responsibilities of employees under the Act
  - Rights and responsibilities of employers under the Act
  - Rights and responsibilities of supervisors under the Act
- b. Fourteen (14) regulations
- c. Codes of practice
- d. Guidelines
- e. Right to refuse
  - Explanation of right to refuse process
  - Rights and responsibilities of employees
  - Rights and responsibilities of employers
  - Rights and responsibilities of supervisors under the Act

#### 2. Identify personal protective equipment (PPE) and procedures.

- a. Employer and employee responsibilities as related to personal protective equipment.
- b. Standards: ANSI (U.S.A. standards), etc.
- c. Work protective clothing and danger if it fits poorly.
- d. Gloves – Importance of proper glove selection (when handling chemicals, cold items, slivers, etc.)

- e. Headwear – appropriate protective headwear when required and the approved type of headwear.
- f. Eye protection – comparison and distinction of everyday eyeglasses, industrial safety glasses and safety goggles
- g. Foot protection – when required according to safety standards
- h. Hearing protection
  - Hazards of various noise levels (hearing protection must be worn)
  - Laws
  - Types of hearing protection
- i. Respiratory protection – types, overview of proper selection
- j. Fall protection – Manitoba requirements standards guidelines
  - ANSI (U.S.A. standards), etc.
- k. Ladders and scaffolding
- l. Safety principles for working with or around industrial trucks site-specific (forklifts, pallet trucks, etc.)

**3. Identify regulations pertinent to care and cleanliness in the working area.**

**4. Identify the regulations relevant to the safe use of chemicals.**

**5. Identify regulations governing the use of scaffolding.**

**6. Identify regulations governing the use of ladders and related equipment.**

**7. Identify ergonomics.**

- a. Definition of ergonomics and conditions that may affect the body
  - Working postures
  - Repetition
  - Force
  - Lifting
  - Tools
  - Identify tool and safety equipment
  - Causes of hand tool accidents
  - equipment

**8. Hazard recognition and control.**

- a. Safe work practices
- b. Basic risk assessment
- c. Injury prevention and control measures
- d. Identification of hazards involved in pneumatic tool use and explanation of how to guard against them
- e. Refrigerants
- f. Toxic chemical (non-refrigerant)
- g. High pressure fluids

**9. Hazard of confined space entry.**

- a. Identification of a confined space
- b. Hazards of a confined space
  - physical
  - biological
- c. Working in a confined space
- d. Emergency response plan
- e. Self-contained breathing apparatus (SCBA)

- 10. Identify first aid/CPR.**
- a. Overview of first aid regulation
  - b. Obligations of employers regarding first aid
    - Who is certified to provide first aid?
    - What to do while waiting for help?
    - Where is first aid kit?
  - c. Describe basic first aid requirements and techniques
    - Scope and limits of first aid intervention
    - Specific interventions (cuts, burns, abrasions, fractures, suffocation, shock, electrical shock, etc.)
    - What is it?
    - Interface with other services and agencies (eg. Workers Compensation claims)
  - d. Describe basic CPR requirements and techniques
    - How do you get certified?
    - Scope and limits of CPR intervention (include varieties of CPR certification)
- 11. Identify the safety requirements as they apply to WHMIS with emphasis on:**
- a. WHMIS is a system
  - b. Provincial regulation under the Safety and Health Act
    - Each province has a WHMIS regulation
  - c. Federal Hazardous Products Act
  - d. WHMIS generic training:
    - WHMIS defined and the format used to convey information about hazardous materials in the workplace
    - Information found on supplier and workplace labeling using WHMIS
    - Hazardous materials in accordance with WHMIS
    - Compliance with government safety standards and regulations
  - e. Description of WHMIS (include varieties of WHMIS Certification)
    - Typology of WHMIS labels, symbols, and classifications
    - Scope and use of Materials Safety Data Sheets (MSDS)
- 12. Identifying and controlling hazards.**
- a. Basic control measures (injury prevention)
  - b. Safe work procedures
  - c. Explanation on the importance of industrial housekeeping
  - d. Employer responsibilities
  - e. How and where to store materials
  - f. Safety measures related to walkways, stairs and floor openings
  - g. Explanation of how to protect the worker and others when working in traffic paths
- 13. Describe the safe storage of stock equipment in service vehicles.**
- 14. Discuss transportation of dangerous goods.**

