



# Carpentry

## Study Guide

### Assessments:

**3003 Finish Carpenter**

**3005 Frame Carpenter**

Aligned to NCCER  
National Standards and  
HBI Residential Standards  
& Key Requirements

Endorsed By:



## Overview

This study guide is designed to help students prepare for the following Carpentry assessments: Finish Carpenter and Frame Carpenter. It not only includes information about each assessment in the series, but also the skill standards upon which the assessments are based, resources that can be used to prepare for the assessments, and test taking strategies.

Each of the four sections in this guide provides useful information for students preparing for the Carpentry assessments.

- CareerTech and Competency-Based Education: A Winning Combination
- Carpentry assessments
  - ▶ Assessment Information
  - ▶ Standards and Test Content
  - ▶ Sample Questions
  - ▶ Textbook/Curriculum Crosswalk
  - ▶ Abbreviations, Symbols, and Acronyms
- Strategies for Test Taking Success
- Notes

These assessments were developed and aligned with the National Center for Construction Education and Research (NCCER) Carpentry certifications. NCCER develops standardized construction and maintenance curricula and assessments with portable credentials. The assessments are also aligned to the National Association of Home Builders (NAHB) Residential Carpentry Standards which include key activities and knowledge required by all residential carpentry specialties. It also includes NAHB's Applied Academic Skills, Safety Skills, and Basic Tool Knowledge.

The Carpentry assessments measure a student's ability to apply knowledge and skills in carpentry careers. The Carpentry assessments are structured to cover the same modules required by NCCER and determine a student's ability to succeed on the industry-level certifications through NCCER.

Baseline knowledge for these areas of emphasis can be obtained from the modules covered on the Construction Trainee assessment offered by the CareerTech Testing Center that also aligns to the NCCER Core Curriculum.

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## CareerTech and Competency-Based Education: A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

### Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

**Skills standards** provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

**Curriculum materials and textbooks** contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

**Certification Assessments** test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, certification assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

### Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

# Carpentry Assessment Information

## What are the Carpentry assessments?

The Carpentry assessments are end-of-program assessments for students in carpentry programs. The assessments provide an indication of student mastery of knowledge and skills necessary for success in careers in this area.

## How were the assessments developed?

The assessments were developed by the CareerTech Testing Center in alignment with the NCCER National Craft Assessment and Certification Program Specifications and NAHB Residential Carpentry Standards. A committee of industry representatives and educators validated the modules covered on the assessments. The content on each assessment was developed and reviewed by a committee of subject matter experts.

The committee assigned frequency and criticality ratings to each skill, which determines the significance of each task for test development:

**Frequency:** represents how often the task is performed on the job. Frequency rating scales vary for different occupations. The rating scale used in this publication is presented below:

1 = less than once a week      2 = at least once a week      3 = once or more a day

**Criticality:** denotes the level of consequence associated with performing a task incorrectly. The rating scale used in this publication is presented below:

1 = slight                                      2 = moderate                                      3 = extreme

## What do the assessments cover?

The areas of emphasis are as follows for each assessment in the Carpentry series:

### 3003 – Finish Carpenter (55 questions)

Orientation to the Trade	3%	Interior Finish	50%
Building Materials, Fasteners, & Adhesives	18%	Stairs	11%
Identify & Safely Use Hand & Power Tools	18%		

### 3005 – Frame Carpenter (55 questions)

Orientation to the Trade	2%	Wall & Ceiling Framing	9%
Building Materials, Fasteners, & Adhesives	13%	Roof Framing	11%
Identify & Safely Use Hand & Power Tools	11%	Windows & Exterior Doors	9%
Site Layout One – Distance		Cold-Formed Steel/Metal Stud Framing	3%
Measurement & Leveling	6%	Exterior Finishing	9%
Floor Systems	15%	Thermal & Moisture Protection	3%
Stairs	9%		

## What are the benefits of using these assessments?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

## When should the assessments be taken?

The CareerTech Testing Center recommends that students take an assessment as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

## Are the assessments timed?


No. Although students may take as long as they need, most finish an assessment within one hour.

## What resources can students use on these assessments?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

## What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.
- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.
- Enlarged text — Students needing this accommodation can activate this feature by clicking the  icon in the upper right corner of the screen.

## What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the student during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Student may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that not only shows the student's score on the assessment, but also how the student performed in each standard area.

## Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who can retake must wait at least three days between test attempts.

# Standards and Test Content

## Orientation to the Trade

1. Describe the history of the carpentry trade. **(1/1)**
2. Identify the career and entrepreneurial opportunities within the carpentry trade. **(1/1)**
3. Identify the skills, responsibilities, and characteristics needed to be a successful carpenter. **(2/3)**
4. Summarize how to be connected to the industry through an organization like SkillsUSA. **(2/2)**
5. Explain the importance of safety in the construction industry and the obligations of the contractor, subcontractors, and carpenters to ensure a safe work environment. **(3/3)**

## Building Materials, Fasteners, and Adhesives

1. Explain the terms commonly used in discussing wood and lumber. **(2/3)**
2. State the uses of various types of hardwoods and softwoods. **(2/3)**
3. Identify various types of imperfections that are found in lumber. **(2/2)**
4. Explain how lumber is graded. **(2/2)**
5. Interpret grade markings on lumber and plywood. **(2/2)**
6. Explain how plywood is manufactured, graded, and used. **(2/2)**
7. Identify various types of building boards and identify their uses. **(2/3)**
  - Hardboard
  - Particleboard
  - Oriented strand board
  - Mineral Fiberboard
8. Identify the uses of and safety precautions associated with pressure-treated and fire-retardant lumber. **(2/3)**
9. Describe the proper method of handling and storing building materials **(2/3)**
10. State the uses of various types of engineered lumber. **(2/3)**
11. Calculate the quantities of lumber, wood, and concrete products using industry-standard methods. **(2/3)**
12. List the basic nail and staple types and their uses. **(2/3)**
13. List the basic types of screws and their uses. **(2/3)**
14. Identify the different types of anchors and their uses. **(2/3)**
15. Describe the common types of adhesives used in construction work and explain their uses. **(2/2)**



