

## PAINTING FAILURES AND REMEDIES II

### OBJECTIVES

Upon completion of this module, the trainee will be able to:

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.

### Note to the Instructor

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 3 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where painting failures and remedies can be observed and studied.

Color slides of the black and white illustrations of failed surfaces used in the Trainee Module are available through Painting and Decorating Contractors of America (PDCA), Fairfax, VA.

### Required Equipment and Materials

The following are required for instruction using this Task Module:

#### Equipment

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment

#### Materials

Trainee Module  
Module Examination  
Performance Profile Examinations  
Transparencies

*(continued on page 2)*

**Materials** (*Cont'd*)

Various examples of painting failures covered in the Trainee Module as available, including:

- |                   |   |
|-------------------|---|
| Brush marks       | Fading                                      |
| Cratering         | Mildew                                      |
| Bristle shedding  | Aniline stains                              |
| Roller splatter   | Rusty nail heads                            |
| Poor color hiding | Staining from flashing                      |
| Sagging           | Surfactant leaching                         |
| Uneven gloss      | Wax bleeding on hardboard siding            |
| Wrinkling         | Lap marks                                   |
| Algae             | Improper preparation of wallcovered surface |
| Tannic acid bleed | Pitch bleeding                              |

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

In this Instructor's Guide, the terms classroom, demonstration, and laboratory are defined and used as follows:

**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course introduces the painting trainee to painting failures and their remedies. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2

### Teaching Time for This Task Module

Approximately 7½ hours or three sessions of training time is suggested to cover *Painting Failures and Remedies II*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Three 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Improper Preparation and Application of Coatings	1.0.0 – 2.7.1
2	Improper Preparation and Application of Coatings; Discoloration Failures	2.8.0 – 3.5.1
3	Discoloration Failures	3.6.0 – 3.13.1
	Performance Testing and Module Examination	

### Optional References for Advanced Study

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Painting and Coating*, Latest Edition, The Sherwin-Williams Company, Cleveland, OH.

*Painting and Decorating Craftsman's Manual and Textbook*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Paint Problem Solver*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

# PERFORMANCE PROFILE TASKS

- 1. Recognize the kinds of failures that are caused by improper application of a coating. Based on the symptoms:**
  - State what caused the problem.**
  - State what should have been done to prevent the problem.**
- 2. Demonstrate the ability to correct coating failures caused by improper application of the coating.**

## PERFORMANCE PROFILE TASKS

- 3. Recognize the conditions that can cause discoloration of a finish. Based on the symptoms:**
  - **State what caused the problem.**
  - **State what should have been done to prevent the problem.**
  
- 4. Demonstrate the ability to correct various types of discoloration problems.**

**JOB SUPERVISION,  
PLANNING, AND CONTROL**

**OBJECTIVES**

Upon completion of this module, the trainee will be able to:

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.

**Note to the Instructor**

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 6 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various job sites where the documents, materials, and the tasks involved with job supervision, planning, and control can be studied and/or observed.

### **Required Equipment and Materials**

The following are required for instruction using this Task Module:

#### **Equipment**

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment  
Architectural rulers, tapes, and wheels  
Calculator

#### **Materials**

Trainee Task Module  
Module Examination  
Performance Profile Examinations  
Transparencies  
Paper and pencils  
Examples of various contractual and job-control documents including:  
    Contract agreements  
    Addenda  
    Purchase orders  
    Stop work orders  
    Inspection and inspection reports  
    Liens  
    Job diary  
    Change orders  
Set(s) of architect's or general contractor's drawings (plans, blueprints) including various painting trade-related schedules  
Examples of typical specification/scope of work for a painting job  
List of typical labor production rates  
List of typical material usage rates  
List of typical material costs  
List of typical labor hour costs  
PDCA Standards P1-92, P2-92, P3-93, P4-94, and P5-94  
Various standardized estimating forms  
Quality control record



## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

In this Instructor's Guide, the terms classroom, demonstration, and laboratory are defined and used as follows:

**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course introduces the painting trainee to the tasks and documents involved in job supervision, planning, and control. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Module 07301

