



Level One

MODULE 07101 - CAREERS IN THE PAINTING TRADE

1. Briefly describe the history of the painting trade, including how the Clean Air and Lead Abatement laws and regulations have changed the paint industry.
2. Identify career opportunities available for people in the painting trade.
3. Explain the purpose and objectives of an apprentice training program.
4. Describe the desired characteristics of professionals in the painting trade.

MODULE 07102 - SAFETY

1. Explain the obligations and responsibilities of workers, employers, and the Occupational Safety and Health Administration (OSHA) with regard to safety.
2. Describe the nature of the hazard(s) and safety rules and guidelines for job site safety relating to:
 - Personal hygiene and work clothing
 - Personal protective and life saving equipment
 - Respiratory hazards
 - Fall hazards
 - Hazardous chemicals and materials
 - Lead hazards
 - Asbestos hazards
 - Confined space hazards
 - Painting tool and equipment hazards
 - Hot and cold weather hazards
 - Electrical hazards
3. Explain the purpose of Hazardous Communication (HazCom) programs including:
 - The elements or parts required of a HazCom program
 - The use of Material Safety Data Sheets (MSDSs)
 - The use of Hazardous Materials Identification System (HMIS) and National Fire Protection Association (NFPA) codes

MODULE 07103 - LADDERS, SCAFFOLDS, LIFTS, AND FALL PROTECTION

1. Recognize, erect, and safely use the different kinds of ladders, including:
 - Stepladders
 - Single ladders
 - Extension ladders
 - Trestle and extension trestle ladders
2. Recognize, erect, and safely use the different kinds of scaffolds, including:
 - Built-up scaffolds
 - Swing scaffolds
 - Beam-suspended scaffolds
3. Recognize and safely use aerial work platforms and scissor lifts.
4. Recognize and safely use fall arresting and other fall protection equipment, including:
 - Body harnesses and belts
 - Lanyards
 - Deceleration devices
 - Lifelines
 - Anchoring devices and equipment connectors

MODULE 07104 - IDENTIFYING SURFACE/SUBSTRATE MATERIALS AND CONDITIONS

1. Identify various substrates used in construction:
 - Wood
 - Masonry, concrete, and stucco
 - Plaster/drywall
 - Synthetic
 - Metal
2. Identify the surface condition of substrates and coatings:
 - New
 - Aged
 - Previously coated
3. Be aware of the basic surface preparation methods and coatings required for various substrates.

MODULE 07105 - PROTECTING ADJACENT SURFACES

1. Describe the tools and materials required for protecting surfaces:
 - Tape dispensers
 - Types of tape
 - Types of masking material, such as paper, film, light-duty plastic sheeting, and liquid or gel masking
 - Paint shields
 - Covering materials, such as dropcloths, netting, and heavy-duty plastic sheeting
2. Describe the methods of applying interior and exterior masking and coverings to various surfaces.
3. Understand the importance of proper cleanup.

MODULE 07106 - BASIC SURFACE PREPARATION

1. Describe preparation tools and materials:
 - Cleaning agents
 - Surface conditioning agents
 - Repair agents
 - Hand tools
 - Power tools
2. Describe or demonstrate preparation methods:
 - Washing and cleaning
 - Hand tool cleaning
 - Power tool cleaning
 - Etching and neutralization
 - Vacuuming
 - Checking for moisture in concrete, stucco, masonry, wood, or plaster substrates
 - Repair/replacement of substrates
3. Describe or demonstrate general preparation procedures for various types of surfaces/substrates:
 - Wood
 - Concrete and masonry
 - Plaster and drywall
 - Metal
 - Synthetic

MODULE 07107 - SEALANTS AND REPAIR/FILLERS

1. Describe the composition and function of various sealants and fillers.
2. Select an appropriate product for a given application and surface, stating the important properties for product selection.
3. Describe tools and additional materials required for sealant application.
4. Apply and smooth suitable products to the following joints using appropriate tools:
 - Fixed inside corner joint between two types of substrate
 - Fixed outside corner joint between two pieces of the same substrate
 - Expansion joint with 25%-50% expected movement
 - Long, wide, deep crevice in substrate
5. Based on application conditions, judge whether a post-primer sealant or filler will adhere properly after curing.