## Identify and Safely Use Hand and Power Tools

1. Identify the hand tools commonly used by carpenters and describe their uses. **(2/3)**
2. Use hand tools in a safe and appropriate manner. **(3/3)**
3. State the general safety rules for operating all power tools, regardless of type. **(3/3)**
4. State the general rules for properly maintaining all power tools, regardless of type. **(3/3)**
5. Identify the portable power tools commonly used by carpenters and describe their uses. **(2/3)**
6. Use portable power tools in a safe and appropriate manner. **(3/3)**
7. Identify the stationary power tools commonly used by carpenters and describe their uses. **(2/3)**
8. Use stationary power tools in a safe and appropriate manner. **(3/3)**



## Interior Finishing

1. Identify various types of door jambs and frames and demonstrate the installation procedures for placing selected door jambs and frames in different types of interior partitions. **(2/3)**
2. Identify different types of interior doors. **(2/3)**
3. Identify different types of interior door hardware and demonstrate the installation procedures for selected types. **(2/3)**
4. Demonstrate the correct and safe use of the hand tools used for interior finishing of doors. **(2/3)**
5. Demonstrate the correct and safe use of the power tools used for interior finishing of doors. **(2/3)**
6. List and identify specific items included on a typical door schedule. **(2/3)**
7. Demonstrate the procedure for placing and hanging a selected door. **(2/3)**
8. Identify the different types of standard moldings and describe their uses. **(2/3)**
9. Make square and miter cuts using a miter box or power miter saw. **(2/3)**
10. Make coped joint cuts using a coping saw. **(2/3)**
11. Select and properly use fasteners to install trim. **(3/3)**
12. Install interior trim, including: **(3/3)**
  - Door trim
  - Window trim
  - Base trim
  - Ceiling trim
13. Estimate the quantities of different trim materials required for selected rooms. **(2/3)**
14. Install wall paneling. **(2/3)**
15. Install shelving. **(2/2)**
16. Install factory made cabinets and countertops. **(2/2)**



## Stairs

1. Identify the various types of stairs. **(2/3)**
2. Identify the various parts of stairs. **(2/3)**
3. Identify the materials used in the construction of stairs. **(2/3)**
4. Interpret construction drawings of stairs. **(2/3)**
5. Explain the methods of constructing various types of stairs. **(2/3)**
6. Understand the various terms and definitions relating to stairs. **(2/3)**
7. Layout and cut stringers. **(2/3)**
8. Determine the number and sizes of risers and treads required for a stairway. **(2/3)**
9. Build a small stair unit with a handrail. **(2/3)**



## Site Layout One—Distance Measurement and Leveling

1. Describe the major responsibilities of the carpenter relative to site layout. **(2/3)**
2. Convert measurements stated in feet and inches to equivalent measurements stated in decimal feet, and vice versa. **(2/2)**
3. Use and properly maintain tools and equipment associated with taping. **(2/2)**
4. Use manual or electronic equipment and procedures to make distance measurements and perform site layout tasks. **(1/2)**
5. Determine approximate distances by pacing. **(1/1)**
6. Recognize, use, and properly care for tools and equipment associated with differential leveling. **(1/2)**
7. Use a builder's level or transit and differential leveling procedures to determine site and building elevations. **(1/2)**
8. Record site layout data and information in field notes using accepted practices. **(1/2)**
9. Check and/or establish 90° angles using the 3/4/5 rule. **(2/3)**





## Floor Systems

1. Identify the different types of framing systems. **(2/3)**
2. Read and understand drawings and specifications to determine floor system requirements. **(2/3)**
3. Identify floor and sill framing and support members. **(2/3)**
4. Name the methods used to fasten sills to the foundation. **(2/3)**
5. Given specific floor load and span data, select the proper girder/beam size from a list of available girders/beams. **(2/3)**
6. List and recognize different types of floor joists. **(2/3)**
7. Given specific floor load and span data, select the proper joist size from a list of available joists. **(2/3)**
8. List and recognize different types of bridging. **(2/3)**
9. List and recognize different types of flooring materials. **(2/3)**
10. Explain the purposes of subflooring and underlayment. **(2/3)**
11. Select fasteners used in floor framing to their correct uses. **(2/3)**
12. Estimate the amount of material needed to frame a floor assembly. **(2/3)**
13. Demonstrate the ability to: **(3/3)**
  - Lay out and construct a floor assembly
  - Install bridging
  - Install joists for a cantilever floor
  - Install a subfloor using butt-joint plywood/OSB panels
  - Install a single floor system using tongue and- groove plywood/OSB panels

## Wall and Ceiling Framing

1. Identify the components of a wall and ceiling layout. **(2/3)**
2. Describe the procedure for laying out a wood frame wall, including plates, corner posts, door and window openings, partition Ts, bracing, and firestops. **(2/3)**
3. Describe the correct procedure for assembling and erecting an exterior wall. **(2/3)**
4. Describe the common materials and methods used for installing sheathing on walls. **(2/3)**
5. Layout, assemble, erect, and brace exterior walls for a frame building. **(2/3)**
6. Describe wall framing techniques used in masonry construction. **(1/2)**
7. Explain the use of metal studs in wall framing. **(2/3)**
8. Describe the correct procedure for laying out a ceiling. **(2/3)**
9. Cut and install ceiling joists on a wood frame building. **(3/3)**
10. Estimate the materials required to frame walls and ceilings. **(2/3)**



## Roof Framing

1. Understand the terms associated with roof framing. **(2/3)**
2. Identify the roof framing members used for different roof types. **(2/3)**
3. Identify the methods used to calculate the length of a rafter. **(2/3)**
4. Identify the various types of trusses used in roof framing. **(2/3)**
5. Use a rafter framing square, speed square, and calculator in laying out a roof. **(2/3)**
6. Identify various types of sheathing used in roof construction. **(2/3)**
7. Frame a gable roof with vent openings. **(2/3)**
8. Frame a roof opening. **(2/3)**
9. Construct a frame roof, including hips, valleys, commons, jack rafters, and sheathing. **(2/3)**
10. Erect a gable roof using trusses. **(2/3)**
11. Estimate the materials used in framing and sheathing a roof. **(2/3)**

## Introduction to Building Envelope Systems

1. Identify various types of fixed, sliding, and swinging windows. **(2/3)**
2. Identify the parts of a window installation. **(2/2)**
3. State the requirements for a proper window installation. **(2/3)**
4. Install a pre-hung window. **(3/3)**
5. Identify the common types of skylights and roof windows. **(1/2)**
6. Describe the procedure for properly installing a skylight. **(1/3)**
7. Identify the common types of exterior doors and explain how they are constructed. **(2/2)**
8. Identify the parts of a door installation **(2/3)**
9. Identify the types of thresholds used with exterior doors. **(1/2)**
10. Install a threshold on a concrete floor. **(2/3)**
11. Install a pre-hung exterior door with weather-stripping. **(2/3)**
12. Identify the various types of locksets used on exterior doors and explain how they are installed. **(2/3)**
13. Install a lockset. **(2/2)**