### Teaching Time for This Task Module

Approximately 15 hours or six sessions of training time is suggested to cover *Job Supervision, Planning, and Control*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Six 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Introduction to Supervision; Supervising Employees  Performance Testing	1.0.0 – 3.4.0
2	Job Estimating; Job Planning, Scheduling, and Completion; Using Architectural Working Drawings; Contract Documents; Job Controls	4.0.0 – 8.3.0
3	Job Estimating; Using Architectural Working Drawings  Performance Testing	4.0.0 – 4.2.2, 6.0.0 – 6.2.0
4	Job Estimating; Using Architectural Working Drawings  Performance Testing	4.0.0 – 4.2.2, 6.0.0 – 6.2.0

<b>Session</b>	<b>Topic</b>	<b>Trainee Module Section(s)</b>
5	Job Estimating; Using Architectural Working Drawings Performance Testing	4.0.0 – 4.2.2, 6.0.0 – 6.2.0
6	Standards for Judging and Accepting the Quality of the Work; Safety Performance Testing and Module Examination	9.0.0 – 10.0.0

### **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Construction Supervision: Project Supervision*, Latest Edition, National Center for Construction Education and Research, Gainesville, FL.

*Estimating Guide*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Professional Estimating Procedures*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

# PERFORMANCE PROFILE TASKS

- 1. Demonstrate or be aware of the following factors associated with the role of a supervisor/leader:**
  - Desirable personal qualities and traits**
  - Methods for achieving effective verbal and written communication**
  - Specific functions performed to get the job or task done**
  - Methods for promoting good working relationships with and among employers, customers, crew members, and craftspersons in other trades**
  - Methods for resolving conflicts with customers and/or among craftspersons**

## PERFORMANCE PROFILE TASKS

- 2. Determine the dimensions for selected rooms and surfaces by scaling architectural/construction drawings.**
- 3. Estimate the cost for a selected painting job.**
  - Interpret contractual documents to determine the job requirements.**
  - Complete a takeoff using construction drawings/schedules and record the data on standardized estimating forms.**
  - Use labor production rates, material usage rates, labor costs, and material costs to calculate the total labor hours required and the total costs for labor and materials for a selected painting job, and record the data on standardized estimating forms.**

# PERFORMANCE PROFILE TASKS

- 4. Be familiar with PDCA standards that help establish industry guidelines for acceptance, inspection, and quality control.**

## **COATINGS III**

### **OBJECTIVES**

Upon completion of this module, the trainee will be able to:

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.

### **Note to the Instructor**

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 6 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various paint suppliers/manufacturers and job sites where different coating formulations or application methods can be studied and/or observed. Another alternative is to invite one or more paint manufacturer's representatives as guest speakers to discuss high-performance coatings. Many times these individuals have videos, etc., that illustrate coating products and their application.

### **Required Equipment and Materials**

The following are required for instruction using this Task Module:

#### **Equipment**

Overhead projector and screen

Chalkboard and chalk

Appropriate brushes, rollers, sprayers, etc. for applying high-performance coatings

Assorted containers, trays etc. for mixing and holding coatings

*(continued on page 2)*

## **Equipment** (Cont'd)

Appropriate Personal Protective Equipment

Sling psychrometer

Hygrometers

Digital thermometer

Moisture meter

Wet-film thickness gauges

Dry-film thickness gauges (magnetic pull-off and electronic)

## **Materials**

Trainee Task Module

Module Examination

Performance Profile Examinations

Transparencies

Product data sheets, product application sheets and MSDSs, for an assortment of high-performance coatings

Assortment of high-performance coatings with formulations covered in the Trainee Module, including:

- Phenolic, vinyl, silicone, and urethane alkyd modified coatings

- Acrylic, vinyl, epoxy, and polyurethane water emulsion coatings

- Bituminous coatings

- Vinyl butyral wash primers

- Chlorinated rubber coatings

- Polyamine-cured, amine adduct-cured, polyamide-cured, 100% solids, and coal tar epoxies

- Acrylic, polyester, polyether, epoxy, vinyl, moisture curing, and alkyd urethane coatings

- Inorganic and organic zinc-rich coatings

- Fire-retardant coatings

- Encapsulants

- Low-temperature coatings

- Primers

- Elastomeric coatings

- Roof coatings

- Floor coatings

- Surface-tolerant coatings

Surface preparation equipment

Assortment of surfaces onto which coatings can be applied



## HOW TO USE THIS INSTRUCTOR'S GUIDE

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Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