## Painter and Decorator

**Unit:** A3 Tools, Equipment, And Access Equipment

**Level:** One

**Duration:** 20 hours

Theory: 15 hours

Practical: 5 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and skills in using tools, equipment and access equipment. Topics will include: types of tools, scaffolding and other access equipment, and maintenance of tools.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Recognize and name tools used in the Painter and Decorator trade.</b>	<b>7%</b>
a. Types	
• Application tools	
• Measuring tape	
• Layout tools	
• Surface preparation tools	
• Electrical tools	
• Air tools	
• Ladders	
• Scaffolds	
• Self-propelled mobile platforms	
• Swing state	
• Spray equipment	
b. Function	
c. Selection for desired task	
<b>2. List and describe workmanship, safety and correct operational procedures associated with hand and power tools.</b>	<b>28%</b>
<b>3. Discuss scaffolding and access equipment.</b>	<b>35%</b>
a. Types	
• Ladders	
• Scaffolds	
• Self-propelled mobile platforms	
• Swing state	
• Boatswain's chair	
b. Safety	
c. Job applications	
d. Components	

- e. Operation
- f. Care and maintenance
- g. Manufacturers' manuals

**4. Demonstrate correct and safe use of hand and power tools. 15%**

**5. Practice care and maintenance of hand and power tools. 15%**

- a. Replacement of worn and defective parts
- b. Oiling

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## Painter and Decorator

**Unit:** C1 Trade Mathematics I

**Level:** One

**Duration:** 40 hours

Theory: 40 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of the principles of mathematics. Topics include: rules of addition, subtracting, multiplication and division, solving related trade problems using whole numbers, fractions and decimal numbers, calculating percentage and ratio, perimeter and area, angular measurement, and spread rate for areas.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. State the rules of addition, subtraction, multiplication and division of decimal fractions and apply these rules to solve related trade problems.</b>	<b>35%</b>
a. Rounding off	
b. Changing to common fractions and vice versa	
c. Use of decimal equivalent table	
<b>2. Solve problems using whole numbers, fractions and decimal numbers.</b>	<b>10%</b>
a. Addition	
b. Subtraction	
c. Multiplication	
d. Division	
<b>3. Calculate percentage and ratio.</b>	<b>7%</b>
a. Decimal	
b. Fractions	
c. Whole numbers	
<b>4. State the rules for changing percent to decimal or fractions and vice versa, and subsequently perform these operations on a given trade problem.</b>	<b>35%</b>
a. Cost	
b. Wages	
c. Mixing multi compound coatings	
<b>5. Calculate perimeters and areas.</b>	<b>7%</b>
a. Squares	
b. Rectangles	
c. Circles (circumferences and areas)	
d. Trapezoids	

- e. Cones
- f. Cylinders
- g. Triangles (hypotenuse)

**6. Calculate spread rates for areas.**

**6%**

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## Painter and Decorator

**Unit: D1 Surface Analysis and Remedies I**

**Level:** One

**Duration:** 20 hours

Theory: 10 hours

Practical: 10 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of surface analysis and remedies. Units include: characteristics and categories of substrates, film breakdown, preparing drywall, preparing metal substrates, preparing masonry, preparing stucco, preparing wood, and repairing substrates.

