

MODULE OVERVIEW

This module provides the trainee with an overview of drywall installation and career opportunities. The module also covers basic principles of human relations and safety.

PREREQUISITES

Prior to training with this module, it is recommended that the trainee shall have successfully completed *Core Curriculum*.

OBJECTIVES

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

1. Describe the history of the drywall trade.
2. Identify the aptitudes, behaviors, and skills needed to be a successful drywall specialist.
3. Identify the training opportunities within the drywall trade.
4. Identify the career and entrepreneurial opportunities within the drywall trade.
5. Identify the responsibilities of a person working in the construction industry.
6. State the personal characteristics of a professional.
7. Explain the importance of safety in the construction industry.

PERFORMANCE TASKS

This is a knowledge-based module. There are no performance tasks.

MATERIALS AND EQUIPMENT LIST

Overhead projector and screen	Power screwdriver and bits
Transparencies	Joint tape
Blank acetate sheets	Taping knife
Transparency pens	Gypsum board samples
Whiteboard/chalkboard	Copy of an employee manual
Markers/chalk	Job announcements for drywall specialists from local newspapers (want ads)
Pencils and scratch paper	<i>OSHA Safety and Health Standards for the Construction Industry</i>
Appropriate personal protective equipment	Copies of the Trade Terms Quiz*
Drywall tools, including:	Module Examinations**
Carbide cutting tool	
Power cutout tool	

* Located in the back of the module.

** Located in the Test Booklet.

SAFETY CONSIDERATIONS

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. Emphasize basic site safety.

ADDITIONAL RESOURCES

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

Gypsum Construction Handbook. Chicago, IL: United States Gypsum Company, 2000.

TEACHING TIME FOR THIS MODULE

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 5 hours are suggested to cover *Orientation to the Trade*. You will need to adjust the time required for hands-on activity and testing based on your class size and resources.

Topic	Planned Time
Session I. Orientation to the Trade	
A. Introduction	_____
B. History of Drywall	_____
C. Modern Drywall Work	_____
D. Opportunities in the Construction Industry	_____
Session II. Human Relations; Safety Roles; Review and Testing	
A. Human Relations	_____
B. Employer and Employee Safety Obligations	_____
C. Review	_____
D. Module Examination	_____
1. Trainees must score 70 percent or higher to receive recognition from NCCER.	
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.	

MODULE OVERVIEW

This module provides an overview of the building materials used in construction work, including lumber, gypsum, engineered wood products, and masonry materials. It describes residential and commercial construction methods, with particular emphasis on suspended ceilings and fire-rated and sound-rated walls.

PREREQUISITES

Prior to training with this module, it is recommended that the trainee shall have successfully completed *Core Curriculum*; and *Drywall Level One*, Module 45101-07.

OBJECTIVES

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

1. Describe the composition and uses of the common types of residential building materials.
2. Identify the major structural components of a residential building.
3. Describe the composition and uses of the common types of commercial building materials.
4. Describe common methods of residential and commercial construction.
5. State the major steps in the construction of a frame residence.
6. Explain common terms used in construction.
7. Identify various types of suspended ceilings.
8. Identify the various types of gypsum board and their applications.
9. Describe types of firestopping systems.
10. Describe the construction of walls to meet code requirements for fire and sound ratings.

PERFORMANCE TASKS

Under the supervision of the instructor, the trainee should be able to do the following:

1. Identify types of gypsum board selected by the instructor and state their applications.
2. Identify types of suspended ceiling components selected by the instructor and state their applications.

MATERIALS AND EQUIPMENT LIST

Overhead projector and screen	Firestopping materials
Transparencies	Metal studs
Blank acetate sheets	Mechanical firestop devices
Transparency pens	Firestopping materials
Whiteboard/chalkboard	Gypsum board, multiple types
Markers/chalk	MSDS for pressure-treated wood
Pencils and scratch paper	Suspended ceiling components
Appropriate personal protective equipment	Manufacturers' literature on suspended ceilings (optional)
Samples of typical construction materials:	VCR/DVD/TV (optional)
Dimension lumber, various sizes	Copies of the Quick Quiz*
Plywood and building boards	Module Examinations**
Engineered wood products	Performance Profile Sheets**
Concrete blocks	
Building bricks	

* Located in the back of this module.

** Located in the Test Booklet.

SAFETY CONSIDERATIONS

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. This module may require trainees to visit construction sites. Ensure all trainees are briefed on job site safety.

ADDITIONAL RESOURCES

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

Gypsum Construction Handbook. Chicago, IL: United States Gypsum Company, 2000.