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**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course continues the study of high-performance coatings introduced in Level 2. Covered in this module are the methods used to select high-performance coatings and the procedures required to achieve the proper surface and substrate preparation and application of these coatings. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 and 07302

### Teaching Time for This Task Module

Approximately 15 hours or six sessions of training time is suggested to cover *Coatings III*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Six 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Film-Forming Mechanism and Generic Coating Types	1.0.0 – 2.2.4
2	Film-Forming Mechanism and Generic Coating Types; Coating Types by Function	2.3.0 – 3.5.0
3	Film-Forming Mechanism and Generic Coating Types; Coating Types by Function Performance Testing	2.1.0 – 3.5.0
4	Selecting a Coating Performance Testing	4.0.0
5	Surface Preparation; Coating Preparation and Application Performance Testing	5.0.0 – 6.0.0
6	Testing and Inspection Performance Testing and Module Examination	7.0.0 – 7.4.0

## **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Coatings for Electric Utilities*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

*Coatings for Food and Beverage Plants*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

*Epoxy Application Reference Guide*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

*Painting and Decorating Craftsman's Manual*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Protective Coating Systems for Industrial Tanks*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

*Protective Coating Systems for Water and Waste Water Treatment Plants*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

*Surface Preparation*, Latest Edition, Sherwin-Williams Company, Cleveland, OH.

# PERFORMANCE PROFILE TASKS

- 1. Interpret the product container label and/or product data sheet information to determine:**
  - The primary ingredients of the coating formulation**
  - If the coating is a thermoset or thermoplastic coating**
  - The properties and characteristics of the coating**
  - The intended function performed by the coating**
- 2. Use the coating manufacturer's product data sheets to select the proper high-performance coating required to meet a given set of job requirements.**

## PERFORMANCE PROFILE TASKS

- 3. Prepare a surface and apply a selected coating in accordance with the coating manufacturer's product data sheet and application bulletin.**
- 4. Use the MSDS for a selected coating to identify:**
  - The hazards (if any) associated with the coating**
  - The personal protective equipment that must be worn or otherwise used when working with the coating**
  - Any other precautions or regulatory information relevant to using the coating**

## PERFORMANCE PROFILE TASKS

- 5. Use a psychrometer, hygrometer, digital thermometer, and moisture meter to measure atmospheric and substrate conditions.**
- 6. Use wet- and dry-film thickness gauges to measure the thickness of coatings.**

## COLOR AND TINTING

### OBJECTIVES

Upon completion of this module, the trainee will be able to:

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.

### Note to the Instructor

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

### Required Equipment and Materials

The following are required for instruction using this Task Module:

#### Equipment

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment  
TV and VCR  
*Color With Ina Brosseau Marx* video  
Grumbacher color wheel

#### Materials

Trainee Task Module  
Module Examination  
Performance Profile Examinations  
Transparencies  
Paints (water- or oil-based)  
Paint brushes  
Mixing containers  
Paper for painting  
Wood surfaces

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Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

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## TASK MODULE OVERVIEW

This course gives the painting trainee background information and introduces the tasks and techniques involved in color and tinting. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 through 07303

### Teaching Time for This Task Module

Approximately 10 hours or four sessions of training time is suggested to cover *Color and Tinting*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Four 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Color; The Color Wheel Performance Testing	1.0.0 – 3.3.3
2	Psychology of Color; Color Schemes Performance Testing	4.0.0 – 5.2.6
3	Practical Color Scheme Tips; Custom Tinting; Color Systems Performance Testing	6.0.0 – 8.3.0
4	Custom Tinting Practice Performance Testing and Module Examination	7.0.0 – 7.5.0

## **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Color with Ina Brosseau Marx*, Videotape, Rochester Institute of Technology, Rochester, NY.

*Lighting Handbook*, Latest Edition, Philips Lighting Company, Somerset, NJ.

*Paint Your House Like a Pro*, Latest Edition, The Globe Pequot Press, Shester, CT.

*The Painting, Patching and Wallcovering Toolbox Manual*, Latest Edition, Prentice Hall, New York, NY.