### Objectives and Content:

**Percent of  
Unit Mark (%)**

**1. Identify the characteristics and categories of substrates.**

**30%**

- a. Substrate
  - Drywall
  - Masonry
  - Metals
  - Stucco
  - Wood
  - Concrete
  - Plaster
- b. Defects
  - Corrosion
  - Efflorescence
  - Mildew/moisture
  - Rotting
  - Stains
  - Spalling
  - Improper taping
- c. Bonding
  - Chemical process
  - Physical process
- d. remedies
  - Chemical
  - Physical
  - Sealing

**2. Identify and describe film breakdown.**

**25%**

- a. Coating failure
  - Alligatoring

- Orange peeling
- Blistering
- Chalking
- Cracking
- Fading
- Mildew
- Peeling
- Wrinkling
- b. Film breakdown
  - Mechanical
  - Environmental (i.e., moisture, atmospheric pollutants)
  - Physical
- c. Remedies
  - Chemical
  - Physical

**3. Describe the procedure for preparing drywall. 15%**

- a. Previously painted surface
- b. Patching compounds
- c. New surface

**4. Describe the procedure for preparing metal substrates. 30%**

- a. Previously painted surface
- b. Patching compounds
- c. New surface

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## Painter and Decorator

**Unit:** E1 Composition and Classification of Coatings

**Level:** One

**Duration:** 50 hours

Theory: 25 hours

Practical: 25 hours

**Overview:**

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of paint, colour and mixing. Units include: conventional coatings, proper method to complete various practical assignments, additive theory and effect of light on colour, and the subtractive theory.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<p>1. <b>Understand the characteristics, categories, and used of ingredients in conventional coatings.</b></p> <ul style="list-style-type: none"><li>a. Resins<ul style="list-style-type: none"><li>• Alkyd</li><li>• Emulsions</li><li>• Lacquer base</li><li>• Oleoresinous</li><li>• Urethanes</li><li>• Acrylics</li><li>• Latex</li><li>• Epoxy ester</li></ul></li><li>b. Pigments<ul style="list-style-type: none"><li>• Colour</li><li>• Extenders</li><li>• Prime</li></ul></li><li>c. Binders<ul style="list-style-type: none"><li>• Natural (including shellac, oils)</li><li>• Synthetic</li></ul></li><li>d. Thinners<ul style="list-style-type: none"><li>• Coal tar</li><li>• Natural</li><li>• Vegetable distillates</li></ul></li><li>e. Catalysts<ul style="list-style-type: none"><li>• Driers (i.e., cobalt, Japan, manganese, lead)</li><li>• Cures</li></ul></li></ul>	<b>20%</b>
<p>2. <b>Demonstrate the ability to identify and select the proper method to complete various practical assignments.</b></p>	<b>50%</b>

- 3. Define the additive theory and understand the effect of light on colour. 15%**
- a. Define the source of colour
  - b. State Newton's Law
  - c. Define and explain the additive theory of light
  - d. Draw and explain the additive chart of light
  - e. List and state what additive colours will make an additive
    - Primary
    - Secondary/mixes
  - f. Describe the effect of light on colour
    - Visual spectrum
    - Subtractive chart
    - Spectrum wheel
  - g. State the effect of individual light rays on various painted surfaces
- 4. Define the subtractive theory and the chemistry of colour. 15%**
- a. Identify the symbol form and state the
    - Primary colours
    - Secondary colours
    - Tertiary colours
    - Intermediate colours

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## Painter and Decorator

**Unit:** E2 Colour I

**Level:** One

**Duration:** 50 hours

Theory: 25 hours

Practical: 25 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of paint, colour and mixing. Units include: a colour blindness test, spectrum wheel, colour terms, fundamentals of mixing colours, and procedures to mix and match paint colours.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Participate in a colour blindness test.</b>	<b>15%</b>
<b>2. Demonstrate use of the spectrum wheel.</b>	<b>35%</b>
a. Identify the intermediate colours	
b. Complete the following charts in colour form and symbol form	
• Subtractive	
• Spectrum	
• Primary saturation	
• Reflecting	
• Spectrum wheel	
• Additive	
<b>3. Identify colour terms.</b>	<b>17%</b>
a. Hue	
b. Value	
c. Chroma	
d. Tint	
e. Tone	
f. Shade	
g. Colour	
h. Colorant	
• Dyes	
• Pigments	
• Universal	
i. Black	
j. White	
k. Toptone	
l. Undertone	
m. Lightfast	