## Cold-Formed Steel/Metal Stud Framing

1. Identify the components of a steel framing/metal stud system. **(2/3)**
2. Identify and select the tools and fasteners used in steel framing/metal stud system. **(2/3)**
3. Identify applications for steel framing/metal stud systems. **(2/3)**
4. Layout and install a steel/metal stud wall with openings to include bracing and blocking. **(2/3)**
5. Layout and install a metal door frame. **(2/3)**
6. Layout and install a steel/metal stud non-structural wall with openings to include bracing and blocking. **(1/3)**

## Exterior Finishing

1. Describe the purpose of wall insulation and flashing. **(2/3)**
2. Identify the types and parts of common cornices. **(2/2)**
3. Demonstrate the installation of selected common cornices. **(2/2)**
4. Demonstrate lap and panel siding estimating methods. **(2/2)**
5. Describe the types and applications of common wood siding: **(2/3)**
  - Beveled
  - Tongue-and-groove
  - Shiplap
  - Board-and-batten
  - Shake or shingle
  - Plywood
  - Cardboard and particleboard
6. Install selected types of wood siding. **(2/3)**
7. Describe fiber-cement siding and its uses. **(1/3)**
8. Install fiber-cement siding. **(2/3)**
9. Describe the types and styles of vinyl and metal siding. **(2/3)**
10. Install selected types of vinyl and metal siding. **(2/3)**
11. Describe the types and applications of stucco and masonry veneer finishes. **(1/2)**
12. Describe the types and applications of special exterior finish systems. **(1/2)**
13. Describe the types and applications of special exterior finish systems – gutters & downspouts. **(2/2)**
14. Install selected types of special exterior finish systems. **(2/2)**



## Thermal and Moisture Protection

1. Describe the requirements for insulation. **(2/2)**
2. Describe the characteristics of various types of insulation material. **(2/2)**
3. Calculate the required amounts of insulation for a structure. **(1/3)**
4. Install selected insulation materials. **(2/3)**
5. Describe the requirements for moisture control and ventilation. **(2/3)**
6. Install selected vapor barriers. **(2/3)**
7. Describe various methods of waterproofing. **(2/23)**
8. Describe air infiltration control requirements. **(1/2)**
9. Install selected building wraps. **(2/2)**



## Sample Questions

- \_\_\_\_\_ 1. When should accidents be reported?
- at the earliest convenience
  - before the end of the shift
  - immediately
  - the next day
- \_\_\_\_\_ 2. What device is attached to scaffolding to provide a larger work area?
- putlogs
  - outriggers
  - broad boards
  - cleats
- \_\_\_\_\_ 3. What type of hammer is used to drive nails, pull nails, and dismantle items?
- curved-claw
  - framing
  - sledge
  - straight-claw
- \_\_\_\_\_ 4. What moisture content is required for green lumber to shrink more than air-dried lumber?
- 10%
  - 20%
  - 30%
  - 40%
- \_\_\_\_\_ 5. When laying out a building, what is used as a temporary framework to assist in locating corner and building lines?
- batter board
  - kerf
  - ledger board
  - stake
- \_\_\_\_\_ 6. The vertical member of a stairway is called a(n) \_\_\_\_\_.
- bulkhead
  - riser
  - tread
  - unit rise

- \_\_\_\_\_ 7. What type of nail is used to fasten drywall to wood studs?
- a. box
  - b. casing
  - c. finish
  - d. galvanized
- \_\_\_\_\_ 8. What type of screw is used to install locksets?
- a. lag
  - b. machine
  - c. sheet metal
  - d. wood
- \_\_\_\_\_ 9. What type of plywood is commonly used for decking?
- a. ash
  - b. cherry
  - c. mahogany
  - d. yellow pine
- \_\_\_\_\_ 10. What type nail is used to nail 2" x 6" joists?
- a. 4 d
  - b. 10 d
  - c. 18 d
  - d. 30 d



## Sample Questions — Key

1. When should accidents be reported?
  - a. at the earliest convenience Wrong, but plausible
  - b. before the end of the shift Wrong, but plausible
  - c. immediately Correct
  - d. the next day Wrong, but plausible
  
2. What device is attached to scaffolding to provide a larger work area?
  - a. putlogs Incorrect by definition
  - b. outriggers Correct by definition
  - c. broad boards Incorrect by definition
  - d. cleats Incorrect by definition
  
3. What type of hammer is used to drive nails, pull nails, and dismantle items?
  - a. curved-claw Incorrect by definition
  - b. framing Incorrect by definition
  - c. sledge Incorrect by definition
  - d. straight-claw Correct by definition
  
4. What moisture content is required for green lumber to shrink more than air-dried lumber?
  - a. 10% Wrong, but plausible
  - b. 20% Correct
  - c. 30% Wrong, but plausible
  - d. 40% Wrong, but plausible
  
5. When laying out a building, what is used as a temporary framework to assist in locating corner and building lines?
  - a. batter board Correct by definition
  - b. kerf Incorrect by definition
  - c. ledger board Incorrect by definition
  - d. stake Incorrect by definition
  
6. The vertical member of a stairway is called a(n) \_\_\_\_\_.
  - a. bulkhead Incorrect by definition
  - b. riser Correct by definition
  - c. tread Incorrect by definition
  - d. unit rise Incorrect by definition

7. What type of nail is used to fasten drywall to wood studs?

- a. box Wrong, but plausible
- b. casing Wrong, but plausible
- c. finish Wrong, but plausible
- d. galvanized Correct

8. What type of screw is used to install locksets?

- a. lag Wrong, but plausible
- b. machine Correct
- c. sheet metal Wrong, but plausible
- d. wood Wrong, but plausible

9. What type of plywood is commonly used for decking?

- a. ash Wrong, but plausible
- b. cherry Wrong, but plausible
- c. mahogany Wrong, but plausible
- d. yellow pine Correct

10. What type nail is used to nail 2" x 6" joists?

- a. 4 d Wrong, but plausible
- b. 10 d Wrong, but plausible
- c. 18 d Correct
- d. 30 d Wrong, but plausible



## Curricula Crosswalk

### Crosswalk to NCCER Modules, NAHB-HBI Residential Standards & Key Activities, & Curriculum and Instructional Materials (CIMC) Carpentry Series

The following crosswalk is intended for guidance purposes only. It does not represent all curricula or resource materials that may be used for carpentry programs. It is intended as a reference material for curriculum planning and mapping standards to available curricula.

