

# Painter and Decorator Level 2

## Painter and Decorator

**Unit:** A4 Communications

**Level:** Two

**Duration:** 21 hours

Theory: 17 hours

Practical: 4 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and skills of communicating. Topics include: communication skills, interpersonal skills, organizational skills, customer service, teamwork skills, conflict resolution skills and procedures, application forms, calculations, etc. within the Acts that affect trades people in Manitoba.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Develop communication skills.</b> a. Oral b. Written <ul style="list-style-type: none"><li>• Reports</li><li>• Documentation</li></ul> c. Listening	<b>10%</b>
<b>2. Demonstrate interpersonal skills.</b>	<b>50%</b>
<b>3. Develop organizational skills.</b> a. Time management b. Scheduling	<b>10%</b>
<b>4. Describe customer service.</b>	<b>10%</b>
<b>5. Develop teamwork skills.</b>	<b>10%</b>
<b>6. Develop skills in conflict resolution.</b>	<b>10%</b>

\*\*\*

## Painter and Decorator

**Unit:** B1 Drawing, Interpretation and Specifications I

**Level:** Two

**Duration:** 28 hours

Theory: 14 hours

Practical: 14 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of drawing, interpretation and specifications. Units include: lines, correct lettering, dimensioning and scaling practices, orthographic view, and locating points on orthographic views.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Interpret the different types of lines, correct lettering, dimensioning and scaling practices by using:</b> a. Instruments b. Architects Scale Rule c. Title blocks	<b>5%</b>
<b>2. Identify all orthographic views (plans, elevation, section) of objects.</b>	<b>10%</b>
<b>3. Locate points on different orthographic views.</b>	<b>12%</b>
<b>4. Read and interpret drawings.</b>	<b>10%</b>
<b>5. Interpret and explain the purposes and develop:</b> a. Plans b. Elevations c. Section views d. Detail drawings e. Drawing lines f. Cutting planes g. Construction and material symbols	<b>5%</b>
<b>6. Apply relevant building standards.</b>	<b>10%</b>
<b>7. Solve problems involving various coatings.</b> a. Take-off b. Materials list	<b>10%</b>
<b>8. Estimate the amount of wall covering required for any given surface.</b>	<b>13%</b>

- |   |            |
|---|------------|
| <b>9. Estimate using drawings and specifications.</b> | <b>12%</b> |
| <b>10. Interpret data sheets.</b>                     | <b>13%</b> |

\*\*\*

## Painter and Decorator

**Unit:** C2 Trade Mathematics II

**Level:** Two

**Duration:** 21 hours

Theory: 21 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of the principles mathematics. Topics include: computing areas of flat planes, surface area of rooms, tanks and cylinders, computing parts of circles, sectors and segments, cylinders and cones.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Compute areas of flat planes.</b> a. Rectangles b. Squares c. Parallelograms d. Triangles e. Circles f. Sectors	<b>15%</b>
<b>2. Calculate surface areas of rooms, tanks and cylinders.</b>	<b>10%</b>
<b>3. Calculate areas, radius, circumferences and diameters of circles.</b>	<b>10%</b>
<b>4. Calculate areas of circular sectors and segments.</b>	<b>10%</b>
<b>5. Calculate surface areas of cylinders and cones.</b>	<b>10%</b>
<b>6. Calculate percentages of volume.</b> a. Materials b. Coatings	<b>15%</b>
<b>7. Define the term “spreading rate”</b>	<b>15%</b>
<b>8. Compile from the drawings a “quantity take off” of a commercial building.</b> a. Architectural b. Mechanical c. Structural	<b>15%</b>

## Painter and Decorator

**Unit:** D2 Surface Analysis and Remedies II

**Level:** Two

**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.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Describe the procedure for preparing masonry.</b> a. Previously painted surface b. Patching compounds c. New surface	<b>15%</b>
<b>2. Describe the procedure for preparing stucco.</b> a. Previously painted surface b. Patching compounds c. New surface	<b>15%</b>
<b>3. Describe the procedure for preparing wood.</b> a. Previously painted surface b. Patching compounds c. New surfaces d. Previously varnished surface	<b>20%</b>
<b>4. Demonstrate ability to analyze, prepare and repair various substrates for a project or job.</b>	<b>50%</b>