# PERFORMANCE PROFILE TASKS

- 1. Recognize and identify the importance of light to color.**
- 2. Identify the three primary colors.**
- 3. Identify the three secondary colors and six intermediate colors, and understand how they are formed.**
- 4. Demonstrate the use of the color wheel by selecting and applying complementary, contrasting, and harmonious colors.**
- 5. Identify and define the three dimensions of color.**
- 6. Describe and illustrate three ways color influences the mood of a person and his or her environment.**

## PERFORMANCE PROFILE TASKS

- 7. Identify the difference between interior and exterior color schemes.**
- 8. Identify the ways color is used for safety.**
- 9. Demonstrate the procedure for creating a custom tint.**
- 10. Identify the three most commonly used color systems and state their purposes.**

## DECORATIVE (FAUX) FINISHES

### OBJECTIVES

Upon completion of this module, the trainee will be able to:

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.

### Note to the Instructor

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 9 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where different decorative finishes and/or the tasks involved with producing a decorative finish can be studied and/or observed.

### Required Equipment and Materials

The following are required for instruction using this Task Module:

#### Equipment

Overhead projector and screen

TV and VCR if using videos

Chalkboard and chalk

Appropriate Personal Protective Equipment

*(continued on page 2)*

## **Equipment** (Cont'd)

Assortment of paint brushes  
and rollers, including:  
    Stippling brush  
    Mottling brush  
    Stencil brush  
    Sable brush  
    #12 camel hair letting quill  
    Blender brush  
    Glaze brush  
Rubber graining comb  
Graining roller  
Containers for mixing glazes, paints, etc.  
Containers for cleaning brushes, rollers  
Roller, roller covers  
Roller trays  
Gallon bucket

## **Materials**

Trainee Task Module  
Module Examination  
Performance Profile Examinations  
Transparencies  
Videos (optional),  
    The Finishing School, Northport, NY:  
        *Glazing*  
        *Marbling I, Marbling II*  
        *Graining I, Graining II*  
Examples, photographs, and/or illustrated  
    books, etc., that show the different kinds  
    of faux finishes  
Clean cotton rags for rag rolling and cleanup  
    of paint and tools  
Assortment of prepared plywood (or other  
    material) surfaces covered with a base  
    coat suitable for the application of  
    different faux finishes  
Oil-based glaze  
Water-based glaze  
Red burnish size  
Oil-type size  
Paint thinner  
Linseed oil  
Water-based glaze extender product  
Assortment of oil and water-based paints  
Turpentine  
Denatured alcohol  
Fine steel wool  
Sea sponges  
Cheesecloth  
Chamois  
Dutch metal leaf, powdered metal alloys,  
    and liquid gilt  
Goose or turkey feathers  
Distilled water  
Mixing sticks  
Ruler  
Paring knife  
Comb  
Shellac (optional)  
Gesso mixture  
Thin latex gloves  
Safety goggles  
Oil varnish

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

In this Instructor's Guide, the terms classroom, demonstration, and laboratory are defined and used as follows:

**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course gives the painting trainee background information and introduces the tasks and techniques involved in creating decorative (faux) finishes. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 through 07304

### Teaching Time for This Task Module

Approximately 22½ hours or nine sessions of training time is suggested to cover *Decorative (Faux) Finishes*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Nine 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Glazing Performance Testing	1.0.0 – 2.1.0
2	Glazing Performance Testing	2.1.0 – 3.1.2
3	Glazing Performance Testing	2.1.0, 3.2.0 – 3.3.3
4	Marbling	7.0.0 – 7.1.3
5	Marbling Performance Testing	7.0.0 – 7.1.3
6	Antiquing Performance Testing	4.0.0 – 4.2.3



<b>Session</b>	<b>Topic</b>	<b>Trainee Module Section(s)</b>
7	Stippling and Mottling Performance Testing	5.0.0 – 5.1.3
8	Graining Performance Testing	7.0.0, 7.2.0 – 7.2.3
9	Gilding Performance Testing and Module Examination	6.0.0 – 6.1.5

### **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Professional Painted Finishes – A Guide to the Art and Business of Decorative Painting*, Rochester Institute of Technology, Rochester, NY.

*Recipes for Surfaces*, Latest Edition, Fireside, New York, NY.