TEACHING TIME FOR THIS MODULE

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 12 hours are suggested to cover *Construction Materials and Methods*. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

Topic	Planned Time
Session I. Introduction to Building Materials	
A. Introduction	_____
B. Lumber	_____
C. Plywood	_____
D. Building Boards	_____
E. Engineered Wood Products	_____
F. Gypsum Board	_____
G. Laboratory	_____
Trainees practice identifying types of gypsum board and their applications. This laboratory corresponds to Performance Task 1.	
H. Masonry Materials	_____
Session II. Residential Frame Construction	
A. Floors	_____
B. Walls	_____
C. Ceilings	_____
D. Roofs	_____
E. Special Applications	_____
Session III. Commercial Construction Methods I	
A. Floors	_____
B. Exterior Walls	_____
C. Interior Walls and Partitions	_____
Session IV. Commercial Construction Methods II	
A. Ceilings	_____
B. Laboratory	_____
Trainees practice identifying types of suspended ceiling components and their applications. This laboratory corresponds to Performance Task 2.	
C. Fire-Rated and Sound-Rated Construction	_____
D. Project Schedules	_____

Session V. Review and Testing

A. Review

B. Module Examination

1. Trainees must score 70 percent or higher to receive recognition from NCCER.
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

C. Performance Testing

1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

MODULE OVERVIEW

This module covers the selection and installation of various types of insulating materials in walls, floors, and attics. It also covers the uses and installation practices for vapor barriers and weatherproofing materials.

PREREQUISITES

Prior to training with this module, it is recommended that the trainee shall have successfully completed *Core Curriculum*; and *Drywall Level One*, Modules 45101-07 and 45102-07.

OBJECTIVES

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

1. Describe the requirements for insulation.
2. Describe the characteristics of various types of insulation material.
3. Calculate the required amounts of insulation for a structure.
4. Install selected insulation materials.
5. Describe the requirements for moisture control and ventilation.
6. Install selected vapor barriers.
7. Describe various methods of waterproofing.
8. Describe air infiltration control requirements.
9. Install selected building wraps.

PERFORMANCE TASKS

Under the supervision of the instructor, the trainee should be able to do the following:

1. Install blanket insulation in a wall.
2. Install a vapor barrier on a wall.
3. Install selected building wraps.

MATERIALS AND EQUIPMENT LIST

Overhead projector and screen	Hand or power stapler and staples
Transparencies	Calculator
Blank acetate sheets	Samples of various vapor barrier materials
Transparency pens	Samples of various waterproofing materials
Whiteboard/chalkboard	Soffit baffles
Markers/chalk	Wire mesh if needed
Pencils and scratch paper	Tape measure
Appropriate personal protective equipment	Utility knife or shears
Flexible insulation	Prepared wall for insulation, vapor barriers, and building wraps
Loose-fill insulation	Copies of the Quick Quiz*
Rigid or semi-rigid insulation boards	Module Examinations**
Reflective insulation	Performance Profile Sheets**
Building wrap materials	

* Located in the back of this module.

** Located in the Test Booklet.

SAFETY CONSIDERATIONS

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. This module may require trainees to visit construction sites. Ensure that they are briefed on site safety procedures. This module requires trainees to install insulation materials. Ensure that they are properly briefed on the use of all tools and personal protection necessary to handle insulation materials.

ADDITIONAL RESOURCES

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. This is optional material for continued education rather than for task training.

International Energy Conservation Code®, International Code Council, 2006.

U.S. Department of Energy website, www.eere.energy.gov.

TEACHING TIME FOR THIS MODULE

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 7½ hours are suggested to cover *Thermal and Moisture Protection*. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

Topic	Planned Time
Session I. Introduction to Thermal Insulation	
A. Introduction	_____
B. Thermal Insulation	_____
C. Insulation Installation Guidelines	_____
D. Laboratory	_____
Trainees practice installing blanket insulation in a wall. This laboratory corresponds to Performance Task 1.	
Session II. Moisture Control and Air Infiltration Control	
A. Moisture Control	_____
B. Laboratory	_____
Trainees practice installing a vapor barrier on a wall. This laboratory corresponds to Performance Task 2.	
C. Waterproofing	_____
D. Air Infiltration Control	_____
E. Laboratory	_____
Trainees practice installing selected building wraps. This laboratory corresponds to Performance Task 3.	
Session III. Review and Testing	
A. Review	_____
B. Module Examination	_____
1. Trainees must score 70 percent or higher to receive recognition from NCCER.	
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.	
C. Performance Testing	_____
1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.	
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.	

MODULE OVERVIEW

This module describes the various types of gypsum drywall, their uses, and the fastening devices and methods used to install them. It also contains detailed instructions for installing drywall on walls and ceilings, using nails, drywall screws, and adhesives. Fire- and sound-rated walls are also discussed.

PREREQUISITES

Prior to training with this module, it is recommended that the trainee shall have successfully completed *Core Curriculum*; and *Drywall Level One*, Modules 45101-07 through 45103-07.

