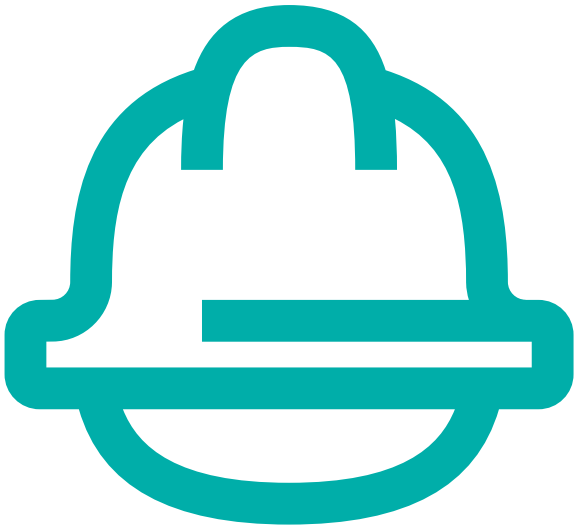
NOCTI

Job Ready Credential Blueprint



Construction Principles

Code: 1177 / Version: 01

General Assessment Information

Blueprint Contents

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Test Type: The Construction Principles industry-based credential is included in NOCTI's Job Ready assessment battery. Job Ready assessments measure technical skills at the occupational level and include items which gauge factual and theoretical knowledge. Job Ready assessments typically offer both a written component and performance component and can be used at the secondary and post-secondary levels. Job Ready assessments can be delivered in an online or paper/pencil format.

Revision Team: The assessment content is based on input from secondary, post-secondary, and business/industry representatives from the states of Kentucky, Maine, Michigan, Montana, Pennsylvania, South Carolina, and Texas.

CIP Code

46.9999-Construction Trades, Other

Learning that works for America CTE™

Career Cluster-Architecture and Construction

O*NET™ in*it

47-4099.00 – Construction and Related Workers, All Other

Association for Career and Technical Education ACTE®

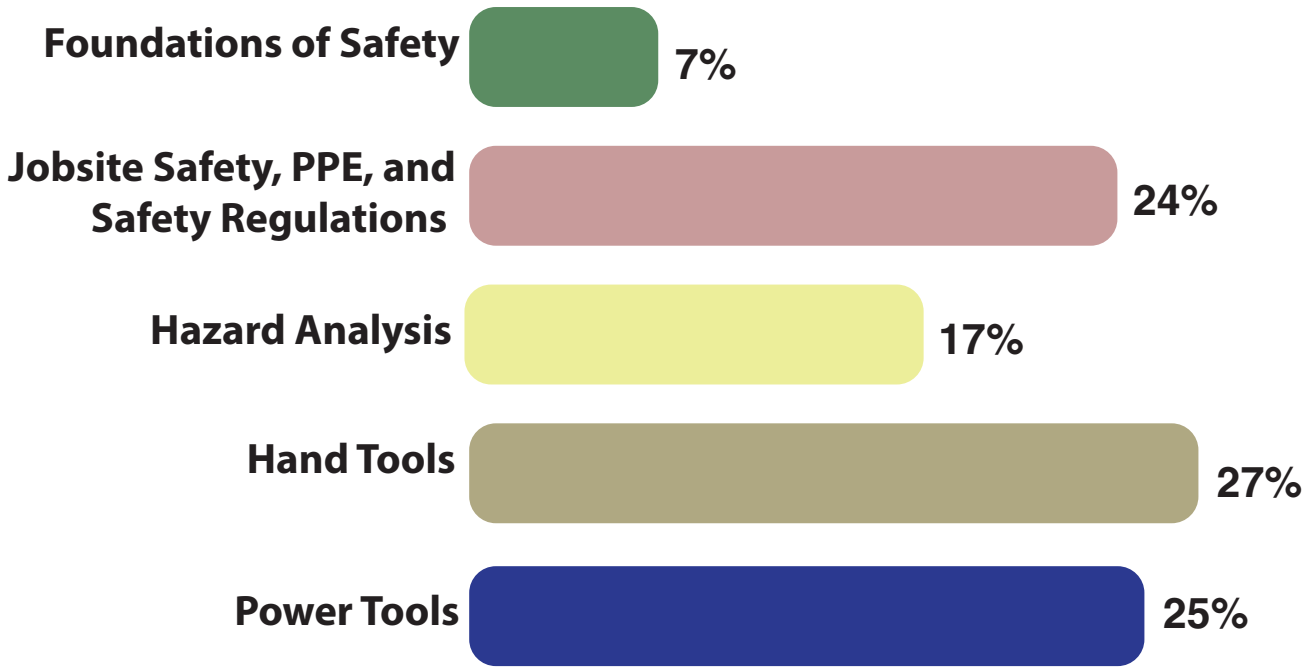
The Association for Career and Technical Education (ACTE), the leading professional organization for career and technical educators, commends all students who participate in career and technical education programs and choose to validate their educational attainment through rigorous technical assessments. In taking this assessment you demonstrate to your school, your parents and guardians, your future employers and yourself that you understand the concepts and knowledge needed to succeed in the workplace. Good Luck!