*Paint Magic*, Latest Edition, Pantheon Books, New York, NY.

# PERFORMANCE PROFILE TASKS

- 1. Prepare oil-based and water-based glazes.**
- 2. Apply glaze coats to properly prepared surfaces using the following methods:**
  - **Sponging**
  - **Rag rolling**
  - **Cheeseclothing**
- 3. Apply a marbled finish to a properly prepared surface.**
- 4. Apply antiqued finishes to a properly prepared surface using the following methods:**
  - **Rubbing with steel wool**
  - **Spattering**

# PERFORMANCE PROFILE TASKS

- 5. Apply stippling and mottling finishes to properly prepared surfaces.**
- 6. Apply a grained finish to a properly prepared surface.**
- 7. Describe the methods used to produce a gilded finish.**



**WALLCOVERING**

**OBJECTIVES**

Upon completion of this module, the trainee will be able to:

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 wallcoverings.
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.

**Note to the Instructor**

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 16 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where wallcoverings and wallcovering techniques can be observed, demonstrated, or practiced.

**Required Equipment and Materials**

The following are required for instruction using this Task Module:

**Equipment**

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment

**Materials**

Trainee Module  
Module Examination  
Performance Profile Examinations  
Transparencies

*(continued on page 2)*

## **Materials (Cont'd)**

Sample rolls, bolts, and books of various residential and commercial wallcoverings in various lengths and widths, including:

- Regular, flopped, and embossed papers
- Vinyl
- Textiles
- Metals
- Natural fiber
- Strings
- Cork
- Moire
- Industrial carpeting
- Wood veneer
- Murals
- Lining paper
- Borders

Common tools used to prepare and install wallcoverings, including:

- Yardstick, measuring tape, zinc strip
- Chalkline and plumb bob
- Carpenter's level
- Screwdrivers
- Shears
- Razor knife
- Brushes or smoothing tools
- Paste roller
- Putty/broad knives
- Seam buster
- Seam roller
- Drop cloths
- Pasting table
- Stepladders and extension plank
- Buckets and sponges
- Water box (for prepasted wallcovering)

Cleaning solutions for surface preparation

Calculators

Sandpaper and sanding tools

Powder adhesives

Premixed adhesives

Adhesive activator

Paste machine

Primer

Sealer

Size

Water for mixing powder adhesives

Pencils

PDCA Wallcovering Problem Solver, if available

Spackle, plaster, wood filler, patching compound

Lining paper

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

In this Instructor's Guide, the terms classroom, demonstration, and laboratory are defined and used as follows:

**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course introduces the painting trainee to the tools, materials, and techniques used in the application of various wallcoverings. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 through 07305

### Teaching Time for This Task Module

Approximately 40 hours or sixteen sessions of training time is suggested to cover *Wallcovering*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Sixteen 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Types of Wallcovering	1.0.0 – 2.4.0
2	Types of Wallcovering	2.5.0
3	Wallcovering Fundamentals	3.0.0 – 3.4.0
4	Estimating Coverage Performance Testing	4.0.0 – 4.8.0
5	Application Tools and Equipment	5.0.0
6	Pastes and Paste Machines Performance Testing	6.0.0 – 6.3.0
7	Surface Preparation Performance Testing	7.0.0 – 7.4.0



<b>Session</b>	<b>Topic</b>	<b>Trainee Module Section(s)</b>
8	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
9	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
10	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
11	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
12	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
13	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
14	Job Planning; Preparing the Wallcovering; Application Techniques*	8.0.0 – 10.6.0
8	Job Planning; Preparing the Wallcovering; Application Techniques* Performance Testing	8.0.0 – 10.6.0
16	Failures and Remedies; Wallcovering Removal* Performance Testing and Module Examination	11.0.0 – 12.0.0

\*These are demonstration and practice sessions that can be structured by the instructor based on available materials, tools, and facilities.

### **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Painting and Decorating Craftsman's Manual and Textbook*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Painting and Decorating Encyclopedia*, Latest Edition, The Goodheart-Willcox Company, Inc., South Holland, IL.

*Wallcovering Problem Solver*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Wallcovering Hanging Instructions*, Latest Edition, Wallcoverings Association, St. Louis, MO.

