

Job Ready Assessment Blueprint

Fundamentals of Construction



Test Code: 0177 / Version: 01

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General Assessment Information

Blueprint Contents

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Test Type: The Fundamentals of Construction assessment 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 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 Montana, Georgia, Kentucky, Oklahoma, and Pennsylvania.



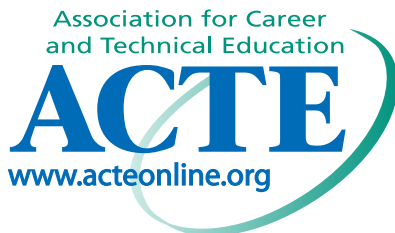
46.9999-Construction
Trades, Other



Career Cluster 2-Architecture
and Construction



47-4099.00 – Construction and
Related Workers, All Other



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!



NATIONAL COLLEGE CREDIT RECOMMENDATION SERVICE
University of the State of New York - Regents Research Fund

In the lower division
baccalaureate/associate degree
category, 3 semester hours in
Fundamentals of Construction

Written Assessment

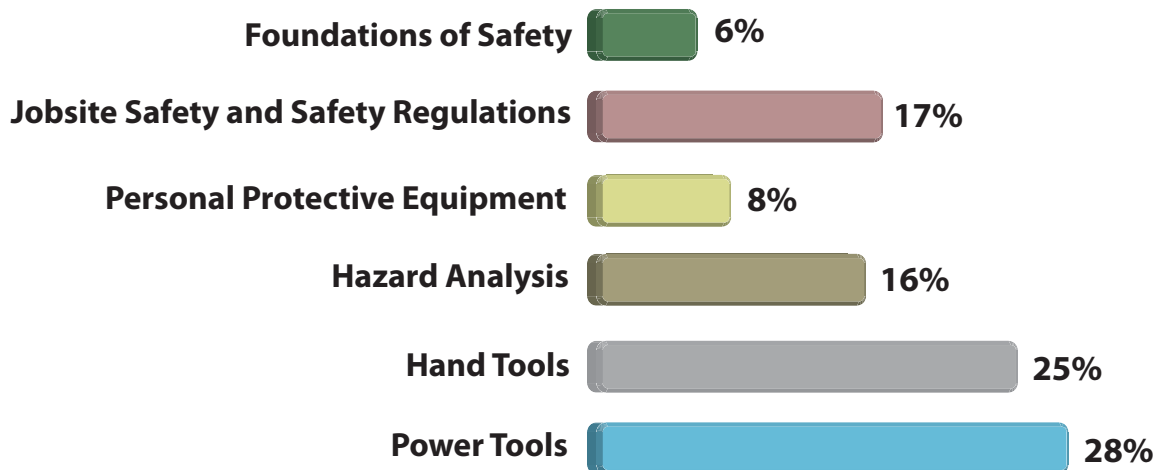
NOCTI written assessments consist of questions to measure an individual's factual theoretical knowledge.

Administration Time: 3 hours

Number of Questions: 169

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Competencies and Skills Tested 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 and Safety Regulations

- Demonstrate understanding of the role of OSHA in jobsite safety
- Demonstrate knowledge of on-the-jobsite safety, including basic first aid, fire prevention, and proper lifting
- 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

Personal Protective Equipment

- Demonstrate the use and care of appropriate personal protective equipment (PPE)
- Exhibit knowledge of how to properly don and remove personal protective equipment (safety goggles, hard hat, personal fall protection, etc.)

Hazard Analysis

- Identify causes of accidents and the impact of accident costs
- Define hazard recognition and risk assessment techniques
- Identify struck-by hazards and demonstrate safe working procedures and requirements
- Identify caught-in-between hazards and demonstrate safe working procedures and requirements
- Identify other construction hazards on the jobsite, including hazardous material exposure, environmental elements, welding and cutting hazards, confined spaces, and fires
- Identify construction site hazards dealing with work around cranes, loaders, excavation equipment, all-terrain forklifts, etc.