- n. Fugitive
- o. Absorb
- p. Reflect
- q. Complement

- 4. Define the fundamentals of mixing colours. 18%**
- a. Describe the procedure for matching a colour
  - b. Identify the tools for matching a colour
  - c. Define the adjustment to allow for drying
  - d. Layout and apply a subtractive chart and a spectrum wheel
- 5. Describe colours used for safety purposes, (National Standards). 15%**

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## Painter and Decorator

**Unit:** E5 Industrial Materials I

**Level:** One

**Duration:** 20 hours

Theory: 10 hours

Practical: 10 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of industrial materials. Objectives include: corrosion process as it relates to metal substrates, industrial substrates, surface preparation, solvents and abrasives.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Define the corrosion process as it relates to metal substrates.</b>	<b>25%</b>
a. Metallic corrosion cell	
b. Methods of corrosion control	
c. Effects of design and fabrication on corrosion control	
d. Concrete substrates	
<b>2. Identify and analyse various industrial substrates.</b>	<b>25%</b>
a. Metal	
• Common metals	
• Manufacturing process	
b. Concrete	
• Elements and uses	
• Materials	
• Fiberglass reinforced plastic	
c. Fibreglass reinforced plastic	
• Application material	
• Mat and sheet systems	
<b>3. Describe surface preparation for industrial coatings.</b>	<b>25%</b>
a. International standards	
• National Association of Corrosion Engineers	
• Society for Protective Coatings	
• Swedish Standards Bureau	
<b>4. Describe the standards for evaluating new and existing surfaces prior to commencement of surface preparation.</b>	<b>25%</b>

## Painter and Decorator

**Unit:** F1 Brushing and Rolling I

**Level:** One

**Duration:** 15 hours

Theory: 5 hours

Practical: 10 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of brushing and rolling. Units include: types and compounds of brushes, use of brushes, types and compounds of rollers, use of rollers, coating techniques, and cleaning and storing.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
1. Identify the types and compounds of brushes and their construction and material	10%
2. Describe the use of brushes. a. Correct brush for applying coatings b. Proper technique	10%
3. Identify the types and compounds of rollers and their construction and material.	10%
4. Describe the use of rollers. a. Correct roller for applying coatings b. Proper technique	10%
5. Practice brushing and rolling techniques	25%
6. Describe the correct procedure required to maintain tools and equipment used in the application of coatings.	10%
7. Demonstrate the ability for cleaning and storing tools and equipment.	25%

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## Painter and Decorator

**Unit:** G1 Wood Finishing I

**Level:** One

**Duration:** 25 hours

Theory: 25 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of wood finishing. Units include: recognition and condition of wood, hardwoods and softwoods, correct materials, tools and equipment.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Demonstrate recognition of wood and condition of wood.</b>	<b>25%</b>
a. Grain pattern	
b. Colour	
c. Appearance of wood at various stages of exposure	
d. Moisture level	
e. Rot	
f. Deterioration of existing coating	
<b>2. Identify hardwoods and softwoods</b>	<b>25%</b>
<b>3. Describe the correct materials and procedures required to complete specific tasks.</b>	<b>25%</b>
a. Finishes on new woods	
b. Refinishing wood	
<b>4. Identify materials, tools and equipment required for various applications.</b>	<b>25%</b>
a. Stain	
• Alkyd oil	
• Gel	
• Latex	
• Nongrain raising	
• Penetrating oil	
• Pigmented oil	
• Spirit	
• Water	
• bleaching	
b. washcoats	
c. Fillers	
d. Sealers	
e. Lacquers	

- f. Natural oils
- g. Varnishes
- h. Shading
- i. Urethane
- j. Removers