# PERFORMANCE PROFILE TASKS

- 1. Estimate the amount of wallcovering needed using various estimating techniques.**
- 2. Select the proper adhesive for a particular wallcovering.**
- 3. Properly mix a powdered adhesive.**
- 4. Prepare a surface for wallcovering.**
- 5. Install selected wallcoverings and borders, demonstrating the ability to work around windows, doors, light fixtures, and other obstacles.**
- 6. Demonstrate the ability to install wallcoverings in difficult places such as stairs, slant walls, dormers, and archways.**

# PERFORMANCE PROFILE TASKS

- 7. Demonstrate the ability to identify the causes of some common wallcovering failures, to correct them, and to state what should have been done to prevent them.**



**OBJECTIVES**

Upon completion of this module, the trainee will be able to:

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.

**Note to the Instructor**

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 5 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where different graphics and/or the tasks involved with producing graphics can be studied and/or observed.

**Required Equipment and Materials**

The following are required for instruction using this Task Module:

**Equipment**

- |  |   |
|--|---|
| Overhead projector and screen                    | Painters striping tools                             |
| Chalkboard and chalk                             | Assorted T-squares (12 to 30 inches long)           |
| Appropriate Personal Protective Equipment        | Assorted triangles (45°, 30°/60°) and french curves |
| Marking devices (pencils, pens, chalk, etc.)     | Assortment of sharp knives                          |
| Architectural rulers and/or scales               | Cutting boards                                      |
| Carpenter's squares                              | Assorted stenciling brushes                         |
| Yardsticks, folding rules, measuring tapes, etc. | Set of dividers                                     |
| Lining brushes                                   |   |

## **Materials**

Trainee Task Module

Module Examination

Performance Profile Examinations

Transparencies

Assorted graphic designs presented on:

- Architectural plans

- Grid square plans

- Templates

- Pounce patterns

- Overhead transparencies

- Stencils

Clear acetate

Stencil board

Carbon paper

Masking tape

Assorted paints for stenciling graphic designs

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview

Classroom, and/or Demonstration, and/or Laboratory

Class Break

Classroom, and/or Demonstration, and/or Laboratory

Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

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**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

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## TASK MODULE OVERVIEW

This course gives the painting trainee background information and introduces the tasks and techniques involved in producing graphics. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

Core Curricula

Painting Level 1

Painting Level 2

Painting Level 3, Modules 07301 through 07306

### Teaching Time for This Task Module

Approximately 12½ hours or five sessions of training time is suggested to cover *Graphics*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Five 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Graphics; Producing Graphics Performance Testing	1.0.0 – 3.3.0
2	Producing Graphics Performance Testing	3.0.0 – 3.3.0
3	Stenciling Performance Testing	4.0.0 – 4.7.0
4	Stenciling Performance Testing	4.0.0 – 4.7.0
5	Lining and Striping Performance Testing and Module Examination	5.0.0 – 5.3.0



## **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Paint Magic*, Latest Edition, Pantheon Books, New York, NY.

*Painting and Decorating Craftsman's Manual and Textbook*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*Painting and Decorating Encyclopedia*, Latest Edition, The Goodheart-Willcox Company, Inc., South Holland, IL.

*Wood Finishes*, Latest Edition, Simon & Schuster Inc., New York, NY.

# PERFORMANCE PROFILE TASKS

- 1. Describe and/or demonstrate how to transfer graphic designs to a surface from:**
  - **Architectural plans**
  - **Grid square plans**
  - **Templates**
  - **Pounce patterns**
  - **Projection**
- 2. Describe and/or demonstrate how to make and use a stencil to produce a graphic.**
- 3. Describe and/or demonstrate the different methods for producing lines and stripes.**

# TEXTURING

## OBJECTIVES

Upon completion of this module, the trainee will be able to:

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

## Note to the Instructor

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 4 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where texturing materials and application/finishing techniques can be observed, demonstrated, or practiced.