\*\*\*

## Painter and Decorator

**Unit:** D3 Material Selection (Products)

**Level:** Two

**Duration:** 14 hours

Theory: 14 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of material selection. Units include: abrasives, chemicals, sealers, patching compounds, covering products and masking products.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Identify the characteristics, categories, and safe uses of abrasives in surface preparation.</b>	<b>20%</b>
a. Powder	
b. Sandpaper (including pads)	
c. Steel wool	
d. Blast media	
<b>2. Identify the characteristics, categories, and safe uses of chemicals in surface preparation.</b>	<b>20%</b>
a. Cleaning	
b. Etching	
c. Neutralizing	
d. Bleaching	
e. Stripping	
<b>3. Identify the characteristics, categories, and safe uses of sealers in substrate preparation.</b>	<b>20%</b>
a. Aluminum paint	
b. Shellac	
c. Prepared stain blockers	
<b>4. Identify the characteristics, categories, and safe uses of patching compounds in substrate preparation.</b>	<b>20%</b>
a. Pre-mix (including caulking)	
b. Powder	
c. Putties	

- 5. Identify and describe covering products. 10%**
- a. Plastic bags
  - b. Plastic drop cloths
  - c. Cloth drop cloths
- 6. Identify and describe masking products. 10%**

\*\*\*

## Painter and Decorator

**Unit:** E3 Colour II

**Level:** Two

**Duration:** 50 hours

Theory: 35 hours

Practical: 15 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of paint, colour and mixing. Units include: universal pigments and dyes, toptone and undertone of colourants, tinting strength, colour hues, pigment primaries, universal tints, ability to mix colours using colourants, colour schemes, effect of colour on a structure, and applying a colour scheme to a previously painted or prepared surface.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
1. <b>Identify the correct procedures required to mix and match paint colours.</b> a. Wet sample b. Dry sample	10%
2. <b>Describe the procedure used to mix primary, secondary, tertiary, and intermediate colours.</b>	10%
3. <b>Mix and match specified colours to wet and dry samples.</b>	15%
4. <b>Identify the characteristics of universal pigments and dyes.</b> a. State the lightfastness of universal pigments and dyes b. Describe alkali and acid resistance properties of universal pigments	10%
5. <b>Identify toptone and undertone of colourants.</b>	10%
6. <b>Identify the tinting strength of colours.</b>	10%
7. <b>Identify the colour hues in relationship to the spectrum.</b>	10%
8. <b>Identify the pigment primaries on the spectrum wheel.</b>	10%
9. <b>Complete the colour properties chart using universal tints.</b>	15%

\*\*\*

## Painter and Decorator

**Unit:** E6 Industrial Materials II

**Level:** Two

**Duration:** 20 hours

Theory: 20 hours

Practical: 0 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and understanding of industrial materials.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<b>1. Describe materials and procedures for the solvent, hand, power tool, and chemical surface preparation.</b>	<b>20%</b>
<b>2. Discuss types of abrasives, their characteristics and their performance potential.</b>	<b>20%</b>
a. Equipment set-up and operation	
b. Stand-off distance	
c. Angle of attack	
d. Dwell time	
<b>3. Discuss the properties of a coating and the method by which each property contributes to the overall performance of the coating material.</b>	<b>20%</b>
a. Abrasion	
b. Chemicals	
c. Moisture	
d. Solvent	
e. Temperature	
f. Ultra-violet	
g. Tensile strength	
h. Flexibility	
i. Dielectric strength	
j. Internal stress	
k. Fire and flame spread	
<b>4. Identify the composition of coatings and linings.</b>	<b>20%</b>
a. Acrylic	
b. Alkyd	
c. Asphalt	
d. Coal tar	
e. Epoxies	
f. Nitro-cellulose	

- g. Phenolic
- h. Polyester
- i. Polyvinyl chloride
- j. Silicate
- k. Silicone
- l. Urethane
- m. Vinyl resins

**5. Discuss the chemistry of industrial coatings.**

**20%**

- a. Thermoplastic or Thermoset
- b. Cure process
  - Solvent evaporation
  - Oxidation
  - Chemical reaction
  - Hydrolysis
  - Heat
- c. Organic and inorganic coatings

