

SOUTHEAST COMMUNITY COLLEGE
CONSTRUCTION MANUFACTURING AND TECHNOLOGY DIVISION
Design & Drafting Technology Program
Revision Date: August 22, 2022

I. CATALOG DESCRIPTION

Course Number: DDRT2839
Course Title: Commercial Estimating
Prerequisite: DDRT1350
Catalog Description: Methods of performing material takeoff and pricing materials for commercial construction. The commercial estimating process will be covered.

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

II. COURSE OBJECTIVES: *Course will:*

- A.** Demonstrate the steps used to complete a commercial estimate.
- B.** Discuss building codes and their impact on estimating.
- C.** Provide commonly used formulas and procedures for estimating.

III. STUDENT LEARNING OUTCOMES AND GENERAL EDUCATION LEARNING OUTCOMES:

- A.** Student Learning Outcomes: *Student will be able to:*
 - 1.** Identify and list the types of estimates and the procedures used in estimating a commercial building.
 - 2.** Identify from drawings, list and define the methods used in estimating foundations, including formwork, reinforcing and flat work concrete.
 - 3.** List and define methods of estimating masonry materials in a commercial building.
 - 4.** List and define methods of estimating structural steel found in a commercial building.
 - 5.** List and define methods of estimating wood construction in a commercial building.
 - 6.** List and define methods of estimating moisture protection construction in a commercial building.
 - 7.** List and identify types of doors and windows and their frames and select the appropriate hardware for a commercial building.
 - 8.** List and define methods of estimating wood construction in a commercial building.
 - 9.** List and define types of finishes and list methods of estimating finishes for construction in a commercial building.
 - 10.** List and define methods of estimating mechanical and electrical systems for construction in a commercial building.
- B.** General Education Learning Outcomes (GELOs)
 - 1.** GELO #5: Analytical, Quantitative, and Scientific Reasoning
Outcome 1: Apply mathematical and scientific methods to solve problems from an array of contexts and everyday situations.

IV. CONTENT/TOPICAL OUTLINE

- A. Orientation of Commercial Estimating
 - 1. Types of Estimates
 - 2. R.S. Means estimating system
 - 3. Unit-price estimating
 - 4. General rules
 - 5. Procedures
- B. Foundation and Concrete
 - 1. Formwork
 - 2. Reinforcing steel
 - 3. Cast in place concrete
 - 4. Finish
 - 5. Precast or cementitious deck
- C. Masonry
 - 1. Brick and mortar
 - 2. Stone and mortar
 - 3. Concrete block
- D. Structural Steel
 - 1. Structural metals
 - 2. Metal joists and decking
 - 3. Miscellaneous metal or ornamental iron
- E. Wood Construction
 - 1. Rough carpentry
 - 2. Finish carpentry
 - 3. Laminated construction
- F. Moisture Protection
 - 1. Waterproofing
 - 2. Insulation
 - 3. Roofing
 - 4. Sheet metal work
- G. Doors, Windows and Glass
 - 1. Metal doors and frames
 - 2. Wood doors and frames
 - 3. Special doors
 - 4. Metal windows
 - 5. Wood windows
 - 6. Finish hardware
 - 7. Glass gazing
- H. Finishes
 - 1. Drywall
 - 2. Acoustical treatment
 - 3. Flooring
 - 4. Paint & Wall Covering

V. INSTRUCTIONAL MATERIALS

- A. Required Text(s): R.S. Means Company, *Open Shop Building Construction Cost Data Book*

VI. METHODS OF PRESENTATION/INSTRUCTION

- A. Methods of presentation typically include a combination of the following:
 - 1. Lecture
 - 2. Demonstration

3. Classroom discussion
4. Instructional Handouts
5. Power Point Presentations
6. Videos
7. Field Trips

VII. METHODS OF EVALUATION

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

VIII. SPECIFIC COURSE REQUIREMENTS

- A. Students must meet all of the following:
 1. Achieve passing grade of 60% or higher, based on SCC grading scale.
 2. Submit own work. Students turning in homework or drawings by someone other than themselves will receive a grade of 0% and will be referred to the Dean of Students for further disciplinary action.