OBJECTIVES

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

1. Identify the different types of drywall and their uses.
2. Select the type and thickness of drywall required for specific installations.
3. Select fasteners for drywall installation.
4. Explain the fastener schedules for different types of drywall installations.
5. Perform single-layer and multi-layer drywall installations using different types of fastening systems, including:
 - Nails
 - Drywall screws
6. Install gypsum drywall on steel studs.
7. Explain how soundproofing is achieved in drywall installations.
8. Estimate material quantities for a drywall installation.

PERFORMANCE TASKS

Under the supervision of the instructor, the trainee should be able to do the following:

1. Install gypsum drywall panels on stud walls and ceilings using:
 - Nails
 - Drywall screws
2. Install gypsum drywall panels on a steel wall.
3. Select the type and thickness of drywall required for specific installations and estimate material quantities for the installation.

MATERIALS AND EQUIPMENT LIST

Overhead projector and screen

Transparencies

Blank acetate sheets

Transparency pens

Whiteboard/chalkboard

Markers/chalk

Pencils and scratch paper

Small samples of common types of gypsum board

Samples of the various edges found on gypsum board

Drywall panels

Samples of various drywall trims

Samples of nails used to secure drywall

Drywall screws

Samples of sound isolation and firestopping materials

Various types of adhesives

Various tools used for gypsum board application including:

Steel rule with cutting edge

4' T-square

Hook-bill knife

Utility saw

Power cutout tool

continued

Drywall or keyhole saw
 Gypsum board lifter
 Adhesive applicators
 Circle cutter
 Drywall hammer
 Nail pouch
 Drywall rasp
 Screw gun
 Drywall lift
 T-brace

Samples of corner beads and casings
 Local building codes
 Firestopping devices
 Samples of different types of firestopping material
 Calculators
 Copies of the Quick Quiz*
 Module Examinations**
 Performance Profile Sheets**

* Located in the back of this module.

**Located in the Test Booklet.

SAFETY CONSIDERATIONS

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. This module may require trainees to visit construction sites. Ensure that they are briefed on site safety procedures. This module requires trainees to use power tools to install drywall. Ensure that all trainees are properly briefed on tool safety. Ensure that all trainees are briefed on lifting safety and observe proper lifting procedures.

ADDITIONAL RESOURCES

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. This is optional material for continued education rather than for task training.

Gypsum Construction Handbook. Chicago, IL: United States Gypsum Company, 2000.

TEACHING TIME FOR THIS MODULE

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 25 hours are suggested to cover *Drywall Installation*. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

Topic	Planned Time
Session I. Introduction, Gypsum Board, and Tools	
A. Introduction	_____
B. Gypsum Board	_____
C. Tools Used for Gypsum Board Application	_____
Sessions II and III. Application of Gypsum Board I	
A. Single-Ply and Multi-Ply Construction	_____
B. Job-Site Preparation	_____
C. Cutting and Fitting Procedures	_____
D. Drywall Fasteners – Nails	_____
E. Laboratory	_____
Trainees practice installing drywall using nails. This laboratory corresponds to Performance Task 1.	

Sessions IV and V. Application of Gypsum Board II

A. Drywall Fasteners – Screws

B. Laboratory

Trainees practice installing drywall using screws. This laboratory corresponds to Performance Task 1.

Session VI. Special Applications I

A. Floating Interior Angle Construction

B. Adhesives

C. Resurfacing Existing Construction

D. Drywall Trims

Sessions VII and VIII. Fire-Rated Walls

A. Fire-Rated Walls

B. Laboratory

Trainees practice installing drywall on a steel stud wall. This laboratory corresponds to Performance Task 2.

Session IX. Special Applications II

A. Sound-Isolation Construction

B. Control Joints

C. Moisture-Resistant Construction

D. Estimating Drywall

E. Laboratory

Trainees practice selecting and estimating drywall. This laboratory corresponds to Performance Task 3.

Session X. Review and Testing

A. Review

B. Module Examination

1. Trainees must score 70 percent or higher to receive recognition from NCCER.

2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

C. Performance Testing

1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.

2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.

MODULE OVERVIEW

This module covers the materials, tools, and methods used to finish and patch gypsum drywall. It includes descriptions of both automatic and manual taping and finishing methods.

PREREQUISITES

Prior to training with this module, it is recommended that the trainee shall have successfully completed *Core Curriculum*; and *Drywall Level One*, Modules 45101-07 through 45104-07.

OBJECTIVES

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

1. State the differences between the six levels of finish established by industry standards and distinguish a finish level by observation.
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.
4. Identify the materials used in drywall finishing and state the purpose and use of each type of material, including:
 - Compounds
 - Joint reinforcing tapes
 - Trim material
 - Textures and coatings
5. Properly finish drywall using hand tools.
6. Recognize various types of problems that occur in drywall finishes; identify the causes and correct methods for solving each type of problem.
7. Patch damaged drywall.