#### Curricula/Resource Titles:

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>1) NCCER – Carpentry Level 1</li> <li>2) NCCER – Carpentry Level 2</li> <li>3) NCCER – Carpentry Level 3</li> <li>4) NCCER – Carpentry Level 4</li> <li>5) NAHB/HBI – Residential Standards &amp; Key Activities</li> <li>6) CIMC – Fundamentals of Carpentry</li> <li>7) CIMC – Introduction to Carpentry</li> <li>8) CIMC – Introduction to Drywall</li> <li>9) CIMC – Drywall</li> <li>10) CIMC – Commercial Carpentry</li> <li>11) CIMC – Interior Wall &amp; Ceiling Framing</li> <li>12) CIMC – Windows</li> <li>13) CIMC – Residential Door Installation</li> <li>14) CIMC – Commercial Door Installation</li> <li>15) CIMC – Stair Framing</li> <li>16) CIMC – Cabinets, Shelves &amp; Built-Ins</li> <li>17) CIMC – Introduction to Concrete</li> <li>18) CIMC – Placing &amp; Finishing Concrete</li> </ul> | <ul style="list-style-type: none"> <li>19) CIMC – Footing &amp; Pier Forms</li> <li>20) CIMC – Edge Forms</li> <li>21) CIMC – Wall &amp; Foundation Forms</li> <li>22) CIMC – Stair Forms</li> <li>23) CIMC – Column Forms</li> <li>24) CIMC – Beam Forms</li> <li>25) CIMC – Above-Grade Slab Systems</li> <li>26) CIMC – Floor Finishing</li> <li>27) CIMC – Floor Framing</li> <li>28) CIMC – Wall &amp; Ceiling Framing</li> <li>29) CIMC – Roof Framing</li> <li>30) CIMC – Trusses</li> <li>31) CIMC – Windows</li> <li>32) CIMC – Exterior Walls &amp; Trim</li> <li>33) CIMC – Cornice &amp; Gable Ends</li> <li>34) CIMC – Insulation</li> <li>35) CIMC – Introduction to Roofing</li> <li>36) CIMC – Roof Finishes</li> </ul> |
|--|---|

For more information about CIMC curricula, please go to [www.okcimc.com](http://www.okcimc.com).

Module Name — Objective	Unit/Module
<b>Orientation to the Trade</b>	1) Module 27101 6) A1,A2
1. Describe the history of the carpentry trade.	1) Module 27101 6) A1
2. Identify the career and entrepreneurial opportunities within the carpentry trade.	1) Module 27101 6) A1.1
3. Identify the skills, responsibilities, and characteristics needed to be a successful carpenter.	1) Module 27101
4. Summarize how to be connected to the industry through an organization like SkillsUSA.	1) Module 27101 6) A1.3

Module Name — Objective	Unit/Module
5. Explain the importance of safety in the construction industry and the obligations of the contractor, subcontractors, and carpenters to ensure a safe work environment.	1) Module 27101 6) A2
<b>Building Materials, Fasteners, and Adhesives</b>	1) Module 27102 5) Applied Material Standard, Interior Trim, Stairs, Concrete Forms, Wood Framing, Metal Framing, Exterior Trim, Siding, Insulation 6) Unit A3 7) Unit A1 10) Unit A2 35) Unit A1
1. Explain the terms commonly used in discussing wood and lumber.	1) Module 27102 5) Applied Material Standard I Interior Trim 1.4 Stairs 1.1 6) Unit A3.1 7) Unit A1.1
2. State the uses of various types of hardwoods and softwoods.	1) Module 27102 5) Applied Material Standard 6 Interior Trim 1.4 Stairs 1.1 Wood Framing 1.1 Metal Framing 1.1 Exterior Trim 1.1 Siding 1.1 Stairs 1.1 Insulation 1.1 6) Unit A3.3,A3.4 7) Unit A1.3
3. Identify various types of imperfections that are found in lumber.	1) Module 27102 5) Wood Framing 1.2 Metal Framing 1.2 Exterior Trim 1.2 Siding 1.2 Stairs 1.2 6) Unit A3.5 7) Unit A1.2

Module Name — Objective	Unit/Module
4. Explain how lumber is graded.	1) Module 27102 5) Applied Material Standard 5 Interior Trim 1.2 Stairs 1.2, 1.3 Wood Framing 1.3 Metal Framing 1.3 Exterior Trim 1.3 7) Unit A1.4
5. Interpret grade markings on lumber and plywood.	1) Module 27102 5) Applied Material Standard 5 Interior Trim 1.3 Stairs 1.3 Wood Framing 1.3 Metal Framing 1.3 Exterior Trim 1.3 6) Unit A3.6,A3.7 7) Unit A1.5
6. Explain how plywood is manufactured, graded, and used.	1) Module 27102 5) Applied Material Standard 5 Interior Trim 2.1 Stairs 2.1 Wood Framing 2.1 Metal Framing 2.1 Exterior Trim 2.1 Siding 2.1 6) Unit A3.8-A3.10
7. Identify various types of building boards and identify their uses.	1) Module 27102 5) Interior Trim 2.2 Stairs 2.2 Wood Framing 2.2 Metal Framing 2.2 Exterior Trim 2.2 Siding 2.2 6) Unit A3.11-A3.18 7) Unit A1.6,A1.7
8. Identify the uses of and safety precautions associated with pressure-treated and fire- retardant lumber.	1) Module 27102
9. Describe the proper method of handling and storing building materials.	1) Module 27102 5) Applied Material Standard 1, 4

