

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.

Objectives and Content:	<u>Percent of Unit Mark (%)</u>
1. Develop communication skills. a. Oral b. Written • Reports • Documentation c. Listening	10%
2. Demonstrate interpersonal skills.	50%
3. Develop organizational skills. a. Time management b. Scheduling	10%
4. Describe customer service.	10%
5. Develop teamwork skills.	10%
6. Develop skills in conflict resolution.	10%

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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.

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

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| 9. Estimate using drawings and specifications. | 12% |
| 10. Interpret data sheets. | 13% |

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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.

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

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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.

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

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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.

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

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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.

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

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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.

Objectives and Content:	<u>Percent of Unit Mark (%)</u>
1. Describe materials and procedures for the solvent, hand, power tool, and chemical surface preparation.	20%
2. Discuss types of abrasives, their characteristics and their performance potential.	20%
a. Equipment set-up and operation	
b. Stand-off distance	
c. Angle of attack	
d. Dwell time	
3. Discuss the properties of a coating and the method by which each property contributes to the overall performance of the coating material.	20%
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	
4. Identify the composition of coatings and linings.	20%
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

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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.

Objectives and Content:	<u>Percent of Unit Mark (%)</u>
1. Demonstrate ability to select the correct tools and equipment required in the application of coatings.	20%
2. Demonstrate brushing and rolling techniques in the application of coatings. a. Ceilings b. Trim c. Walls	30%
3. Describe the ability to maintain tools and equipment used in the application of coatings.	30%
4. Demonstrate the ability to clean and store tools and equipment.	20%

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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.

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

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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.

Objectives and Content:	<u>Percent of Unit Mark (%)</u>
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%

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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.

Objectives and Content:	<u>Percent of Unit Mark (%)</u>
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. a. Asian wallcoverings b. Universal wallcoverings c. European wallcoverings	20%
5. Describe the types of wallpaper patterns and borders. a. Drop b. Random c. Straight d. Plain	10%
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%
