

AIT-1050: CONSTRUCTION INDUSTRY ORIENTATION

Cuyahoga Community College

Viewing: AIT-1050 : Construction Industry Orientation

Board of Trustees:

2016-05-26

Academic Term:

Fall 2024

Subject Code

AIT - Applied Industrial Technology

Course Number:

1050

Title:

Construction Industry Orientation

Catalog Description:

An introduction to the construction industry and to respective construction apprenticeship programs and respective entry requirements. Included are soft skills for industry success, introduction to green building techniques and apprenticeship training center visits. Instruction site exploration will be included whenever possible.

Credit Hour(s):

3

Lecture Hour(s):

3

Requisites

Prerequisite and Corequisite

Eligibility for ENG-0985 Introduction to College Literacies, MATH-0915 Basic Arithmetic and Pre-Algebra or qualified Math placement, and concurrent enrollment in the following courses: AIT-1010 Construction Measurements and Calculations, AIT-1020 Comprehension and Communication for Construction, AIT-1030 Basic Construction Language, AIT-1040 Spatial and Mechanical Reasoning, AIT-1060 Construction Tools, and AIT-1120 Building Construction Trades Lab.

Outcomes

Course Outcome(s):

Discuss the various construction industry building trades, the hierarchy of construction and develop an understanding of union versus non-union operations.

Objective(s):

1. Describe the different building trades on a construction site.
2. Explain the hierarchy of construction.
3. Differentiate between union sponsored training programs and non-union.
4. Describe the responsibilities of labor, management and labor management organizations and associations.
5. Discuss green building and how it relates to construction.

Course Outcome(s):

Explain the purpose of apprenticeship programs, the history past and current and identify governing standards with respect to entry and duration.

Objective(s):

1. Explain the procedures for entry into the union apprenticeship programs and distinguish between "intent to hire" entry and standard testing.
2. Explain the function of the Bureau of Apprenticeship in conjunction with the Federal Government.
3. Explain the need for money management and work cycles in construction.
4. Discuss history of apprenticeship programs and current state of apprenticeship programs.

5. Differentiate between the various apprenticeship programs.
6. Explain the graduated pay structure of the union apprenticeship programs.
7. Identify the respective lengths of different construction apprenticeship programs and discuss how graduated pay scales are affected.

Course Outcome(s):

Discuss the importance of soft skills and personal physical conditioning in the construction industry and their relative importance to career success.

Objective(s):

1. List different soft skills in the construction industry.
2. Explain the need for money management and work cycles in construction.
3. Apply conflict resolution practices on the jobsite.
4. Discuss the importance of good communication skills and the application of them on construction sites.
5. Recognize importance of maintaining good physical health and establish a program that develops and maintains stamina and endurance required for work in the construction industry.

Methods of Evaluation:

1. Tests
2. Quizzes
3. Class participation

Course Content Outline:

1. Construction building trades
 - a. Trades
 - i. Architectural
 1. Bricklayer
 2. Carpenter
 - a. Concrete form builder
 - b. Interior systems mechanic
 - c. Residential
 - d. Heavy and highway
 3. Cement finisher
 4. Construction tender
 5. Electrician
 6. Floorlayer
 7. Glazier
 8. Ironworker
 9. Laborer
 10. Millwright
 11. Operating engineer
 12. Roofer
 - ii. Mechanical
 1. Plumber
 2. Pipefitter
 3. Sheet metal worker
 - iii. Electrical
 1. Inside wireman
 2. Telecommunications
 3. Residential
 - b. Hierarchy
 - i. Developer
 1. Architect
 2. Owner
 - ii. General contractor/construction manager

1. Subcontractor
 2. Supervision
 3. Project manager
 - iii. Workforce
 1. Superintendent
 2. Foreman
 3. Journeyman
 4. Apprentice
 - c. Union versus non-union
 - d. Organizations and associations
 - i. Labor
 - ii. Management
 - e. Green building
 - i. Materials
 - ii. Work practices
2. Apprenticeship
 - a. History
 - i. Past
 - ii. Present
 - b. Apprenticeship programs
 - i. Day school
 - ii. Night classes
 - iii. Weekly
 - iv. Quarterly
 - v. Seasonal
 - c. Pay structure
 - i. Graduated increases
 - ii. Apprentice responsibilities
 - d. Terms of apprenticeship
 - i. Three year
 - ii. Four year
 - iii. Five year
 - e. Condition of entry
 - i. Intent to hire
 - ii. Testing
 - f. Bureau of Apprentice and Training (BAT)
 - i. Federal governance
 - ii. Apprentice standards
3. Soft skills
 - a. Responsibility
 - i. Promptness
 - ii. Time management
 - b. Self management and self esteem
 - i. Dress code
 - ii. Respect
 - c. Conflict resolution
 - d. Communication
 - i. Listening
 - ii. Feedback
 - iii. Definition and process
 - e. Money management
 - f. Physical health program
 - i. Purpose
 1. Stamina
 2. Endurance
 - ii. Components

1. Training
2. Cardiovascular
3. Weight Control

Resources

National Labor College. *Core Curriculum*. existing. National Labor College, Silver Springs, Md, 2009.

International Pipe Trades Joint Training Committee. *Building Trades*. current. Annapolis Md.United Assoc, 2007.

Carpenters International Training Fund CITF. *Craft Orientation*. current. CITF Las Vegas,Nv, 2010.

Top of page

Key: 45