PERFORMANCE TASKS

Under the supervision of the instructor, the trainee should be able to do the following:

1. Distinguish a finish level by observation; identify the steps needed to take it to the next level of finish.
2. Properly prepare the following compounds for use:
 - Taping compound
 - Topping compound
 - Premix
 - Quickset compound
3. Select the proper hand tools and perform the following:
 - Joint taping and finishing
 - Fastener spotting
 - Corner finishing
 - Sanding
4. Patch damaged drywall using two different methods.

MATERIALS AND EQUIPMENT LIST

Overhead projector and screen

Transparencies

Blank acetate sheets

Transparency pens

Whiteboard/chalkboard

Markers/chalk

Pencils and scratch paper

*A Recommended Specification for Levels of
Gypsum Board Finish*

To the maximum extent possible, various samples
of properly finished walls as defined in the Trainee
Module, including:

Level 0

Level 1

Level 2

Level 3

Level 4

Level 5

Various types of joint reinforcing tape, including
fiberglass, metal edge, and paper

Various compounds, including powder, premix,
and quickset

Water

Mixing container

Mixing tools

Pieces of 2 × 4

Various trims, including corner bead with mesh
flanges, L-bead, J-bead, and expansion joints

Various grades of sandpaper

Mesh cloth

Polyethylene sponges

Sanding tools

Various hand and automatic tools used to cut,
hang, and finish drywall, including:

Automatic loading pumps

Banjo

BAZOOKA®

Broad knife

Caulking gun

Circle cutter

Corner tools

Drywall hammer

Drywall saw

Finishing knives

Flat finishers

Joint trowels

Mud mashers

Mud mixers

Mud pan or hawk

Nail spotter

Putty knife

Sanding block, pole sander, or electric sander

Screwdriver

Sponge sander

Straight edge or T-square

Tape dispenser

Utility knife

Vacuum sander

Various tools used for creating texture patterns

Corner roller

Corner plow

Samples of textured finishes

Samples of common finished joint problems

Samples of common compound problems

Copies of the Quick Quiz*

Module Examinations**

Performance Profile Sheets**

* Located in the back of this module.

** Located in the Test Booklet.

SAFETY CONSIDERATIONS

Ensure that the trainees are equipped with appropriate personal protective equipment and know how to use it properly. This module may require trainees to visit construction sites. Ensure that they are briefed on site safety procedures. This module requires trainees to finish drywall. Ensure that all trainees are properly briefed on tool safety. Ensure that all trainees are briefed on dust hazards and controlling dust.

ADDITIONAL RESOURCES

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 for task training.

Gypsum Construction Guide. Charlotte, NC: National Gypsum Company, 1994.

Gypsum Construction Handbook. Chicago, IL: United States Gypsum Company, 2000.

Painting and Decorating Craftsman's Manual and Textbook. Fairfax, VA: Painting and Decorating Contractors of America, 1995.

TEACHING TIME FOR THIS MODULE

An outline for use in developing your lesson plan is presented below. Note that each Roman numeral in the outline equates to one session of instruction. Each session has a suggested time period of 2½ hours. This includes 10 minutes at the beginning of each session for administrative tasks and one 10-minute break during the session. Approximately 25 hours are suggested to cover *Drywall Finishing*. You will need to adjust the time required for hands-on activity and testing based on your class size and resources. Because laboratories often correspond to Performance Tasks, the proficiency of the trainees may be noted during these exercises for Performance Testing purposes.

Topic	Planned Time
Session I. Introduction, Standards, and Tools	
A. Introduction	_____
B. Finishing Standards	_____
C. Laboratory Trainees practice identifying various finishing standards. This laboratory corresponds to Performance Task 1.	_____
D. Finishing Tools	_____
Sessions II and III. Finishing Materials	
A. Finishing Materials	_____
B. Laboratory Trainees practice preparing various types of finishing compounds. This laboratory corresponds to Performance Task 2.	_____
Sessions IV through VI. Finishing Procedures	
A. Finishing Procedures	_____
B. Laboratory Trainees practice selecting the proper tool and performing various finishing techniques. This laboratory corresponds to Performance Task 3.	_____
Sessions VII through IX. Finishing Procedures	
A. Problems and Remedies	_____
B. Laboratory Trainees practice patching drywall. This laboratory corresponds to Performance Task 4.	_____
Session X. Review and Testing	
A. Review	_____
B. Module Examination	_____
1. Trainees must score 70 percent or higher to receive recognition from NCCER.	
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.	
C. Performance Testing	_____
1. Trainees must perform each task to the satisfaction of the instructor to receive recognition from NCCER. If applicable, proficiency noted during laboratory exercises can be used to satisfy the Performance Testing requirements.	
2. Record the testing results on Craft Training Report Form 200, and submit the results to the Training Program Sponsor.	

