

# Carpentry

## Basic Safety A.0

- 1 Identify the responsibilities and personal characteristics of a professional craftsperson. A.1
- 2 Explain the role that safety plays in the construction crafts. A.2
- 3 Describe what job- site safety means. A.3
- 4 Explain the appropriate safety precautions around common job- site hazards. A.4
- 5 Demonstrate the use and care of appropriate personal protective equipment. A.5
- 6 Follow safe procedures for lifting heavy objects. A.6
- 7 Describe safe behavior on and around ladders and scaffolds. A.7
- 8 Explain the importance of the HazCom (Hazard Communication Standard) requirement and MSDS (Material Safety Data Sheets). A.8
- 9 Describe fire prevention and fire fighting techniques. A.9
- 10 Define safe work procedures around electrical hazards. A.10
- 11 Complete 10- hour OSHA course/assessment and receive card. (SDE Requirement) A.11

## Basic Math B.0

- 1 Add, subtract, multiply, and divide whole numbers, with and without a calculator. B.1
- 2 Use a standard ruler and a metric ruler to measure. B.2
- 3 Add, subtract, multiply, and divide fractions. B.3
- 4 Add, subtract, multiply, and divide decimals, with and without a calculator. B.4
- 5 Convert decimals to percents and percents to decimals. B.5
- 6 Convert fractions to decimals and decimals to fractions. B.6
- 7 Explain what the metric system is and how it is important in the construction trade. B.7
- 8 Recognize and use metric units of length, weight, volume, and temperature. B.8

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**9 Recognize some of the basic shapes used in the construction industry and apply basic geometry to measure them.** B.9

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**Introduction to Hand Tools** C.0

**1 Recognize and identify some of the basic hand tools used in the construction trade.** C.1

**2 Use these tools safely.** C.2

**3 Describe the basic procedures for taking care of these tools.** C.3

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**Introduction to Power Tools** D.0

**1 Identify commonly used power tools of the construction trade.** D.1

**2 Use power tools safely.** D.2

**3 Explain how to maintain power tools properly.** D.3

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**Introduction to Blueprints** E.0

**1 Recognize and identify basic blueprint terms, components, and symbols.** E.1

**2 Relate information on blueprints to actual locations on the print.** E.2

**3 Recognize different classifications of drawings.** E.3

**4 Interpret and use drawing dimensions.** E.4

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**Basic Rigging** F.0

**1 Explain how ropes, chains, hoists, loaders, and cranes are used to move material and equipment from one location to another on a job site.** F.1

**2 Describe inspection techniques and load-handling safety practices.** F.2

**3 Explain the American National Standards Institute (ANSI) hand signals.** F.3

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**Basic Communication Skills (SDE Requirement)** G.0

**1 Explain techniques for communicating effectively with coworkers and supervisors.** G.1

**2 Demonstrate verbal and written communication skills necessary in the workplace.** G.2

**3 Demonstrate telephone and e-communication skills necessary in the workplace.** G.3

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**Basic Employability Skills (SDE Requirement)** H.0

**1 Identify the roles of individuals and companies in the construction industry.** H.1

**2 Explain the importance critical thinking and problem solving skills in the workplace.** H.2

**3 Describe computer systems and their industry applications.** H.3

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**4 Explain interpersonal relationship skills, self -presentation, and key workplace issues such as sexual harassment, stress, and substance abuse. H.4**

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**Demonstrating Basic Building Site Preparation Skills UA.0**

**1 Describe the major responsibilities of the contractor/carpenter relative to site layout. UA.1**

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**2 Use and properly maintain tools and equipment associated with taping. UA.2**

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**3 Use taping and/or chaining equipment and procedures to make distance measurements and perform site layout tasks. UA.3**

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**4 Recognize, use, and properly care for tools and equipment associated with differential leveling. UA.4**

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**5 Use a builder's level or laser level or transit and differential leveling procedures to determine site and building elevations. UA.5**

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**6 Check and/or establish 90- degree angles using the 3/4/5 rule. UA.6**

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**Demonstrating Skills Necessary to Construct and Set Concrete Forms UB-0**

**U1 Install anchor bolts/foundation ties. UB.1**

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**Demonstrating Floor Framing Skills with Metal or Wood UC.0**

**1 Understand current terms associated with floor framing. UC.1**

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**2 Select and use metal framing connectors. UC.2**

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**3 Lay out a floor frame. UC.3**

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**4 Cut and install sill plates. UC.4**

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**5 Install posts and columns. UC.5**

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**6 Frame and install a built -up girder/beam. UC.6**

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**7 Cut and install floor joists and bridging. UC.7**

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**8 Frame floor openings. UC.8**

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**9 Install a subfloor. UC.9**

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**Demonstrating Wall Framing Skills with Metal or Wood UD.0**

**1 Understand current terms associated with wall framing. UD.1**

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**2 Select and use metal framing connectors. UD.2**

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**3 Lay out a wall frame. UD.3**

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**4 Construct corner posts and T -posts.** UD.4

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**5 Frame and align and exterior wall.** UD.5

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**6 Frame and align a partition wall.** UD.6

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**7 Install backing for fixtures or cabinets.** UD.7

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**8 Build a box beam.** UD.8

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**9 Install structural sheathing.** UD.9

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**10 Anchor a partition.** UD.10

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**11 Frame wall openings.** UD.11

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**Interpreting and  
Demonstrating Use of  
Architectural  
Blueprints** UE.0

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**1 Read and interpret blueprints and specifications.** UE.1

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**Demonstrating Roof and  
Ceiling Framing Skills  
with Metal or  
Wood** UF.0

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**1 Understand current terms associated with roof and ceiling framing.** UF.1

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**2 Select and use metal framing connectors.** UF.2

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**3 Lay out a ceiling frame.** UF.3

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**4 Cut and install ceiling joists.** UF.4

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**5 Cut and install ceiling joist strongbacks.** UF.5

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**6 Frame ceiling openings.** UF.6

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**7 Lay out roof openings.** UF.7

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**8 Cut and install rafters.** UF.8

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**9 Cut and install a ridgeboard.** UF.9

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**10 Frame roof openings.** UF.10

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**11 Frame gable ends.** UF.11

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**12 Cut and install collar ties.** UF.12

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**13 Install roof trusses.** UF.13

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**14 Install roof sheathing.** UF.14

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**15 Lay out common rafters.** UF.15

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**Demonstrating Skills  
Required to Install  
Roofing Materials** UG.0

- 1 Apply roof felt paper. UG.1
- 2 Install asphalt composition shingles. UG.2
- 3 Install flashing. UG.3
- 4 Install ridge vent. UG.4

**Demonstrating Exterior  
Finishing Skills** UH.0

- 1 Install exterior sheathing. UH.1
- 2 Install exterior finish materials. UH.2
- 3 Frame a boxed cornice. UH.3
- 4 Install a window unit. UH.4
- 5 Install exterior doors and lock sets. UH.5
- 6 Install exterior trim. UH.6
- 7 Install door and window flashing. UH.7

**Demonstrating Interior  
Finishing Skills** UI.0

- 1 Install paneling products. UI.1
- 2 Cut and install furring. UI.2
- 3 Install drywall board. UI.3
- 4 Install interior doors. UI.4
- 5 Cut and install finish flooring. UI.5
- 6 Cut and install interior trim. UI.6

**Demonstrating Skills  
Required to Construct  
Steps** UJ.0

- 1 Lay out and cut straight -run stringers. UJ.1
- 2 Cut and install risers and treads. UJ.2