MODULE 07108 - INTRODUCTION TO PAINTS AND COATINGS

1. Explain the function(s) of pigments, resins, solvents, and additives.
2. Describe the basic differences between water-based and oil-based paints and coatings, including the film-forming mechanisms, advantages, and disadvantages of both types.
3. Use manufacturer's literature and/or product labels to identify coating(s) recommended for use with various substrates (wood, metal, etc.) and exposure conditions. Also identify the recommended method of surface preparation for each coating.
4. Describe the properties and/or functions of paints or coatings.
 - Properties:
 - Alkyd
 - Latex
 - Epoxy
 - Urethane (polyurethane)
 - Functions:
 - Primers/undercoats
 - Tie coats
 - Finish coat
 - Sealers
 - Shellacs, varnishes, and lacquers
 - Stains
 - Special purpose coatings
5. Demonstrate and/or explain the general methods used for the cleanup and disposal of water-based and oil-based paints.

MODULE 07109 - BRUSHING AND ROLLING PAINTS AND COATINGS

1. Recognize the various types of paint brushes and select the proper paint brush for the application.
 - Wall brushes
 - Varnish brushes
 - Sash and trim brushes
 - Stain brushes
 - Special purpose brushes
 - Decorative brushes
2. Recognize the different kinds of rollers and roller covers and select the proper roller and cover for the application.
 - Dip rollers
 - Self-feeding rollers
 - Special purpose rollers
3. Demonstrate how to properly mix paint.
4. Demonstrate how to properly apply paint to surfaces using the brush and the roller.
5. Demonstrate how to clean and store paint brushes and rollers.

Level Two

MODULE 07201 - PAINTING FAILURES AND REMEDIES

1. Recognize the physical symptoms of various types of coating failures that occur on interior and exterior finishes.
2. State the cause or causes of specific types of failures.
3. Describe the appropriate method for correcting the specific types of failures and explain how each failure could have been prevented.
4. Describe the causes and remedies of coating failures related to high interior humidity.
5. Describe the causes and remedies of moisture damage due to snow and ice buildup on a roof.

MODULE 07202 - JOB PLANNING AND COMPLETION

1. Describe the general procedure or steps involved by a painting contractor when estimating a job for the purpose of submitting a bid.
2. Describe the general procedure or steps involved to properly plan and complete a painting job once a contract for the job has been awarded.
3. Correctly interpret contractual documents to determine the painting contractor's responsibilities.
 - Blueprints
 - Schedules (finish, door, etc.)
 - Contract/specifications
 - Scope of work
 - Change orders
4. Develop a detailed schedule for accomplishing a selected job or task using labor hour data recorded on estimating forms and/or takeoff sheets.
5. Determine the quantities of paints and other materials needed to cover selected surfaces.
 - From estimating forms and/or takeoff sheets
 - By actual surface measurement and quantity calculations

MODULE 07203 - CHEMICAL CLEANING AND STRIPPING

1. Describe or demonstrate knowledge of the types of chemical cleaners and strippers.
2. Describe or demonstrate knowledge of the hazards associated with chemical cleaners and strippers.
3. Describe or demonstrate the general methods of using chemical cleaners and strippers.

MODULE 07204 - LOW-PRESSURE WATER CLEANING

1. Describe or demonstrate knowledge of low-pressure water washers:
 - Basic equipment components and functions
 - Accessories
 - Cleaning and surface preparation agents
 - Applications
 - Wet abrasive blasting requirements
 - Surface preparation standards and inspection techniques
2. Describe or demonstrate knowledge of typical low-pressure washer operation guidelines:
 - Warnings and hazards
 - Pressure relief
 - Starting and stopping
 - Spraying
 - Storage

MODULE 07205 - ABRASIVE BLASTING

1. Recognize and describe basic abrasive blasting system equipment and materials.
 - System equipment components
 - Media
 - Operator protective gear
2. Describe or demonstrate basic abrasive blasting system hazards and operation guidelines.

