Construction Pre-apprenticeship Program

Institute for Workforce Education

A Division of St. Augustine College

This program is designed for individuals who want to prepare for entrance into apprenticeship programs in the construction trades. It covers the skills required to sit in an apprenticeship interview and prepares them with the skills to take an apprenticeship entrance exam. This training program is designed with a very interactive and hands-on approach based on adult learning theory and it includes presentations, demonstrations, activities and exercises, and multi-media tools.

PREREQUISITES

1. 9th grade level reading, writing, and math skills as demonstrated by TABE test results.
2. Commitment to completing the course with all of its modules as demonstrated by signing the training commitment contract.
3. Pass the screening profile as designed and approved by HACIA.

Instruction hours: 80 hours

Course Outline

Module 1: Introduction to Construction and Its Trades (5 hours)
Introduces participants to the world of construction, its past, present, and future, and the trades available for participants to specialize in. For each construction trade of focus (carpentry, electrical, drywall, paint, and equipment operation), this module reviews the history of the trade, describes the apprentice program, identifies career opportunities for carpentry and construction workers, and lists the responsibilities and characteristics a worker should possess.

Module 2: Basic Safety (10 Hours)
Complies with OSHA-10 training requirements. Explains the safety obligations of workers, supervisors, and managers to ensure a safe workplace. Discusses the causes and results of accidents and the impact of accident costs. Defines safe work procedures, proper use of personal protective equipment, and working with hazardous chemicals. Identifies other potential construction hazards, \including hazardous material exposures, welding and cutting hazards and confined spaces.

Module 3: Introduction to Construction Math (20 Hours)
Reviews basic mathematical functions and explains their applications to the construction trades. Explains how to use and read various length measurement tools, including standard and metric rulers and tape measures, and the architect's and engineer's scales. Explains decimal-fraction conversions and the metric system, using practical examples. Also reviews basic geometry as applied to common shapes and forms.

Module 4: Introduction to Hand Tools (5 Hours)
Introduces trainees to hand tools that are widely used in the construction industry, such as hammers, saws, levels, pullers, and clamps. Explains the specific applications of each tool and shows how to use them properly. Also discusses important safety and maintenance issues related to hand tools.

Module 5: Introduction to Power Tools (5 Hours)
Provides detailed descriptions of commonly used power tools, such as drills, saws, grinders, and sanders. Reviews applications, proper use, safety, and maintenance. Many illustrations show power tools used in on-the-job settings.

Module 6: Introduction to Construction Drawings (10 Hours)
Familiarizes trainees with basic terms for construction drawings, components, and symbols. Explains the different types of drawings (civil, architectural, structural, mechanical, plumbing/piping, electrical, and fire protection) and instructs trainees on how to interpret and use drawing dimensions. Four over-sized drawings are included.

Module 7: Basic Communication Skills (7.5 Hours)
Provides trainees with techniques for communicating effectively with co-workers and supervisors. Includes practical examples that emphasize the importance of verbal and written information and instructions on the job and teaches participants how to design a professional resume. Also discusses effective telephone and e-mail communication skills.

Module 8: Basic Employability Skills (7.5 Hours)
Identifies the roles of individuals and companies in the construction industry. Introduces trainees to critical thinking and problem solving skills and computer systems and their industry applications. Also reviews effective relationship skills, effective self-presentation and interviewing skills, and key workplace issues such as sexual harassment, stress, and substance abuse.

Module 9: Green Construction (10 Hours)
Provides fundamental instruction in the green environment, green construction practices, and green building rating systems.