

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Building Construction Technology Program
Revision Date: August 26, 2019

I. CATALOG DESCRIPTION

Course Number: CNST1125
Course Title: Concrete and Masonry Applications I
Prerequisite(s): None
Corequisite(s): CNST1123
Catalog Description: Laboratory application in proper use of concrete and masonry tools, materials. Experience in block and brick laying, concrete forming, and reinforcing and finishing. Safety training.

Credit Hours: 1.5
Class Hours: 0
Lab Hours: 68
Total Contact Hours: 68

II. COURSE OBJECTIVES: *Course will:*

- A. Select and mix mortar by hand and with machine for brick and block work to complete projects.
- B. Layout a site for small residential foundation.
- C. Erect batter boards and square building layout.
- D. Set string at proper setbacks for building, foot, footing, and excavation lines.
- E. Level and plumb block lab projects.
- F. Identify block sizes, modular layout, block bonds, and joint finishes to properly complete projects.
- G. Select, place, finish, and reinforce concrete for sidewalks, slabs, and footings.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A. Student Learning Outcomes: *Student will be able to:*
 - 1. Demonstrate quality of performance in bricklaying through participation in the Fastest Trowel Evaluation.
 - 2. Demonstrate an industry related production level for units of masonry placed per day.
 - 3. Place, finish and reinforce concrete for sidewalks, slabs and footings.
- B. General Education Learning Outcomes:
 - 1. GELO #3: Critical Thinking & Problem Solving
Outcome 1: Collect, identify, interpret and analyze data.

IV. CONTENT/TOPICAL OUTLINE *(course outline may provide more detailed information)*

- A. Mortar mixing
 - 1. Operation, proportions, consistency, machine mixing, hand mixing
- B. Site layout
 - 1. Batter boards, squaring procedures – builder's level, 6-8-10 method, diagonal method, square root process
- C. Block projects
 - 1. 4' block wall, block corner, pilaster, 12' block wall with window, 10' square building (3 courses high)
- D. On-the-job training
 - 1. Block, concrete

- E. Concrete construction
 - 1. Mixes, admixtures, placing, troweling, finishes
- F. Tours
 - 1. Construction site, block plant, State Capitol

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): Kicklighter, *Modern Masonry*, (Refer to CID and/or instructor for current edition)
- B. Supplies/Tools required by the Building Construction Program:
 - 1. Safety glasses
 - 2. Hard Hats
 - 3. Work boots

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Hands-on lab projects
 - 2. Lab demonstrations
 - 3. Lab assistance
 - 4. Speaker(s)
 - 5. Field Trip(s)
 - 6. Instructional handouts

VII. METHODS OF EVALUATION

- A. Methods of evaluation, although determined by the individual instructor, traditionally includes a combination of the following:
 - 1. Projects (84% of final grade)
 - a. Due dates are provided with assignment
 - b. Complete projects on time
 - c. Points are deducted if a project is late
 - 2. Lab Evaluation (16%)
 - a. Time management (20% of lab evaluation)
 - b. Speed and accuracy (20%)
 - c. Work habits and safety practices (10%)
 - d. Initiative and leadership (15%)
 - e. Application of theory and concepts (20%)
 - f. Attitude, cooperation, and teamwork (15%)
 - 3. Evaluation will be based on the number of points earned from the total points possible.

VIII. SPECIFIC COURSE REQUIREMENTS

- A. Student must meet all of the following to receive a passing grade:
 - 1. Achieve a passing grade of "C" (70%) or higher, based on SCC grading scale.
 - 2. Submit own work. Students turning in homework, reports, field notes, or calculations by someone other than themselves will receive 0% and be referred to the Division Dean and Dean of Students for further disciplinary action. Consequences can include failing the course.
 - 3. Demonstrate attitude, skills, and character commensurate with industry standards.
 - 4. All program policies of the Building Construction Technology program will be strictly enforced.
 - 5. Intentional damage to college property will not be tolerated and may result in punitive action, such as being removed from the program.

6. All cell phones will be turned off during class/lab time. If this becomes a problem, the instructor may consider the delinquent student absent.