MODULE 07206 - DRYWALL FINISHING AND PATCHING

1. Explain the different levels of finishing as defined in Recommended Specification for Levels of Gypsum Board Finish.
2. Identify the hand tools used in drywall finishing and demonstrate the ability to use these tools.
3. Identify the automatic tools used in drywall finishing and demonstrate the ability to use these tools.
4. Identify the materials used in drywall finishing and state the purpose and use of each type of material.
 - Compounds
 - Joint reinforcing tapes
 - Trim materials
 - Textures and coatings
5. Demonstrate the ability to properly finish drywall using hand tools and automatic tools.
6. Recognize various types of problems that occur in drywall finishes and identify the cause and correct method for solving each type of problem.
7. Demonstrate the ability to patch damaged drywall.

MODULE 07207 - STAINS

1. Describe the differences between stains and other coatings.
2. Describe the differences between dye and pigmented stains.
3. Describe the advantages and disadvantages of using waterborne stains.
4. Select the appropriate stain given a job application and substrate description.
5. Identify application considerations unique to stains.

MODULE 07208 - CLEAR FINISHES

1. Describe the types of clear finishes and their properties.
2. Determine if a clear finish should be used given a description of the substrate and job.
3. Select an appropriate clear finish using packaging, technical data sheets, and job information.
4. Describe the application procedures for clear finishes.
5. Correctly apply clear finishes, observing proper safety precautions.

MODULE 07209 - WOOD FINISHING

1. Explain why wood should be finished.
2. Describe the characteristics of wood.
3. Recognize open-grain and closed-grain wood surfaces.
4. Name and describe the use of basic wood finishing materials.
5. Demonstrate and/or describe the steps that are involved in the wood finishing process.
 - Sanding and cleaning
 - Bleaching
 - Staining
 - Filling
 - Sealing
 - Applying finish coat(s)

MODULE 07210 - COATINGS II

1. Describe the properties of a high-performance coating.
2. Identify some unique coating ingredients and properties.
3. Identify several coating types besides common alkyd and latex paints.
4. Describe some situations that require unique coating solutions.
5. Select an appropriate coating given a job description.
6. Describe some coating preparations, tests, and inspections that can be done to ensure successful coating application.

MODULE 07211 - SPRAY PAINTING (CONVENTIONAL, AIRLESS, AND HVLP)

1. Recognize conventional spray systems and components. Explain the purpose or function served by each component in a conventional spray system.
2. Recognize airless and air-assisted airless spray systems and components. Explain the purpose or function served by each component in airless and air-assisted airless spray systems.
3. Recognize HVLP spray systems and components. Explain the purpose or function served by each component in an HVLP spray system.
4. Demonstrate how to properly mix paint in preparation for spray painting.
5. Select and/or properly size conventional spray system components needed for spraying different materials and surfaces. Demonstrate how to use the equipment to properly apply paint to selected surfaces.
6. Select and/or properly size airless spray system components needed for spraying different materials and surfaces. Demonstrate how to use the equipment to properly apply paint to selected surfaces.
7. Select and/or properly size HVLP spray system components needed for spraying different materials and surfaces. Demonstrate how to use the equipment to properly apply paint to selected surfaces.
8. Perform cleaning and maintenance on conventional spray equipment per the instructions given in the equipment manufacturer's service literature.
9. Perform cleaning and maintenance on airless spray equipment per the instructions given in the equipment manufacturer's service literature.
10. Perform cleaning and maintenance on HVLP spray equipment per the instructions given in the equipment manufacturer's service literature.
11. Demonstrate how to measure the thickness of wet and dry paint films.
12. Demonstrate how to measure the viscosity of paints and coatings.

Level Three

MODULE 07301 - PAINTING FAILURES AND REMEDIES II

1. Recognize the symptoms of coating failures that are caused by improper preparation and application of coatings.
2. Recognize the conditions that cause discoloration.
3. Describe the appropriate methods for correcting each type of failure.
4. Explain how each type of failure could have been prevented.

MODULE 07302 - JOB SUPERVISION, PLANNING, AND CONTROL

1. Describe the role of the onsite supervisor.
2. List the personal qualities and traits of an effective leader/supervisor.
3. Demonstrate how to communicate correctly both verbally and in writing.
4. Explain why understanding human relations on the job is important.
5. List the laws enforced by the EEOC for the protection of employees.
6. Describe and/or demonstrate the general procedures for estimating a job.
7. Describe and/or demonstrate how to perform a takeoff, including how to document the takeoff data on selected standard forms.
8. Correctly interpret contractual documents to determine the painting contractor's responsibilities:
 - Blueprints
 - Schedules (finish, door, etc.)
 - Contract/specifications
 - Scope of work
 - Change orders
9. State the purpose for selected contract documents:
 - Addenda
 - Stop work order
 - Inspection reports
 - Change orders
10. Identify sources of documents that can be used to provide guidance for judging and accepting the quality of work.

