

## **COURSE INFORMATION**

<b>Course prefix/No.:</b>	<b>BCT 142</b>
<b>Course Title:</b>	<b>Fundamentals of Construction Safety</b>
<b>Lecture Hours/Week:</b>	<b>4.0</b>
<b>Lab Hours/Week:</b>	<b>0</b>
<b>Credit Hours/Semester:</b>	<b>4.0</b>

[\*Distance Learning Attendance/VA Statement\*](#)  
[\*Textbook Information\*](#)

## **COURSE DESCRIPTION**

This course covers safety standards and practices as they apply to the building construction industry.

## **COURSE COMPETENCIES**

Upon successful completion of this course, the student should be able to:

### **Module 1 - Introduction to Safety and Personal Protective Equipment**

- Explain the importance of safety in construction.
- Describe the roles of the employee and employer in maintaining a safe work environment.
- Locate and explain specific OSHA safety requirements.
- Name the essential components of an effective company safety program.
- Explain the importance of personal protective equipment (PPE).
- Explain when head PPE is needed.
- Describe the appropriate maintenance required for head PPE.
- Describe circumstances where eye protection is required.
- Select correct eye PPE for various construction activities.
- Describe required features for foot PPE.
- Select and fit appropriate gloves for different construction activities.
- Select and use appropriate PPE for ears.
- Explain when it is appropriate to use a safety harness system.
- Observe correct technique in lifting heavy objects.

### **Module 2 - Maintaining the Safe Worksite**

- Describe the features of a safe worksite.
- Maintain a worksite that is clear of debris, trash, materials, and tools.
- Describe and maintain the light level needed for working safely.
- Observe safety precautions while on scaffolds and ladders.
- Explain methods used to keep workers from falling or stepping off stairs.

- Identify and eliminate hazards on stairs before they are used.
- Inspect and maintain ladders to manufacturer's specifications.
- Explain correct ways to place and secure ladders at the base.
- Demonstrate the correct way to climb a ladder with three point contact.
- Describe the features of an OSHA-approved ladder.
- Describe the foundations and leveling devices that are acceptable for erecting scaffolds.
- Identify and correct hazards on a scaffold.
- Explain situations that require the installation of guard rails or other fall protection devices.
- Explain the use of guardrail alternatives (such as slide guides and harnesses) when guardrails cannot be used.
- Explain situations where slide guards and safety harness systems are required on roofs.
- Describe procedures to prevent workers from falling through roof openings and skylights.
- Describe unsafe weather conditions which require roofing operations to halt.

### **Module 3 - Excavations and Trenching**

- Describe OSHA requirements to keep workers from being crushed.
- Explain requirements to give workers a way to get into and out of a trench or excavation.
- Describe requirements for using shoring, shields, and benching in excavations.
- Explain OSHA rules for keeping water out of excavations.
- Explain OSHA rules for inspecting for and preventing cave-ins.
- Describe necessary precautions to prevent workers from injury by loading and unloading dump trucks.
- Identify and describe corrective measures for hazards on excavation sites.

### **Tools and equipment**

- Maintain hand tools and power equipment in safe working condition.
- Demonstrate correct procedures for using various hand and power tools.
- Utilize blade guards as specified by OSHA.

### **Module 4 - Vehicles and mobile equipment**

- Locate and explain OSHA codes relating to vehicles and mobile equipment and the training of workers that operate them.
- Maintain vehicles and mobile equipment to meet OSHA requirements.

## **Electrical, Sanitation, and Fire Prevention**

- Locate and explain OSHA codes regarding temporary power, extension cords, work on new and existing energized circuits, and requirements for ground fault interrupters (GFIs).
- Maintain power tools and equipment to manufacturer's specifications.
- Inspect a job site and identify electrical shock hazards
- Describe corrective measures to eliminate job site and electrical shock hazards.
- Explain OSHA requirements for potable water and toilet facilities at all jobsites.
- Explain safety precautions for storing paint, solvents, and other types of flammable materials.
- Explain the functions of HazCom and MSDSs.
- Describe fire prevention and extinguishing techniques.
- Inspect a job site and identify potential fire hazards
- Describe corrective measures to eliminate potential fire hazards.

## **REQUIREMENTS**

### *Attendance Policy*

The college attendance policy stated in the college handbook will be honored. The instructor will provide specific requirements for the course.

### *Academic Honesty*

Students are expected to adhere to the college policy regarding student conduct as stated in the college handbook.

### *Assignments*

Students are expected to complete all assignments and any supplementary exercises designated by the instructor.

## **EVALUATION STRATEGIES/GRADING**

Students must complete all modules, including assignments, projects, labs, and tests. Students must earn at least a "C" in order for the course to serve as a prerequisite and for the course to apply towards a certificate.

### **Grading Scale**

A = 90 -100

B = 80 - 89

C = 70 - 79

D = 60 - 69

F = 0 - 59

## Evaluation Method

Tests/Projects (minimum of four total)	12.50% for each module
Work Attitude	6.25% for each module
Lab	6.25% for each module

100% Final Grade = 25% X 4 modules

## Work Attitude is defined as:

- Participation
- Responsibility
- Cooperation
- Professionalism
- Appearance
- Attendance
- Effort
- Self Motivation
- Safety
- Works Independently

## ENTRY LEVEL SKILLS

The student must be able to read and solve basic mathematical equations.

## PREREQUISITES/CO-REQUISITES

**Prerequisites:** RDG 031 or equivalent

**Co-requisites:** None

## METHODS OF INSTRUCTION

Lectures, reading assignments, projects, discussions, video presentations, multimedia presentations, and web content are the major teaching methods used in this course. See instructor for specifics.

## LAB EXERCISES

See addendum and/or instructor for additional details.