

Michigan
Access
Only



SKILLED TO BUILD MICHIGAN FOUNDATION

Residential Construction Skills

CERTIFICATION



CERTIFICATION BLUEPRINT

ABOUT SKILLED TO BUILD MICHIGAN FOUNDATION

Skilled to Build Michigan Foundation is the nonprofit arm of the Home Builders Association of Michigan, a professional trade association with a 4,000+ member network of builders, remodelers and subcontractors. Over the last decade, the residential construction industry has seen a tremendous decline in skilled labor. By connecting employers with skilled laborers, we can address the workforce shortage and fill these essential positions

Learn more at: <https://skilledtobuildmichigan.com/stb-credential/>.

CERTIFICATION EXAM OVERVIEW

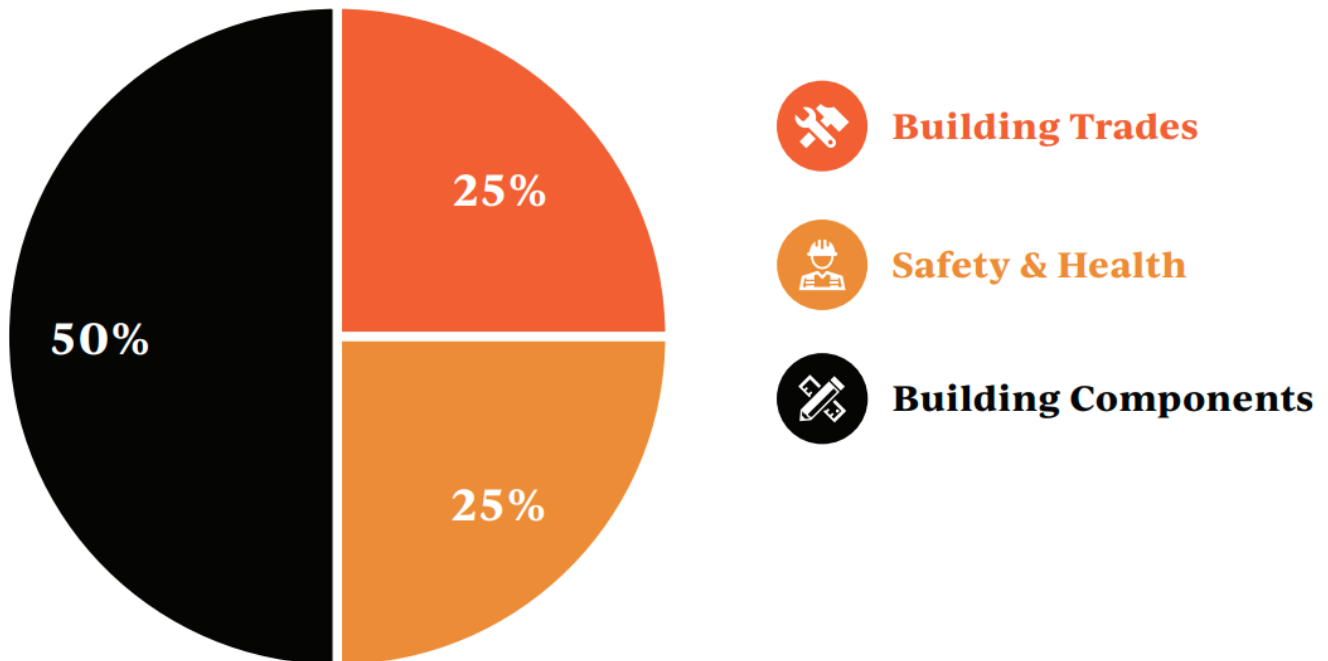
The Skilled to Build Michigan Foundation Residential Construction Skills Certification confirms the Michiganders possess the essential knowledge and skills to excel in the building industry. This certification is available to anyone, regardless of their stage in education or career, and is designed to validate expertise for students and professionals alike. The exam consists of 100 questions and evaluates knowledge of building trades, components, safety and health.

TESTING PLATFORM

The Skilled to Build Michigan Foundation utilizes iCEV as the certification testing platform. As the testing platform, iCEV fulfills the following responsibilities:

- Provides secure testing technology for certification exams
- Regulates testing environment
 - The [proctoring guidelines](#) are designed to protect the integrity of the certification exam. Testing must be proctored, and referencing any study material is strictly prohibited. Re-tests, if needed, are available with remediation and remuneration.
- Works with Secondary and Post-Secondary academic institutions, workforce development associations, and the public at large to offer certification options for career advancement.
- Provides certification verification to employers for potential job applicants
- Offers certification exam preparation materials