## Required Equipment and Materials

The following are required for instruction using this Task Module:

### Equipment

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment  
Examples of selected texturing tools and equipment covered in the Trainee Module

### Materials

Trainee Module  
Module Examination  
Performance Profile Examinations  
Transparencies  
Notebook and paper  
Four or more examples of selected texturing materials covered in the Trainee Module  
Adequate areas of substrates or surfaces for demonstration and trainee practice of texture material application and finishing

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

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**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course introduces the painting trainee to the methods, procedures and materials used in the application and finishing of texture materials on exterior and interior substrates and surfaces. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 through 07307

### Teaching Time for This Task Module

Approximately 10 hours or four sessions of training time is suggested to cover *Texturing*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Four 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Common Texture Materials; Typical Texture Equipment Performance Testing	1.0.0 – 3.0.0
2	Typical Texture Finish Patterns; General Safety Guidelines for Texture Material Application; Typical Texture Material Application Guidelines Performance Testing	4.0.0 – 6.0.0
3	Practice of Safety and Application Guidelines Performance Testing	5.0.0 – 6.0.0
4	Practice of Safety and Application Guidelines Performance Testing and Module Examination	5.0.0 – 6.0.0

## **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Gypsum Construction Handbook*, Latest Edition, United States Gypsum Company, Chicago, IL.

*Painting and Decorating Craftsman's Manual and Textbook*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

# PERFORMANCE PROFILE TASKS

- 1. Recognize and describe the uses of selected common texture materials and aggregates.**
- 2. Recognize and describe the uses for various selected texture equipment.**
- 3. Describe safety and general application guidelines that must be observed when applying and finishing texture materials.**
- 4. Recognize, describe, and demonstrate selected typical texture patterns, how the material is applied, and how the finish is achieved.**





## SPRAYING WITH SPECIAL DEVICES

### OBJECTIVES

Upon completion of this module, the trainee will be able to:

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

### Note to the Instructor

Before teaching this Task Module, you should review the details in this Instructor's Guide for Equipment and Supplies, Testing, and the suggested Teaching Sequence. Be sure to allow ample time to prepare your own training plan or lesson plan and to gather all required equipment and materials.

The specific content for Sessions 1 through 8 may be altered at your discretion so that the sessions can easily be adapted to the local situation. An alternative to providing certain class materials is to take field trips to various sites where special spraying devices and their safety and operating procedures can be observed, demonstrated, or practiced.

### Required Equipment and Materials

The following are required for instruction using this Task Module:

#### Equipment

Overhead projector and screen  
Chalkboard and chalk  
Appropriate Personal Protective Equipment  
Four or more examples of selected special spraying equipment covered in the Trainee Module

#### Materials

Trainee Module  
Module Examination  
Performance Profile Examinations  
Transparencies  
Four or more examples of selected texturing materials used in the special spray equipment covered in the Trainee Module  
Adequate areas of substrates or surfaces for demonstration and trainee practice of special spray equipment operation and material application

## HOW TO USE THIS INSTRUCTOR'S GUIDE

For each 2½ hour class session in this Instructor's Guide, the basic Presentation Sequence is as follows:

Introduction/Overview  
Classroom, and/or Demonstration, and/or Laboratory  
Class Break  
Classroom, and/or Demonstration, and/or Laboratory  
Summary

*Suggested* time periods for classroom sessions are included throughout this Instructor's Guide. These time periods should be adapted to meet local conditions and training requirements.

Each class session is presented with two columns of information. On the left side of the page, a narrow column provides suggested trainee and instructor actions, icons to call your attention to material, safety, audiovisual, or testing requirements, and space for your notes. The right-hand column provides the outline of the suggested presentation for each class session.

In this Instructor's Guide, the terms classroom, demonstration, and laboratory are defined and used as follows:

**Classroom:** Sessions are designed for lectures, group discussions, coaching, and additional activities. Trainees should be encouraged to actively participate.

**Demonstration:** Instructors will demonstrate all procedures before trainees attempt them. Instructors should make sure that trainees can point out all safety procedures during demonstrations to be assured of the proper use of equipment by trainees.

**Laboratory:** Instructors will facilitate all laboratory activities, coach trainees as they practice the procedures, monitor trainee progress, and provide feedback. The instructor will make sure that safety rules are followed at all times and that protective equipment is worn.

### NCCER Standardized Craft Training Programs

The National Center for Construction Education and Research provides a standardized national program of accredited craft training based on the *Wheels of Learning*. Key features of the program include instructor certification, competency-based training, and performance testing. The program provides trainees, instructors, and companies with a standard form of recognition through a National Craft Training Registry. The program is described in full in the *Guidelines for Accreditation*, published by the National Center. For more information on standardized craft training, contact NCCER at P.O. Box 141104, Gainesville, FL 32614-1104; or call 352-334-0911.