\*\*\*

## Painter and Decorator

**Unit:** F2 Brushing and Rolling II

**Level:** Two

**Duration:** 20 hours

Theory: 0 hours

Practical: 20 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. <b>Demonstrate ability to select the correct tools and equipment required in the application of coatings.</b>	20%
2. <b>Demonstrate brushing and rolling techniques in the application of coatings.</b> a. Ceilings b. Trim c. Walls	30%
3. <b>Describe the ability to maintain tools and equipment used in the application of coatings.</b>	30%
4. <b>Demonstrate the ability to clean and store tools and equipment.</b>	20%

\*\*\*

## Painter and Decorator

**Unit:** F3 Spraying I

**Level:** Two

**Duration:** 10 hours

Theory: 5 hours

Practical: 5 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of spraying. Units include: conventional spray equipment including industrial, commercial and residential, airless spray equipment, hot spray system, compressors, and spraying techniques.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
<p><b>1. Describe and operate conventional spray equipment including industrial, commercial, and residential.</b></p> <ul style="list-style-type: none"> <li>a. Function of components</li> <li>b. Types of feed</li> <li>c. Atomization of material</li> <li>d. Store and maintain equipment</li> <li>e. Recognize spray patterns               <ul style="list-style-type: none"> <li>• Adjustments for correct pattern</li> <li>• Correcting defects</li> </ul> </li> </ul>	<b>10%</b>
<p><b>2. Describe and identify airless spray equipment including industrial, commercial, and residential.</b></p> <ul style="list-style-type: none"> <li>a. Functions of components</li> <li>b. Correct spray pattern</li> <li>c. Maintain and store</li> <li>d. Safety features</li> <li>e. Starting-up and shutting down</li> </ul>	<b>15%</b>
<p><b>3. Describe the principles of a Hot Spray System.</b></p>	<b>13%</b>
<p><b>4. Describe and identify compressors including industrial, commercial, and residential.</b></p> <ul style="list-style-type: none"> <li>a. Functions and components of single stage, two stage and diaphragm compressor</li> <li>b. Maintain and storage</li> </ul>	<b>12%</b>
<p><b>5. Demonstrate conventional and airless spray painting techniques.</b></p> <ul style="list-style-type: none"> <li>a. Adjust material to specified viscosity</li> </ul>	<b>50%</b>

## Painter and Decorator

**Unit:** G2 Wood Finishing II

**Level:** Two

**Duration:** 36 hours

Theory: 16 hours

Practical: 20 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and an understanding of wood finishing. Units include: removers, wood fillers, patching compounds, sanding, stains, and cabinet filters.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
1. Describe and identify the use of removers.	5%
2. Identify wood fillers and patching compounds.	5%
3. Demonstrate the ability to perform the minimum of sanding after using prepared patching compounds.	20%
4. Demonstrate the ability to apply stains.	25%
a. Chemical	
b. Oil	
c. Water	
d. Spirit (NGR)	
5. Describe wood finishing application techniques.	15%
a. Wiping	
b. Brushing	
c. Spraying	
6. Identify and describe the process for applying wood finishing coats.	20%
a. Wash coats	
b. Transparent coats	
c. Semi-transparent coats	
d. Opaque coats	
7. Demonstrate and identify the correct procedure when using a cabinet scraper.	5%
8. Describe the application of rubbing compounds.	5%

## Painter and Decorator

**Unit:** G3 Wallcovering I

**Level:** Two

**Duration:** 40 hours

Theory: 30 hours

Practical: 10 hours

### Overview:

Upon completion of this unit of instruction the apprentice will demonstrate knowledge and a basic understanding of wallcovering. Units include: preparation, base coats, types, sizes and dimensions, wallpaper patterns and borders, adhesives, cutting, folding, turning corners, natural and synthetic materials, seams, and hanging panels.

<b>Objectives and Content:</b>	<b><u>Percent of Unit Mark (%)</u></b>
1. Identify the procedures required when preparing surface for wallcoverings.	15%
2. Demonstrate the ability to prepare a surface for the applications of wallcoverings.	25%
3. Describe appropriate base coats for wallcoverings and identify application methods.	10%
4. Identify the different types, size, and dimensions of various wallcoverings.	20%
a. Asian wallcoverings	
b. Universal wallcoverings	
c. European wallcoverings	
5. Describe the types of wallpaper patterns and borders.	10%
a. Drop	
b. Random	
c. Straight	
d. Plain	
6. Identify the types of adhesives and their recommended uses.	10%
7. Identify the tools and their functions used to apply wallcoverings.	5%
8. Describe the correct procedures required for cutting lengths.	5%

\*\*\*