

Industrial Ironworker

IRON30_03

Updated November 2024

Focus Statement

An ironworker works comfortably at heights that often reach 2000 feet or higher, recognizes safety-related issues and equipment; masters proper and safe use of a variety of hand and hydraulic, pneumatic, and electrical power tools; recognizes various structural shapes, such as wide-flange beam sections and a variety of fastening materials and their proper uses; directs and assembles different types of mobile and tower construction cranes, creates and develops complex rigging plans for heavy structural steel lifts; effectively communicates hoisting operations using verbal and hand signals; plumbs and aligns steel structures to tolerances set by AISC Code of Standard Practices; fits, bolts, and welds structural members; identifies and interprets a wide variety of blueprint components; calculates weights of a variety of structural shapes, and recognizes the functions and limitations of a wide variety of hoisting equipment and welding processes.

Overview

- Two-hour closed-book examination
- May use a basic function, non-printing calculator
- No extra papers, books, notes or study materials are allowed

Minimum passing score is 75.

Performance Verification

A corresponding hands-on Performance Verification is available.

NCCER Curriculum

All NCCER knowledge assessments are referenced to NCCER's curriculum modules as listed on this specification sheet. This assessment is referenced to NCCER's 2nd edition of the Ironworking curriculum. You may order books and modules from Pearson by visiting www.nccer.org/order-books-modules/

Assessment Development

All questions are developed and approved by subject matter experts under the direction of NCCER.

Credentials

Upon successful completion of the knowledge assessment or performance verification, credentials can be viewed and printed by the individual or assessment program through their NCCER Account.

Score Report and Training Prescription

Each candidate will have online access to their assessment results including their overall score and recommended training through their NCCER Account.

Written Assessment Contents:

Module ID	Content Domain/Module Title	Number of Items
29102 30112	Cutting & Welding	6
30106 30107 30316 38301	Rigging	11
30105 30203 30207	Cranes and Forklifts	8

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Written Assessment Contents:

Module ID	Content Domain/Module Title	Number of Items
30109 30112 30205	Structural Ironworking	7
30103	Tools and Equipment of the Trade	2
30104	Fastening	2
30110 30208	Plumbing, Aligning, and Guying	5
30108 30204	Trade Drawings	4
30113	Joists and Girders	3
30115 30201	Trade Math and Field Fabrication	7
30114	Metal Decking and Stud Welding	2

Total Number of Items

57