

STATUS: A

COMMON COURSE NUMBER: BCN2614C

COURSE TITLE: Construction Estimating II

CREDIT HOURS: 3

CONTACT HOURS BREAKDOWN:

Lecture/Discussion 16

Lab 48

Other

Contact Hours/Week 4

CATALOG COURSE DESCRIPTION:

Prerequisite: BCT 1600

Corequisite: None

A study of construction contracts, contractor responsibilities, job planning, scheduling, selection of equipment, methods of construction and safety standards. The student is required to make quantity takeoffs from a set of plans to do pricing of labor and materials.

General Education Requirements - Associate of Arts Degree, meets Area(s):
General Education Requirements - Associate in Science Degree, meets Area(s):

UNIT TITLES:

1. Efficient Use of Specifications
2. Planning the Construction of a Commercial Building
3. Quantity Survey of Materials
4. Pricing Materials, Equipment, and Labor
5. Preparation of Bids and Bidding

I. Course Overview:

Upon successful completion of this course, the students should be able to prepare a complete cost estimate of a commercial building including the quantity take-off according to accepted professional standards.

II. Units:

Unit 1. Efficient Use of Specifications

General Outcome:

- 1.0 The students should be able to demonstrate a proficiency in the fundamentals of reading and using the specifications, including their role as a part of the contract documents.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 1.1 Describe the general conditions of the contract.
- 1.2 Describe the protection, insurance, and guarantee provisions of the contract.
- 1.3 Describe the application of standard building codes as incorporated into the specifications.

Unit 2. Planning the Construction of a Commercial Building

General Outcome:

2.0 The students should be able to demonstrate a proficiency in the procedures and methods necessary for planning the construction of a two-story commercial building.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 2.1 Interpret and describe the basic phases of scheduling sub-contractors.
- 2.2 Describe the principles of supervision required in the construction of small buildings.
- 2.3 Interpret cost control procedures used in small buildings.

Unit 3. Quantity survey of Materials

General Outcome:

3.0 The students should be able to demonstrate a proficiency in the basic procedures and methods required to prepare a quantitative survey for a small building.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 3.1 Make efficient use of construction drawings for estimating purposes.
- 3.2 Describe methods used in quantity surveys.
- 3.3 Prepare a quantity survey tabulated on "estimating data sheets."

Unit 4. Pricing Materials, Equipment, and Labor

General Outcome:

- 4.0 The students should be able to demonstrate a proficiency in the methods and procedures used to prepare a cost estimate for a small building.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

- 4.1 Determine material costs.
- 4.2 Determine equipment costs.
- 4.3 Determine labor costs.

Unit 5. Preparation of Bids and Bidding Procedures

General Outcome:

5.0 The students should be able to demonstrate a proficiency in the use of basic documents during the bidding process.

Specific Learning Outcomes:

Upon successful completion of this unit, the students should be able to:

5.1 Describe the applications of computers for estimating and cost control.

5.2 Determine the overhead costs and profit margins for successful bidding.

5.3 Describe lump sum and mean bidding.

5.4 Analyze unbalanced bids.