## TASK MODULE OVERVIEW

This course introduces the painting trainee to four special spray painting methods and their related equipment. The special spraying equipment covered are texture sprayers, cold roof coating sprayers, electrostatic sprayers, and plural component proportioning equipment. The intended audience for this Task Module includes all painting trainees.

### Prerequisites

Please see the Course Map. Prior to training with this Task Module, it is suggested that the trainee shall have successfully completed the following Task Modules:

- Core Curricula
- Painting Level 1
- Painting Level 2
- Painting Level 3, Modules 07301 through 07308

### Teaching Time for This Task Module

Approximately 20 hours or eight sessions of training time is suggested to cover *Spraying with Special Devices*. The training class session is a suggested 2½ hour time period, which includes one break. **You will need to adjust the time required for hands-on activities and testing based on your class size and resources.** All time periods for this module are suggested and you will need to adapt the suggested lesson plan to meet your local conditions.

### Safety Considerations

Make sure that the trainees are equipped with appropriate personal protective equipment.

### Suggested Teaching Sequence — Eight 2½ Hour Sessions

Adjust your class times based on class size and resources.

Session	Topic	Trainee Module Section(s)
1	Introduction; Texture Spray Materials, Systems, and Components Performance Testing	1.0.0 – 2.4.2
2	Demonstration and Practice of Sprayer Safety and Operational Guidelines	2.4.0 – 2.4.2
3	Demonstration and Practice of Sprayer Safety and Operational Guidelines Performance Testing	2.4.0 – 2.4.2
4	Cold Roof Coating Spray Systems Performance Testing	3.0.0 – 3.3.2
5	Electrostatic Spray Systems Performance Testing	4.0.0 – 4.8.5

<b>Session</b>	<b>Topic</b>	<b>Trainee Module Section(s)</b>
6	Demonstration and Practice of the Operation and Safety Considerations for a Typical Electrostatic Sprayer Performance Testing	4.7.0 – 4.8.5
7	Plural Component Materials and Proportioning Equipment Performance Testing	5.0.0 – 5.6.0
8	Demonstration and Practice of the Operation and Safety Considerations for a Plural Component Sprayer Performance Testing and Module Examination	5.5.0 – 5.6.0

### **Optional References for Advanced Study**

This module is intended to present thorough resources for task training. The following reference works are suggested for both instructors and motivated trainees interested in further study. These are optional materials for continued education rather than task training.

*Graco Plural Component Training (Materials)*, Videotape No. K09-V87, Graco Inc., Minneapolis, MN.

*Painting and Decorating Craftsman's Manual and Textbook*, Latest Edition, Painting and Decorating Contractors of America, Fairfax, VA.

*ProMix™ Plural Component Solutions*, Videotape No. I01-V97, Graco Inc., Minneapolis, MN.

*When You're Asking for the Moon—Texspray™*, Videotape No. 303-920, Graco Inc., Minneapolis, MN.

# PERFORMANCE PROFILE TASKS

- 1. Recognize and describe the various types of texture sprayers, their advantages and disadvantages, and selected types of texture materials.**
- 2. Demonstrate the proper safety procedures and spray techniques for a selected texture sprayer.**
- 3. Recognize and describe a typical cold roof coating sprayer and the various common cold roof coatings that can be sprayed using the sprayer.**
- 4. Demonstrate the proper safety procedures and spray techniques for a selected cold roof coating sprayer.**

## PERFORMANCE PROFILE TASKS

- 5. Describe the principles of operation of a selected electrostatic spray system along with the characteristics and safety considerations of various types of coating materials used with electrostatic sprayers.**
- 6. Demonstrate the proper safety procedures and spray techniques for a selected electrostatic sprayer.**
- 7. Recognize and describe typical plural component materials, their working characteristics, and the various types of proportioning equipment used in their application.**

## PERFORMANCE PROFILE TASKS

- 8. Demonstrate proper safety precautions and application procedures in the handling, mixing, and dispensing of selected plural component materials using selected proportioning equipment and a selected sprayer.**

