

SOUTHEAST COMMUNITY COLLEGE
ADVANCED TECHNOLOGIES & SKILLED TRADES DIVISION
Building Construction Technology Program
Revision Date: October 5, 2023

I. CATALOG DESCRIPTION

Course Number: CNST1180
Course Title: Construction Equipment Operator
Prerequisite(s): None
Catalog Description: Light Construction Equipment Operator-based safety training including: OSHA certification for operation of Skid Steer, Mini Excavator, Telehandler, Forklift, and Scissor Lift. Students will perform a supervised operation evaluation as well as a written test for all 5 pieces of equipment.

Credit Hours: 2
Class Hours: 15
Lab Hours: 45
Total Contact Hours: 60

II. COURSE OBJECTIVES: *Course will:*

- A. Provide instruction in the prevention of accidents through the use of human performance tools, checklists and procedures.
- B. Introduce the student to safety equipment and devices commonly used in the protection of personnel on the job.
- C. Introduce the proper selection, use and care of personal protective equipment.
- D. Provide students with multiple case studies, research requirements, videos, and class discussion on historic industrial and environmental accidents and their causes.
- E. Provide an opportunity for students to become certified to operate a forklift, telehandler, scissor lift, skid steer, mini excavator

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to*
 - 1. Understand the reasons for safety in the workplace.
 - 2. Explain how to use Personal Protective Equipment for all work situations.
 - 3. Understand and demonstrate the proper use of a forklift, telehandler, scissor lift, skid steer, and mini excavator.
- B.

IV. CONTENT/TOPICAL OUTLINE

Interior

- a) Operator's Manual
- b) Capacity and Warning Labels
- c) Safety Restraint
- d) Fire Extinguisher
- e) Controls
- f) Mirrors

Exterior

- a) PPE
- b) Engine Check
- c) Hoses and Wiring
- e) Protective Structures
- f) Lights
- g) Tires
- h) Tracks
- i) Lift Arms
- j) Bucket & Other Attachments

Stability Principles

- a) Balance & Leverage
- b) Center of Gravity
- c) Tipping Capacity
- d) Rated Operating Capacity
- e) Attachment – ROC
- f) Weight Distribution
- g) Ground Conditions
- h) Weather

Safe Operations Begins with You

- a) Emotional & Physical Health & Fatigue
- b) General Distractions
- c) PPE

Know Your Machine

- a) Operator's Manual
- b) Mounting & Dismounting
- c) Restraint Systems

Know Your Worksite

- a) Communication
- b) Pedestrians
- c) Travel With Loads
- e) Emergency Stop
- f) Ramps & Trailers

V. INSTRUCTIONAL MATERIALS

- A.** Other Resources: Instructor provided, Internet, classroom activities
- B.** Outside Reading/Research required: Internet Research assignments
- C.** Supplies:
 - 1. USB Flash Drive
 - 2. Reusable Ear Plugs
 - 3. Safety Glasses
 - 4. Hard Hat (Class E minimum)
 - 5. Leather Gloves
 - 6. Safety Shoes

VI. METHODS OF PRESENTATION/INSTRUCTION

- A.** Methods of presentation typically include a combination of the following:
 - 1. Instructor-led learning activities
 - 2. Assigned research projects
 - 3. Homework assignments
 - 4. Quizzes and tests

VII. METHODS OF EVALUATION

- A.** Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1. Class participation
 - 2. Regular assignments
 - 3. Written exams and/or quizzes
 - 4. Performance and observational assessments

VIII. SPECIFIC COURSE REQUIREMENTS

- A.** A minimum grade of “C” or 70% is required to receive credit for this course.
- B.** A minimum grade of “B” or 80% is required to achieve the NUCP certificate, in accordance with ACAD 08-006, Revision 1, dated October 2016
- C.** Credit by Examination: Credit for the course CANNOT be earned through Credit by Examination.