MODULE 07303 - COATINGS III

1. Describe the properties and applications of high-performance coatings.
2. Identify the film-forming mechanisms for selected types of high-performance coatings.
3. Recognize substrates and conditions that require the use of a high-performance coating.
4. Use the manufacturer's product data to select high-performance coatings for given substrates and application conditions.
5. Prepare and apply high-performance coatings in accordance with the manufacturer's application instructions.
6. Use a psychrometer, digital thermometer, and moisture meter to measure atmospheric and substrate conditions.
7. Recognize and use wet- and dry-film thickness gauges to measure paint film thickness.

MODULE 07304 - COLOR AND TINTING

1. Understand why light is important to color.
2. Recognize and identify the three primary colors, the three secondary colors, and the six intermediate colors.
3. Identify and define the three dimensions of color.
4. Demonstrate use of the color wheel by selecting and applying complementary, contrasting, and harmonious colors.
5. Demonstrate the ability to describe and use colorants for mixing and matching coating materials.
6. Describe three ways color influences the mood of a person and his or her environment.
7. Understand the difference between interior and exterior color schemes.
8. List the proper sequence and explain the steps involved in creating a custom tint.
9. Identify three ways color is used for safety.
10. Identify the three most common color systems.

MODULE 07305 - DECORATIVE (FAUX) FINISHES

1. Understand the reason or purpose for using each type of decorative finish.
2. Recognize surfaces with decorative finishes applied by glazing.
3. Demonstrate how to make common glaze formulas (recipes).
4. Recognize surfaces with decorative finishes applied by antiquing.
5. Recognize surfaces with decorative finishes applied by gilding.
6. Recognize surfaces with decorative finishes applied by stippling and mottling, and describe the difference between the two methods.
7. Recognize surfaces with decorative finishes applied by marbling and graining, and describe the difference between the two methods.
8. Demonstrate and/or describe how to prepare surfaces for application of the different types of decorative finishes.
9. Use the proper tools needed to achieve special effects when applying different types of decorative finishes.
10. Be familiar with the decorative colors commonly used in marbling and graining.

MODULE 07306 - WALLCOVERING

1. Identify the basic types of wallcoverings, their characteristics, and their uses.
2. Identify the types and categories of commercial wallcoverings.
3. Understand the terms associated with wallcovering.
4. Use various methods to calculate the amount of wallcovering needed for a project.
5. Identify and apply the tools, equipment, adhesives, and other materials commonly used to install wall coverings.
6. Correctly apply a variety of wallcoverings using the proper technique when confronted with doors, windows, dormers, archways, and other architectural elements.
7. Recognize and correct common wallcovering failures.

MODULE 07307 - GRAPHICS

1. Explain the term graphics.
2. Explain why graphics are used.
3. Describe and/or demonstrate the different methods for transferring graphic designs to a surface.
 - Architectural plans
 - Grid square plans
 - Templates
 - Pounce patterns
 - Projection
4. Explain by whom and why graphics are often regulated.
5. Describe and/or demonstrate how to make and use a stencil to produce a graphic.
6. Describe and/or demonstrate the different methods for producing lines and stripes.

MODULE 07308 - TEXTURING

1. Recognize and describe common texture materials, aggregates, and application tools currently in use.
2. Recognize and describe a variety of common texture finishes and patterns and explain how they are achieved.
3. Describe and/or demonstrate typical texture application and finishing guidelines including:
 - Warnings and hazards
 - Application and finishing techniques

MODULE 07309 - SPRAYING WITH SPECIAL DEVICES

1. Recognize and describe systems, components, materials, and principles of operation for:
 - Various texture sprayers
 - Cold roof coating sprayers
 - Electrostatic sprayers
 - Plural component proportioning equipment
2. Describe and/or demonstrate typical operation guidelines for this equipment including:
 - Warnings and hazards
 - Applications and application techniques