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Specific Competencies and Skills (continued)

Hand Tools

- Demonstrate understanding of how to visually inspect hand tools to determine if they are safe to use, and use tools safely
- Exhibit understanding of the basic procedures for taking care of hand tools
- Demonstrate understanding of the use of hammers (e.g., claw, ball-peen, sledge)
- Demonstrate understanding of the use of ripping bars and nail pullers
- Demonstrate understanding of the use of chisels and punches
- Demonstrate understanding of the use of screwdrivers (e.g., Phillips, spade, slotted)
- Demonstrate understanding of the use of wire cutters and pliers (e.g., crimping/lineman's, locking nose, tongue in groove)
- Demonstrate understanding of the use of wrenches (e.g., combination, crescent)
- Demonstrate understanding of the use of sockets and ratchets
- Demonstrate understanding of the use of levels (e.g., laser, torpedo, 2-foot, 4-foot and 6-foot) and squares (e.g., rafter, combination, T)
- Demonstrate understanding of the use of rules and measuring tools (e.g., tape, laser)
- Demonstrate understanding of the use of plumb bob and chalk lines
- Demonstrate understanding of the use of utility knives, jab saw, coping saw (dull vs. sharp)



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Specific Competencies and Skills (continued)

Power Tools

- Identify the general safety rules for operating all power tools, regardless of type
- Identify the general safety rules for properly maintaining all power tools, regardless of type
- Identify, exhibit understanding of, and use stationary power tools in a safe and appropriate manner
- Demonstrate understanding of the use of drills (e.g., power, cordless, hammer and impact wrenches)
- Demonstrate understanding of the use of saws (e.g., table, miter, compound, slide, chop, circular, saber/jig)
- Demonstrate understanding of the use of grinders (e.g., angle) and sanders (belt, palm, and orbital)
- Demonstrate understanding of the use of pneumatically-powered nail guns



Sample Questions

Which of the following agencies is responsible for national workplace safety regulations?

- A. ANSI
- B. OSHA
- C. NIOSH
- D. HAZCOM

Wearing steel-toed boots helps to prevent injuries caused by

- A. impact from falling tools and materials
- B. electrical shock from exposed wire
- C. chemical spills on the jobsite
- D. slippery surfaces due to inclement weather

Hand tools are capable of causing injuries, including

- A. electrocutions, abrasions, lacerations, and contusions
- B. punctures, ulcers, lacerations, and contusions
- C. punctures, abrasions, chemical burns, and contusions
- D. punctures, abrasions, lacerations, and contusions

What tool would a worker use to make sure that the wall is aligned top and bottom?

- A. chalk line
- B. builder's level
- C. plumb bob
- D. torpedo level

The splitter on a table saw

- A. adds strength to the saw
- B. prevents binding of stock
- C. should be removed
- D. makes a guide unnecessary

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Sample Questions (continued)

One of the most common safety grounding systems in extension cords used to protect the worker from shock is the _____ system.

- A. two-wire
- B. three-wire
- C. four-wire
- D. five-wire

The splitter on a table saw

- A. adds strength to the saw
- B. prevents binding of stock
- C. should be removed
- D. makes a guide unnecessary

The operator of heavy equipment on a jobsite must be

- A. certified
- B. experienced
- C. qualified
- D. educated

Four tools used to repair drywall are

- A. screw gun, combination square, cross-cut saw, and coping saw
- B. screw gun, hand saw, utility knife, and spackle knife
- C. screw gun, tape measure, combination square, and utility knife
- D. screw gun, utility knife, keyhole saw, and spackle knife

What is a safe and practical working air pressure for nail guns?

- A. 0-30 psi
- B. 50-70 psi
- C. 80-110 psi
- D. 150-200 psi

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 35 minutes

Number of Jobs: 4

Areas Covered:

19% Circular Saw

Participant will select and set up proper equipment to make an accurate rip, and clean area when finished.

37% Drill Holes

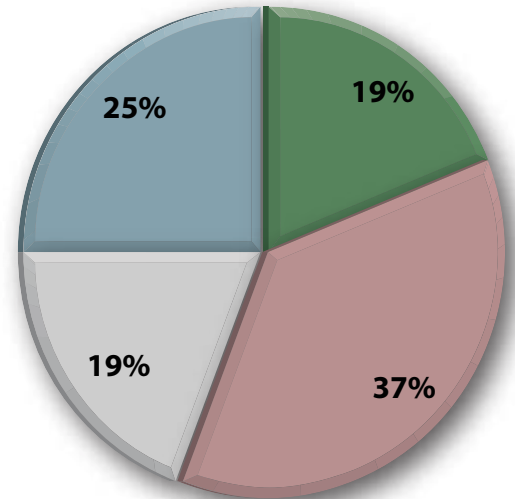
Participant will select and set up proper equipment to drill holes in several types of material, and clean area when finished.

19% Pneumatic Fasteners

Participant will select and set up proper tools and fasteners for framing, sheathing, and roofing.

25% Jobsite Hazards

Participant will identify hazards that are present on a simulated jobsite, and correct the hazards when possible.



Sample Job

Circular Saw

Maximum Time: 20 minutes

Participant Activity: Adhere to safety procedures throughout the job, put on appropriate PPE, replace blade in circular saw, mark dimensions, and rip the board. Clean up work area.



Notes

