

## **Construction Basics – 2-3 Credit Hours**

*All content from NCCER Core 6<sup>th</sup> edition modules.*

### **INTRODUCTION TO CONSTRUCTION DRAWINGS**

#### Learning Objectives

1. Describe components and features used in construction drawings and identify how the drawings are different.
  - Summarize the purpose of the six basic construction drawing components.
  - List and explain the significance of various drawing elements, such as lines of construction, symbols, and grid lines.
  - Explain how dimensions relate to various drawing scales.
  - Demonstrate how to use engineer's and architect's scales.
  - Identify the six types of construction drawings.

#### Performance Tasks

1. Learning Objective 1 - Using the residential floor plan and elevations supplied in the Appendix D:
  - Locate the wall common to bedroom #3 and the garage.
  - Determine the overall width of the home.
  - Calculate the distance from the outside northwest corner of the house to the center of the window in bedroom #2.
  - Determine the overhang of the eaves.
  - Using an architect's scale, determine the width of the garage.

### **INTRODUCTION TO BASIC RIGGING**

#### Learning Objectives

1. Identify and describe various types of rigging slings, hardware, and equipment.
  - Identify and describe various types of slings.
  - Describe how to inspect various types of slings.
  - Identify and describe how to inspect common rigging hardware.
  - Identify and describe various types of hoists.
  - Identify and describe basic rigging hitches and the related Emergency Stop hand signal.

#### Performance Tasks

1. Learning Objective 1 - Demonstrate the proper ASME Emergency Stop hand signal.
2. Learning Objective 1 - Demonstrate the ability to report the load capacity of a sling, and if the sling is too damaged to use.

### **BASIC COMMUNICATION SKILLS**

#### Learning Objectives

1. Describe the communication, listening, and speaking processes and their relationship to job performance.

- Describe the communication process and the importance of listening and speaking skills.
  - Describe the listening process and identify good listening skills.
  - Describe the speaking process and identify good speaking skills.
2. Describe good reading and writing skills and their relationship to job performance.
    - Describe the importance of good reading and writing skills.
    - Describe job-related reading requirements and identify good reading skills.
    - Describe job-related writing requirements and identify good writing skills.

#### Performance Tasks

1. Learning Objective 1 - Perform a given task after listening to oral instructions.
2. Learning Objective 2 - Fill out a work-related form provided by your instructor.
3. Learning Objective 2 - Read and interpret a set of instructions for properly donning a safety harness and then orally instruct another person on how to don the harness.

### **BASIC EMPLOYABILITY SKILLS**

#### Learning Objectives

1. Describe the opportunities in the construction businesses and how to enter the construction workforce.
  - Describe the construction business and the opportunities offered by the trades.
  - Explain how workers can enter the construction workforce.
2. Explain the importance of critical thinking and how to solve problems.
  - Describe critical thinking and barriers to solving problems.
  - Describe how to solve problems using critical thinking.
  - Describe problems related to planning and scheduling
3. Explain the importance of social skills and identify ways good social skills are applied in the construction trade.
  - Identify good personal and social skills.
  - Explain how to resolve conflicts with co-workers and supervisors.
  - Explain how to give and receive constructive criticism.
  - Identify and describe various social issues of concern in the workplace.
  - Describe how to work in a team environment and how to be an effective leader.

#### Performance Tasks

This is a knowledge-based module. There are no Performance Tasks.

### **INTRODUCTION TO MATERIALS HANDLING**

#### Learning Objectives

1. Identify the basic concepts of material handling and common safety precautions.
  - Describe the basic concepts of material handling and manual lifting.
  - Identify common material handling safety precautions.
  - Identify and describe how to tie knots commonly used in material handling.
2. Identify various types of material handling equipment and describe how they are used..

- Identify non-motorized material handling equipment and describe how they are used
- Identify motorized material handling equipment and describe how they are used.

#### Performance Tasks

1. Learning Objective 1 - Demonstrate safe manual lifting techniques.
2. Learning Objective 1 - Demonstrate how to tie two of the following common knots:
  - Square
  - Bowline
  - Half hitch
  - Clove hitch