Module Name — Objective	Unit/Module
10. State the uses of various types of engineered lumber.	1) Module 27102 5) Interior Trim 2.3-2.8 Stairs 2.4-2.6, 3.1, 3.9 Wood Framing 2.5, 3.1-3.2, 3.9 Metal Framing 2.5 Exterior Trim 2.3, 2.6 Siding 2.3
11. Calculate the quantities of lumber, wood, and concrete products using industry-standard methods.	1) Module 27102 5) Applied Material Standard 2 6) Unit A3.19-A3.21 7) Unit A1.9
12. List the basic nail and staple types and their uses.	1) Module 27102 5) Applied Material Standard 7 Interior Trim 4.1 Stairs 4.1 Wood Framing 4.1 Metal Framing 4.1 Exterior Trim 4.1 Siding 4.1 Insulation 4.1 7) Unit A1.8 10) Unit A2.12 35) Unit A1.5
13. List the basic types of screws and their uses.	1) Module 27102 5) Applied Material Standard 7 Interior Trim 4.1 Stairs 4.1 Concrete Form 4.1 Wood Framing 4.1 Metal Framing 4.1 Exterior Trim 4.1 Siding 4.1 Insulation 4.1
14. Identify the different types of anchors and their uses.	1) Module 27102 5) Applied Material Standard 7 Interior Trim 4.2 Stairs 4.2 Wood Framing 4.2 Metal Framing 4.2 Exterior Trim 4.2 Siding 4.2 Insulation 4.2

Module Name — Objective	Unit/Module
<p>15. Describe the common types of adhesives used in construction work and explain their uses.</p>	<p>1) Module 27102            5) Applied Material Standard 8                Interior Trim 4.3                Stairs 4.3                Wood Framing 4.3                Metal Framing 4.3                Exterior Trim 4.3                Siding 4.3                Insulation 4.3            6) Unit A3.1            7) Unit A1.1</p>
<p><b>Identify and Safely Use Hand and Power Tools</b></p>	<p>1) Module 27103            5) Safety, Interior Trim, Stairs, Wood Framing, Metal Framing, Exterior Trim, Siding, Insulation            6) Unit A2, C1, C2            7) Unit A2            8) Unit A2            10) Unit A2            11) Unit A1            17) Unit A1            35) Unit A2            36) Unit A1</p>
<p>1. Identify the hand tools commonly used by carpenters and describe their uses.</p>	<p>1) Module 27103            5) Safety                Interior Trim 5.0                Stairs 5.0                Wood Framing 5.0                Metal Framing 5.0                Exterior Trim 5.0                Siding 5.0                Insulation 5.0            6) Unit A2, C1            7) Unit A2            8) Unit A2.1, A2.3            11) Unit A1.2            17) Unit A1.7, A1.8            35) Unit A1.1, A2</p>

Module Name — Objective	Unit/Module
2. Use hand tools in a safe and appropriate manner.	1) Module 27103 5) Safety Interior Trim 5.0 Stairs 5.0 Wood Framing 5.0 Metal Framing 5.0 Exterior Trim 5.0 Siding 5.0 Insulation 5.0 6) Unit A2, C1 7) Unit A2 8) Unit A2.2 17) Unit A1.6 35) Unit A2.2-A2.5 36) Unit A1.6, A1.8
3. State the general safety rules for operating all power tools, regardless of type.	1) Module 27103 5) Safety 3.4 Interior Trim 6.0 Stairs 6.0 Wood Framing 6.0 Metal Framing 6.0 Exterior Trim 6.0 Siding 6.0 Insulation 6.0 6) Unit C2 7) Unit A2 8) Unit A2.3 17) Unit A1.9 35) Unit A2.2-A2.4
4. State the general rules for properly maintaining all power tools, regardless of type.	1) Module 27103 5) Safety 3.4 Interior Trim 6.0 Stairs 6.0 Wood Framing 6.0 Metal Framing 6.0 Exterior Trim 6.0 Siding 6.0 Insulation 6.0 6) Unit C2 7) Unit A2 35) Unit A2.2

Module Name — Objective	Unit/Module
<p>5. Identify the portable power tools commonly used by carpenters and describe their uses.</p>	<p>1) Module 27103            5) Safety 3.4                Interior Trim 6.0                Stairs 6.0                Wood Framing 6.0                Metal Framing 6.0                Exterior Trim 6.0                Siding 6.0                Insulation 6.0            6) Unit A2, C2            7) Unit A2            10) Unit A2.12            17) Unit A1.10            35) Unit A2.4            36) Unit A1.7, A1.9</p>
<p>6. Use portable power tools in a safe and appropriate manner.</p>	<p>1) Module 27103            5) Safety 3.4                Interior Trim 6.0                Stairs 6.0                Wood Framing 6.0                Metal Framing 6.0                Exterior Trim 6.0                Siding 6.0                Insulation 6.0            6) Unit A2, C2            7) Unit A2            35) Unit A2.6</p>
<p>7. Identify the stationary power tools commonly used by carpenters and describe their uses.</p>	<p>1) Module 27103            5) Safety 3.4                Interior Trim 7.0                Stairs 7.0                Wood Framing 7.0                Metal Framing 7.0                Exterior Trim 7.0                Siding 7.0                Insulation 7.0            6) Unit A2, C2            7) Unit A2</p>

Module Name — Objective	Unit/Module
8. Use stationary power tools in a safe and appropriate manner.	1) Module 27103 5) Safety 3.4 Interior Trim 7.0 Stairs 7.0 Wood Framing 7.0 Metal Framing 7.0 Exterior Trim 7.0 Siding 7.0 Insulation 7.0 6) Unit A2, C1 7) Unit A2
<b>Interior Finishing</b>	2) Module 27210, 27211 5) Interior Trim, Stairs 11) Unit I 12) Unit I 13) Unit I 14) Unit I 16) Unit I
1. Identify various types of door jambs and frames and demonstrate the installation procedures for placing selected door jambs and frames in different types of interior partitions.	2) Module 27210 5) Interior Trim 12.1, 12.3 13) Unit 1.16, 1.19 14) Unit 1.14
2. Identify different types of interior doors.	2) Module 27210 13) Unit 1.17 14) Unit 1.18-1.21
3. Identify different types of interior door hardware and demonstrate the installation procedures for selected types.	2) Module 27210 5) Interior Trim 24.2 13) Unit 1.18, 1.20 14) Unit 1.22
4. Demonstrate the correct and safe use of the hand tools used for interior finishing of doors.	2) Module 27210 5) Interior Trim 5.0 Stairs 5.0
5. Demonstrate the correct and safe use of the power tools used for interior finishing of doors.	2) Module 27210 5) Interior Trim 6.0 Stairs 6.0
6. List and identify specific items included on a typical door schedule.	2) Module 27210 14) Unit 1.25
7. Demonstrate the procedure for placing and hanging a selected door	2) Module 27210 5) Interior Trim 24.3, 24.7 13) Unit 1.27-1.31 14) Unit 1.29
8. Identify the different types of standard moldings and describe their uses.	2) Module 27210 11) Unit 1.1, 1.5 12) Unit 1.11 14) Unit 1.26