Written Assessment

NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours
Number of Questions: 167
Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Foundations of Safety

- Demonstrate understanding of the role that safety plays in the construction industry
- Demonstrate understanding of the idea of a safety culture and its importance in the construction industry
- Demonstrate understanding of the meaning of jobsite safety

Jobsite Safety, PPE, and Safety Regulations

- Demonstrate understanding of the role of OSHA in jobsite safety
- Demonstrate understanding of appropriate safety precautions to take around common jobsite hazards
- Demonstrate understanding of safe behavior on and around ladders and scaffolds
- Define safe work procedures to use around electrical hazards
- Demonstrate the use and care of appropriate Personal Protective Equipment (PPE)
- Exhibit knowledge of donning and inspection of personal fall protection

Hazard Analysis

- Identify causes of accidents and the impact of accident costs
- Define hazard recognition and risk assessment techniques
- Identify fall hazards and fall protection techniques and practices for different situations
- Identify struck-by and caught-in-between hazards and demonstrate safe working procedures and requirements
- Identify other construction hazards on the jobsite, including hazardous material
- Identify construction site hazards dealing with aerial lifts, scissor lifts, and forklifts

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Specific Standards and Competencies (continued)

Hand Tools

- Demonstrate and understand the care for hand tools and how to visually inspect them for safe use
- Demonstrate understanding and safe use of hammers (e.g., claw, sledge)
- Demonstrate understanding and safe use of ripping bars and nail pullers
- Demonstrate understanding and safe use of chisels and punches
- Demonstrate understanding and safe use of screwdrivers (e.g., Phillips, Torx)
- Demonstrate understanding and safe use of wire cutters and pliers (e.g., adjustable locking, lineman's)
- Demonstrate understanding and safe use of wrenches (e.g., adjustable)
- Demonstrate understanding and safe use of sockets and ratchets
- Demonstrate understanding and safe use of levels (e.g., laser) and squares (e.g., speed)
- Demonstrate understanding and safe use of rulers and measuring tools (e.g., tape measure)
- Demonstrate understanding and safe use of plumb bob and chalk lines
- Demonstrate understanding and safe use of utility knives, tools required to repair drywall, and crosscut saws

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Specific Standards and Competencies (continued)

Power Tools

- Identify the general safety rules for operating power tools
- Identify the general safety rules for properly maintaining power tools
- Identify and exhibit understanding and safe use of stationary power tools
- Demonstrate understanding and safe use of drills (e.g., cordless, hammer)
- Demonstrate understanding and safe use of saws (e.g., miter, reciprocating, circular)
- Demonstrate understanding and safe use of grinders and sanders (e.g., belt, orbital)
- Demonstrate understanding and safe use of pneumatic nail guns
- Demonstrate understanding and safe use of powder-actuated nail guns

Sample Questions

Which of these is the top priority of completing a construction project?