INDUSTRY STANDARDS OVERVIEW



LEARNING OBJECTIVES & INDUSTRY STANDARDS

1. Building Trades

1.1 Installation: Drywall

- 1.1.1 To discuss tools and materials needed for drywall installation
- 1.1.2 To describe safety precautions relevant to drywall installation
- 1.1.3 To demonstrate the installation of a drywall interior wall
- 1.1.4 To demonstrate the installation of a drywall ceiling
- 1.1.5 To demonstrate the process of repairing a hole in a wall made of drywall

1.2 Installation: Plumbing Equipment & Fixtures

- 1.2.1 To discuss tools and materials needed for plumbing installation
- 1.2.2 To describe safety precautions relevant to plumbing installation
- 1.2.3 To demonstrate the installation of basic plumbing systems

1.3 Installation: Electrical Wiring & Control Systems

- 1.3.1 To discuss tools and materials needed for electrical wiring and control system installation
- 1.3.2 To describe safety precautions relevant to electrical wiring and control system installation
- 1.3.3 To demonstrate the installation of electrical wiring and control systems

1.4 HVAC: The Refrigeration Cycle

- 1.4.1 To define the basic terminology associated with the refrigeration cycle
- 1.4.2 To identify the four primary components of the refrigeration cycle
- 1.4.3 To explore various types of refrigerants
- 1.4.4 To summarize the effect each of the four primary components has on refrigerant during the refrigeration cycle

1.5 HVAC: Basic Tools

- 1.5.1 To summarize the key safety rules and OSHA regulations required for a safe worksite
- 1.5.2 To explain the types of personal protective equipment used during the service and installation of HVAC systems
- 1.5.3 To identify the tools used for service and installation of HVAC systems, including tools used for brazing, testing and metal duct fabrication

2. Safety & Health

2.1 Personal & Occupational Health & Safety

- 2.1.1 To understand OSHA's role in occupational health and safety
- 2.1.2 To learn the rules and regulations of a job site
- 2.1.3 To understand basic job site hazards and safety
- 2.1.4 To learn about and care for personal protective equipment
- 2.1.5 To understand emergency preparedness plans and actions

2.2 Hand & Power Tool Safety in Construction Environments

- 2.2.1 To explain the hazards of working with hand and power tools
- 2.2.2 To summarize the safe working practices for using hand and power tools
- 2.2.3 To demonstrate how to maintain safe working environments while using hand and power tools

2.3 Trenching & Shoring Safety in Construction Environments

- 2.3.1 To discuss the hazards of trenching
- 2.3.2 To explain the safety regulations keeping workers safe on worksites with trenches
- 2.3.3 To list the safe work practices workers can utilize to stay safe on worksites with trenches

2.4 Excavator Safety

- 2.4.1 To describe the procedures for inspecting excavator components
- 2.4.2 To explain how operators protect the safety of themselves and their coworkers

3. Building Components

3.1 Introduction to Construction Drawings

- 3.1.1 To understand classifications of different construction drawings
- 3.1.2 To recognize elements and symbols of construction drawings
- 3.1.3 To recognize various drawing tools
- 3.1.4 To understand how to develop and design a building plan

3.2 Understanding Construction Codes, Regulations & Contracts

- 3.2.1 To know the regulatory agencies and organizations involved in construction
- 3.2.2 To understand building codes, regulations and standards
- 3.2.3 To become knowledgeable on construction contracts

3.3 Site Preparation

- 3.3.1 To evaluate specific characteristics at potential sites
- 3.3.2 To identify surveying equipment and understand various surveying types
- 3.3.3 To understand factors involved in pre-construction and specific procedures involved in development

3.4 Installation: Foundation & Subflooring

- 3.4.1 To discuss tools and materials needed for foundation and subflooring installation
- 3.4.2 To describe safety precautions relevant to foundation and subflooring installation
- 3.4.3 To understand the basics of lumber
- 3.4.4 To demonstrate the installation of foundation and subflooring

3.5 Installation: Framing

- 3.5.1 To discuss tools and materials needed for framing installation
- 3.5.2 To describe safety precautions relevant to framing installation
- 3.5.3 To demonstrate the installation of wall, ceiling and roof framing
- 3.5.4 To demonstrate the of decking and framing member buildup

3.6 Installation: Windows

- 3.6.1 To evaluate specific characteristics at potential sites
- 3.6.2 To identify surveying equipment and understand various surveying types
- 3.6.3 To understand factors involved in pre-construction and specific procedures involved in development

3.7 Installation: Doors

- 3.7.1 To discuss tools and materials needed for door installation
- 3.7.2 To describe safety precautions relevant to door installation
- 3.7.3 To demonstrate the installation of an exterior door

3.8 Installation: Roofing

- 3.8.1 To discuss tools and materials needed for roof installation
- 3.8.2 To describe safety precautions relevant to roof installation
- 3.8.3 To demonstrate the installation of a traditional shingle roof