<b>Module Name — Objective</b>	<b>Unit/Module</b>
9. Make square and miter cuts using a miter box or power miter saw.	2) Module 27210 5) Interior Trim 7.1 Stairs 7.1 11) Unit 1.2
10. Make coped joint cuts using a coping saw.	2) Module 27210 5) Interior Trim 6.1 Stairs 6.1 11) Unit 1.2
11. Select and properly use fasteners to install trim.	2) Module 27210 5) Interior Trim 6.3 Stairs 6.3
12. Install interior trim	2) Module 27210 5) Interior Trim 27.4, 28.0, 29.0 12) Unit 1.16 13) Unit 1.24 14) Unit 1.29
13. Estimate the quantities of different trim materials required for selected rooms.	2) Module 27210 5) Interior Trim 8.1, 8.3 Stairs 8.1, 8.3 11) Unit 1.6, 1.7 12) Unit 1.12 13) Unit 1.25, 1.26 14) Unit 1.27, 1.28
14. Install wall paneling	2) Module 27210 5) Interior Trim 27.1-27.3
15. Install shelving	2) Module 27210 16) Unit 1.12
16. Install factory made cabinets and countertops	2) Module 27211 5) Interior Trim 32.1, 32.2 16) Unit 1.11
<b>Stairs</b>	1) Module 27110 5) Interior Trim, Stairs, Wood Framing 10) Unit E3 15) Unit 1
1. Identify the various types of stairs	1) Module 27110 15) Unit 1.2
2. Identify the various parts of stairs.	1) Module 27110 15) Unit 1.1
3. Identify the materials used in the construction of stairs.	1) Module 27110 5) Interior Trim 30.9 Stairs 17.7
4. Interpret construction drawings of stairs	1) Module 27110 5) Stairs 8.1, 8.3

<b>Module Name — Objective</b>	<b>Unit/Module</b>
5. Explain the methods of constructing various types of stairs.	1) Module 27110 5) Interior Trim 30.4 Stairs 13.1, 13.7, 13.10, 30.1-30.8 Wood Framing 30.6-30.8
6. Understand the various terms and definitions relating to stairs.	1) Module 27110 15) Unit 1.1, 1.2
7. Layout and cut stringers.	1) Module 27110 5) Wood Framing 30.1 Stairs 30.1 15) Unit 1.7
8. Determine the number and sizes of risers and treads required for a stairway.	1) Module 27110 5) Wood Framing 30.2 Stairs 30.2 10) Unit E3.8 15) Unit 1.5, 1.6
9. Build a small stair unit with a handrail.	5) Wood Framing 26.8, 30.3-30.5 Stairs 26.8, 30.3-30.5 15) Unit 1.10
<b>Site Layout One—Distance Measurement and Leveling</b>	4) Module 27401 5) Applied Math, Applied Measurement 6) Unit B2, E1, E2 7) Unit A3
1. Describe the major responsibilities of the carpenter relative to site layout.	4) Module 27401 6) Unit E2 7) Unit A3.1
2. Convert measurements stated in feet and inches to equivalent measurements stated in decimal feet, and vice versa.	4) Module 27401 5) Applied Math 1.0
3. Use and properly maintain tools and equipment associated with taping	4) Module 27401
4. Use manual or electronic equipment and procedures to make distance measurements and perform site layout tasks	4) Module 27401 5) Applied Measurement 7.0 7) Unit A3.2
5. Determine approximate distances by pacing	4) Module 27401 5) Applied Measurement 4.0
6. Recognize, use, and properly care for tools and equipment associated with differential leveling.	4) Module 27401 6) Unit E1.1-E1.17
7. Use a builder's level or transit and differential leveling procedures to determine site and building elevations.	4) Module 27401 5) Applied Measurement 2, 3, 6 6) Unit E1.5-E1.8, E1.21
8. Record site layout data and information in field notes using accepted practices.	4) Module 27401 6) Unit B2.13
9. Check and/or establish 90° angles using the 3/4/5 rule.	4) Module 27401 5) Applied Math 9.0 6) Unit B2.11, B2.16, E2.6 7) Unit A3.2

Module Name — Objective	Unit/Module
<b>Floor Systems</b>	1) Module 27105 5) Wood Framing, Metal Framing, Exterior Trim, Siding, Insulation, Stairs, Applied Communications 7) Unit A3, 10) Unit A1 26) Unit I 27) Unit I
1. Identify the different types of framing systems.	1) Module 27105 5) Wood Framing 10.1-10.3, 12.1-12.5 Metal Framing 12.1-12.2, 12.5 Siding 12.3, 12.5 Insulation 12.3, 12.5 27) Unit I.1
2. Read and understand drawings and specifications to determine floor system requirements.	1) Module 27105 5) Wood Framing 8.1-8.2 Metal Framing 8.2 Exterior Trim 8.2 Siding 8.2 Stairs 8.2 Insulation 8.2 7) Unit A3.5
3. Identify floor and sill framing and support members.	1) Module 27105 5) Wood Framing 13.4, 26.2, 26.3 10) Unit A1.1-A1.2 27) Unit I.3
4. Name the methods used to fasten sills to the foundation.	1) Module 27105 5) Wood Framing 13.2 Insulation 13.2 10) Unit A1.3
5. Given specific floor load and span data, select the proper girder/beam size from a list of available girders/beams.	1) Module 27105 5) Wood Framing 3.3-3.4, 26.4-26.5 10) Unit A1.4
6. List and recognize different types of floor joists.	1) Module 27105 10) Unit A1.5 27) Unit I.4
7. Given specific floor load and span data, select the proper joist size from a list of available joists.	1) Module 27105 5) Wood Framing 13.5 10) Unit A1.5
8. List and recognize different types of bridging.	1) Module 27105 10) Unit A1.6 27) Unit I.5