A. ensuring the safety and health of workers
B. completing the job on time
C. maximizing profits
D. completing the job ahead of schedule

During a scheduled OSHA inspection on a jobsite, the worker has the right to

A. hide defective tools and power cords
B. take the rest of the day off
C. talk to the inspector privately
D. remove jobsite ladders and scaffolds

The leading cause of fatalities in the construction industry is

A. falls
B. nail gun injuries
C. electrical shock
D. site fires

Worksite accidents can be attributed to unsafe conditions and unsafe practices. Which of these is an unsafe condition?

A. ignoring warning labels
B. poor work area lighting
C. incorrectly setting up ladders
D. horseplay on the job

What is required when operating an articulated personnel lift?

A. hard hat
B. self-retracting life line
C. safety belt with lanyard
D. fall protection

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Sample Questions (continued)

What is the most common type of hammer used by carpenters?

A. ball-peen hammer
B. claw hammer
C. rubber mallet
D. sledgehammer

Nail pullers operate on the principle of

A. centrifugal force
B. inertial force
C. leverage
D. acceleration

Double-insulated tools prevent electric shock by

A. insulating heat from the tool
B. insulating motor and case
C. reversing the flow of current
D. using a three-prong plug

The purpose of the riving knife on a table saw is to help

A. prevent kick-back
B. push wood upwards
C. prevent tear out
D. smooth the cut

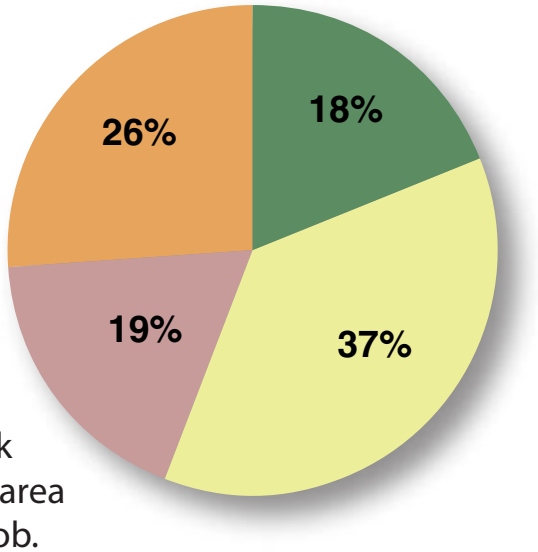
Most cordless drills have a _____ chuck.

A. right-handed
B. keyed
C. keyless
D. left-handed

Performance Assessment

NOCTI performance assessments allow individuals to demonstrate their acquired skills by completing actual jobs using the tools, materials, machines, and equipment related to the technical area.

Administration Time: 1 hour and 25 minutes
Number of Jobs: 4



Areas Covered:

19% Circular Saw
Participant will select and put on appropriate PPE for the job, replace the blade in the saw, mark with a chalk line, rip the board, unplug the saw and clean up work area while adhering to safety procedures throughout the job.

37% Drill Holes
Participant will select and set up proper equipment to drill holes in several types of material, remove the bit when finished, and clean up work area while adhering to safety procedures throughout the job.

18% Pneumatic Fasteners
Participant will select and set up proper tools and fasteners for framing, sheathing, and trim, and clean up work area while adhering to safety procedures throughout the job.

26% Jobsite Hazards
Participant will identify hazards that are present on a simulated jobsite, correcting hazards, when possible, demonstrate proper safety procedures, and clean up work area while adhering to safety procedures throughout the job.

Sample Job

Circular Saw

Maximum Time: 20 minutes

Participant Activity: Participant will alert the evaluator to possible hazards, select and put on appropriate PPE for the job, replace the blade in the saw, mark board with a chalk line, rip the board, unplug the saw, and cleanup work area while adhering to safety procedures throughout the job.