

CONS 73 Course Outline as of Fall 2019**CATALOG INFORMATION**

Dept and Nbr: CONS 73 Title: ESTIMATING WITH COMPUTER

Full Title: Estimating with Computers

Last Reviewed: 1/28/2019

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	1.50	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	1.50	Lab Scheduled	2.00	8	Lab Scheduled	35.00
		Contact DHR	0		Contact DHR	0
		Contact Total	3.00		Contact Total	52.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00

Total Student Learning Hours: 87.50

Title 5 Category: AA Degree Applicable

Grading: Grade Only

Repeatability: 00 - Two Repeats if Grade was D, F, NC, or NP

Also Listed As:

Formerly:

Catalog Description:

Creation of cost estimates for residential and/or commercial projects using an industry-accepted computer program.

Prerequisites/Corequisites:

Course Completion of CONS 70B

Recommended Preparation:

Course Completion of CS 61.11A

Limits on Enrollment:**Schedule of Classes Information:**

Description: Creation of cost estimates for residential and/or commercial projects using an industry-accepted computer program. (Grade Only)

Prerequisites/Corequisites: Course Completion of CONS 70B

Recommended: Course Completion of CS 61.11A

Limits on Enrollment:

Transfer Credit: CSU;

Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	Area			Effective:	Inactive:
CSU GE:	Transfer Area			Effective:	Inactive:
IGETC:	Transfer Area			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1999	Inactive:	
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:

Both Certificate and Major Applicable

COURSE CONTENT

Student Learning Outcomes:

At the conclusion of this course, the student should be able to:

1. Prepare a quantity survey and estimate for a residential or commercial construction project using an industry-accepted computer program.

Objectives:

At the conclusion of this course, the student should be able to:

1. Demonstrate ability to use an industry-accepted computer program for estimating.
2. Research and organize information needed for producing a quantity survey and estimate.
3. Produce estimate reports.

Topics and Scope:

I. Introduction and Overview

- A. Review of principles of quantity surveying
- B. Review of principles and types of estimates

II. Software Organization and Capabilities

- A. Estimating software program functions
- B. Understanding the basic commands
- C. Establishing formulas
- D. Accuracy and checking work
- E. Types of reports
- F. Using the program

III. Quantity Survey Data

- A. Using printed construction documents to determine quantities
- B. Using electronic documents to determine quantities
- C. Standard units of measure
- D. Case studies and application

IV. Construction Costs Data

- A. Determine time and pay for labor required for construction tasks
- B. Determine costs of construction materials and equipment
- C. Determine administrative cost of a construction contract

- D. Case studies and application
- V. Quantity Survey and Cost Estimates
 - A. Generating preliminary reports
 - B. Updating information
 - C. Formats for final reports
 - D. Case studies and application
- VI. Student Project
 - A. Review of construction documents
 - B. Setting up the quantity survey and estimate
 - C. Acquiring and entering the quantity survey data
 - D. Acquiring and entering the cost data for labor, materials, equipment, and administration
 - E. Accuracy and checking work
 - F. Producing reports

All topics are covered in the lecture and lab portions of the course.

Assignment:

Lecture-Related Assignments:

1. Assigned reading (20-30 pages per week)
2. Problem solving assignments (6-18)
3. Skills demonstration exercises (4-8)
4. Quizzes (2-4)
5. Final Exam

Lab-Related Assignments:

1. Estimating project (1)

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

None, This is a degree applicable course but assessment tools based on writing are not included because problem solving assessments and skill demonstrations are more appropriate for this course.

Writing
0 - 0%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Problem solving assignments and project

Problem solving
30 - 50%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Skill demonstration exercises

Skill Demonstrations
30 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Quizzes and final exam

Exams
10 - 20%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation

Other Category
0 - 10%

Representative Textbooks and Materials:

Fundamentals of Construction Estimating. 4th ed. Pratt, David. Cengage Learning. 2019
Construction Estimating Using Excel. 3rd ed. Peterson, Steven. Pearson Publishing. 2018
Instructor prepared materials