<b>Module Name — Objective</b>	<b>Unit/Module</b>
9. List and recognize different types of flooring materials.	1) Module 27105 10) Unit A1.7 26) Unit 1.1-1.8 27) Unit 1.7
10. Explain the purposes of subflooring and underlayment.	1) Module 27105 10) Unit A1.8-A1.9 26) Unit 1.9 27) Unit 1.6
11. Select fasteners used in floor framing to their correct uses.	1) Module 27105 5) Wood Framing 9.8 Metal Framing 9.8 10) Unit A1.10 27) Unit 1.2
12. Estimate the amount of material needed to frame a floor assembly.	1) Module 27105 10) unit A1.11 26) Unit 1.11-1.14 27) Unit 1.9
13. Demonstrate the ability to construct floor assembly, install bridging, joists, subfloor, etc...	5) Applied Communications 4 Wood Framing 2.1-2.2, 13.1-13.5, 13.7-13.10, 26.6 Metal Framing 2.1-2.2 Exterior Trim 2.1-2.2 Siding 2.1-2.2 Stairs 2.1-2.2, 13.1-13.2, 13.7, 13.9- 13.10 26) Unit 1.15-1.18 27) Unit 1.10-1.14
<b>Wall and Ceiling Framing</b>	1) Module 27111, 27112 5) Wood Framing, Metal Framing, Applied Communication 7) Unit a3 10) Unit A2, A3 28) Unit 1
1. Identify the components of a wall and ceiling layout.	1) Module 27111, 27112 5) Wood Framing 12.1-12.5, 14.1 Metal Framing 12.1-12.2, 12.5, 14.1 7) Unit A3.4 10) Unit A2.1-2.2 28) Unit 1.1
2. Describe the procedure for laying out a wood frame wall, including plates, corner posts, door and window openings, partition Ts, bracing, and fire stop.	1) Module 27111 5) Wood Framing 14.19-14.20, 14.2- 14.4, 14.6 7) Unit A3.8 10) Unit A2.3 28) Unit 1.2-1.3, 1.20-1.23

Module Name — Objective	Unit/Module
3. Describe the correct procedure for assembling and erecting an exterior wall.	1) Module 27111 5) Wood Framing 14.5-14.6 28) Unit 1.5
4. Describe the common materials and methods used for installing sheathing on walls.	1) Module 27111 5) Wood Framing 14.7 28) Unit 1.7
5. Layout, assemble, erect, and brace exterior walls for a frame building	1) Module 27111 5) Applied Communication 4 Wood Framing 14.1 Metal Framing 14.1 10) Unit A2.11 28) Unit 1.6
6. Describe wall framing techniques used in masonry construction.	1) Module 2711
7. Explain the use of metal studs in wall framing.	1) Module 27111 5) Wood Framing 14.18, 14.6 10) Unit A3 28) Unit 1.8
8. Describe the correct procedure for laying out a ceiling.	1) Module 27112 5) Wood Framing 16.1 10) Unit A2.13-A2.15.A2.17 28) Unit 1.24
9. Cut and install ceiling joists on a wood frame building.	1) Module 27112 5) Wood Framing 16.2-16.8 10) Unit A2.13-A2.15,A2.17 28) Unit 1.14-1.17
10. Estimate the materials required to frame walls and ceilings.	1) Module 27111, 27112 10) Unit A2.16.A2.18 28) Unit 1.12-1.13, 1.18-1.19
<b>Roof Framing</b>	1) Module 27112 5) Wood Framing, Metal Framing, Applied Measurements, Exterior Trim 10) Unit B1 29) Unit 1 30) Unit 1
1. Understand the terms associated with roof framing.	1) Module 27112 10) Unit B1.1-B1.2 29) Unit 1.1
2. Identify the roof framing members used for different roof types.	1) Module 27112 10) Unit B1.3 29) Unit 1.2-1.3
3. Identify the methods used to calculate the length of a rafter.	1) Module 27112 10) Unit B1.5, B1.7 29) Unit 1.4-1.5

<b>Module Name — Objective</b>	<b>Unit/Module</b>
4. Identify the various types of trusses used in roof framing.	1) Module 27112 5) Wood Framing 3.4, 3.5 Metal Framing 3.4, 3.5 10) Unit B2.1, B2.8
5. Use a rafter framing square, speed square, and calculator in laying out a roof.	1) Module 27112 5) Applied Measurement 5 Wood Framing 18.1, 19.1-19.3 Metal Framing 18.1 10) Unit B1.8-B1.10 29) Unit 1.6-1.8, 1.13
6. Identify various types of sheathing used in roof construction.	1) Module 27112 5) Wood Framing 19.13 29) Unit 1.14 30) Unit 1.10
7. Frame a gable roof with vent openings.	1) Module 27112 5) Wood Framing 18.5, 19.10-19.11, 21.4 Metal Framing 18.5 Exterior Trim 21.4 10) Unit B1.12 29) Unit 1.10, 1.15
8. Frame a roof opening.	1) Module 27112 5) Wood Framing 18.5, 19.8 Metal Framing 18.5 10) Unit B1.11 29) Unit 1.9, 1.19 30) Unit 1.11
9. Construct a frame roof, including hips, valleys, commons, jack rafters, and sheathing.	1) Module 27112 5) Wood Framing 18.6-18.7, 19.4-19.6, 19.13-19.16 Metal Framing 18.6-18.7 29) Unit 1.16-1.18, 1.20
10. Erect a gable roof using trusses.	1) Module 27112 5) Wood Framing 3.4-3.5, 18.2 Metal Framing 3.4-3.5, 18.2 30) Unit 1
11. Estimate the materials used in framing and sheathing a roof.	1) Module 27112 10) Unit B1.13 29) Unit 1.11-1.12

Module Name — Objective	Unit/Module
<b>Introduction to Building Envelope Systems</b>	1) Module 27109 5) Wood Framing, Metal Framing, Exterior Trim, Siding 10) Unit F4 13) Unit I 14) Unit I 31) Unit I
1. Identify various types of fixed, sliding, and swinging windows.	1) Module 27109 31) Unit I.2-I.6
2. Identify the parts of a window installation.	1) Module 27109 31) Unit I.7
3. State the requirements for a proper window installation.	1) Module 27109 5) Wood Framing 24.1, 24.4-24.8 Exterior Trim 23.2, 24.1, 24.4-24.8 Siding 23.2 31) Unit I.8-I.11
4. Install a pre-hung window.	1) Module 27109 31) Unit I.13-I.16
5. Identify the common types of skylights and roof windows.	1) Module 27109 5) Wood Framing 24.9 Exterior Trim 24.9
6. Describe the procedure for properly installing a skylight.	1) Module 27109
7. Identify the common types of exterior doors and explain how they are constructed.	1) Module 27109 10) Unit F4.1-F4.4 13) Unit I.5-I.8 14) Unit I.3-I.7
8. Identify the parts of a door installation.	1) Module 27109 10) Unit F4.5-4.6 13) Unit I.9-I.10 14) Unit I.8-I.11
9. Identify the types of thresholds used with exterior doors.	1) Module 27109
10. Install a threshold on a concrete floor.	1) Module 27109 13) Unit I.11 14) Unit I.12
11. Install a pre-hung exterior door with weather-stripping.	1) Module 27109 5) Wood Framing 24.2 Metal Framing 23.2, 24.2 Exterior Trim 23.2 13) Unit I.13-I.14 14) Unit I.15-I.16
12. Identify the various types of locksets used on exterior doors and explain how they are installed.	1) Module 27109 13) Unit I.12

<b>Module Name — Objective</b>	<b>Unit/Module</b>
13. Install a lockset.	1) Module 27109 5) Wood Framing 24.3 Exterior Trim 24.3
<b>Cold-Formed Steel/Metal Stud Framing</b>	2) Module 27205 5) Wood Framing
1. Identify the components of a steel framing/metal stud system.	2) Module 27205 5) Wood Framing
2. Identify and select the tools and fasteners used in steel framing/metal stud system.	2) Module 27205 5) Wood Framing
3. Identify applications for steel framing/metal stud systems.	2) Module 27205 5) Wood Framing
4. Layout and install a steel/metal stud wall with openings to include bracing and blocking.	2) Module 27205 5) Wood Framing
5. Layout and install a metal door frame.	2) Module 27205 5) Wood Framing
6. Layout and install a steel/metal stud non-structural wall with openings to include bracing and blocking.	2) Module 27205 5) Wood Framing
<b>Exterior Finishing</b>	2) Module 27204 5) Wood Framing, Metal Framing, Exterior Trim, Siding, Insulation, 32) Unit I 33) Unit I
1. Describe the purpose of wall insulation and flashing.	2) Module 27204 5) Wood Framing 21.0, 23.1 Exterior Trim 23.1 Siding 23.1 Insulation 21.0
2. Identify the types and parts of common cornices.	2) Module 27204 5) Exterior Trim 22.0 Siding 22.0 33) Unit 1.1-1.5
3. Demonstrate the installation of selected common cornices.	2) Module 27204 33) Unit 1.6-1.7
4. Demonstrate lap and panel siding estimating methods.	2) Module 27204 33) Unit 1.9-1.10
5. Describe the types and applications of common wood siding.	2) Module 27204 5) Exterior Trim 2.3, 23.3-23.5, 23.7-23.11 Siding 2.3, 23.3-23.5, 23.7-23.11 32) Unit 1.1-1.5, 1.9-1.11 33) Unit 1.8



<b>Module Name — Objective</b>	<b>Unit/Module</b>
6. Install selected types of wood siding.	2) Module 27204 5) Exterior Trim 2.3 Siding 2.3 33) Unit 1.8
7. Describe fiber-cement siding and its uses.	2) Module 27204
8. Install fiber-cement siding.	2) Module 27204 5) Metal Framing 23.12 Exterior Trim 2.3, 23.12 Siding 2.3
9. Describe the types and styles of vinyl and metal siding.	2) Module 27204 5) Exterior Trim 2.3 Siding 2.3 32) Unit 1.12-1.16
10. Install selected types of vinyl and metal siding.	2) Module 27204 5) Metal Framing 23.13 Exterior Trim 23.13 32) Unit 1.17
11. Describe the types and applications of stucco and masonry veneer finishes.	2) Module 27204
12. Describe the types and applications of special exterior finish systems.	2) Module 27204 5) Exterior Trim 10.2, 23.6 Siding 23.6
13. Describe the types and applications of special exterior finish systems – gutters & downspouts.	2) Module 27204
14. Install selected types of special exterior finish systems.	2) Module 27204 5) Metal Framing 23.14 Exterior Trim 23.14
<b>Thermal and Moisture Protection</b>	2) Module 27203 5) Wood Framing, Metal Framing, Exterior Trim, Siding, Insulation 10) Unit FI 32) Unit I 34) Unit I
1. Describe the requirements for insulation.	2) Module 27203 10) Unit FI.3-FI.6 34) Unit 1.1
2. Describe the characteristics of various types of insulation material.	2) Module 27203 10) Unit FI.1-FI.2 34) Unit 1.2-1.4
3. Calculate the required amounts of insulation for a structure.	2) Module 27203 5) Insulation 2.8 10) Unit FI.7, FI.10 34) Unit 1.12

Module Name — Objective	Unit/Module
4. Install selected insulation materials.	2) Module 27203 5) Wood Framing 21.2 Insulation 21.1-21.3 10) Unit F1.9 34) Unit 1.10-1.11
5. Describe the requirements for moisture control and ventilation.	2) Module 27203 5) Wood Framing 21.5 Insulation 21.5 34) Unit 1.9
6. Install selected vapor barriers.	2) Module 27203 5) Wood Framing 21.5 Insulation 21.5 10) Unit F1.8 34) Unit 1.14-1.15
7. Describe various methods of waterproofing.	2) Module 27203 5) Wood Framing 2.9 Metal Framing 2.9 Exterior Trim 2.9 Siding 2.9 Insulation 2.9 32) Unit 1.6
8. Describe air infiltration control requirements.	2) Module 27203
9. Install selected building wraps.	2) Module 27203

## Abbreviations, Symbols and Acronyms

The following is a list of abbreviations, symbols, and acronyms used in the Carpentry study guide and on the Carpentry assessments.

°	Degree
°F	Degree Fahrenheit
\$	Dollars
'	Foot/feet
”	Inch/inches
Ω	Ohms
%	Percent
#	Pound
ACI	American Concrete Institute
ANSI	American National Standards Institute
CDX	CD Exposure I Plywood
ft <sup>2</sup>	Feet Squared
GFCI	Ground Fault Circuit Interrupter
HAZCOM	Hazard Communication
I.D.	Inside Diameter
lb	Pound/Pounds
LSL	Laminated Strand Lumber
LVL	Laminated Veneer Lumber
MDF	Medium Density Fiberboard
mm	Millimeter
MSHA	Mine Safety and Health Administration
NAHB	National Association of Home Builders
NCCER	National Center for Construction Education and Research
NIOSH	National Institute for Occupational Safety and Health
O.C.	On Center
OSB	Oriented Strand Board
OSHA	Occupation Safety and Health Act
SDS	Safety Data Sheet
WWF	Welded-wire Fabric

## Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test.

### General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and “eat right” several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

### Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is incorrect.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked incorrect.













