

CONS 106 Course Outline as of Fall 2024**CATALOG INFORMATION**

Dept and Nbr: CONS 106 Title: ESTIMATING AND BIDDING

Full Title: Construction Estimating and Bidding

Last Reviewed: 9/25/2023

Units	Course Hours per Week		Nbr of Weeks		Course Hours Total	
Maximum	3.00	Lecture Scheduled	3.00	17.5	Lecture Scheduled	52.50
Minimum	3.00	Lab Scheduled	0	6	Lab Scheduled	0
		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: 105.00

Total Student Learning Hours: 157.50

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:

Students will utilize current industry-accepted methods for doing quantity surveys for the preparation of cost estimates for construction or bidding purposes in this intermediate-level course. The culture and environment of the construction industry will be examined as related to construction estimates including methods, ethics, legal issues, and procedures.

Prerequisites/Corequisites:

Course Completion of CONS 101

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

Description: Students will utilize current industry-accepted methods for doing quantity surveys for the preparation of cost estimates for construction or bidding purposes in this intermediate-level course. The culture and environment of the construction industry will be examined as related to construction estimates including methods, ethics, legal issues, and procedures. (Grade Only)

Prerequisites/Corequisites: Course Completion of CONS 101

Recommended:

Limits on Enrollment:

Transfer Credit:

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: Effective: Inactive:

UC Transfer: Effective: Inactive:

CID:

Certificate/Major Applicable:

Certificate Applicable Course

COURSE CONTENT

Student Learning Outcomes:

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

1. Identify and describe common industry-accepted construction pricing models.
2. Apply industry-standard quantity survey methods for a common residential or light commercial project.
3. Describe the key components of a common construction bid.

Objectives:

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

1. Compare and contrast the key differences between a construction estimate and a bid.
2. Assemble a rough estimate for a common residential or light commercial project.
3. Identify key omissions within a common construction bid.
4. Prepare a quantity survey for a construction project using industry-accepted procedures.
5. Describe roles and responsibilities of estimation and bid preparation construction management professionals.

Topics and Scope:

- I. Pre-Bid Strategy for Project Selection
 - A. Contract documents review
 - B. Site review
 - C. Market analysis
 - D. Available workforce
 - E. Risk analysis
 - F. Company backlog
 - G. Company core competencies
 - H. Competition environment

- I. Insurance, bonds, and General Conditions
- J. Overhead and profit
- K. Project timeframe
 - 1. Short-term projects
 - 2. Long-term projects
- L. Project budget and client solvency
- M. Ethical considerations
- II. Estimating
 - A. Quantity survey fundamentals for common residential or light commercial projects
 - 1. Dimensional unit consistency
 - 2. Cross-checking meaningful results
 - 3. Validation of results
 - B. Site analysis
 - 1. Jurisdictional review
 - 2. Geotechnical report and engineering data
 - 3. Materials and equipment staging
 - 4. Jobsite security
 - C. Contingencies
 - D. Pricing formats
 - 1. Unit pricing
 - 2. Square foot cost
 - 3. Detailed breakdown
 - 4. Lump sum
 - 5. Allowances
 - E. Subcontractor and material suppliers' solicitations
 - F. Requests for Information (RFI)
 - G. Computer applications for estimating
- III. Bidding
 - A. Bidding documents
 - 1. Standard bid forms and templates
 - 2. Bid form criteria
 - B. Subcontractor comparative bid analysis
 - C. Material suppliers comparative bid analysis
 - D. Bid presentation and opening
 - E. Bid follow-up for market analysis
 - F. Ethics
 - 1. Bid shopping
 - 2. Unbalanced bid
 - 3. Known under-representation of client risk or cost exposure
 - 4. Avoiding conflicts of interest
 - 5. Observing laws and regulations
 - a. Permits
 - b. Professional consultation

Assignment:

- 1. Reading assignments (20-50 pages per week)
- 2. Study question sets (1-3 weekly)
- 3. Quiz(zes) (1-4)
- 4. Midterm exam
- 5. Interview or research report paper(s) (1-3)
- 6. Final project estimate and presentation

7. Project quantity survey(s) (1-4)

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.

Interview or research report paper(s)

Writing
5 - 10%

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

Study question sets; project quantity survey(s)

Problem solving
30 - 60%

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

None

Skill Demonstrations
0 - 0%

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

Quiz(zes); midterm; final project

Exams
30 - 50%

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

Class participation and presentation

Other Category
5 - 10%

Representative Textbooks and Materials:

Estimating in Building Construction. 9th ed. Peterson MBA PE, Steven and Dagostino, Frank. Pearson. 2018 (classic).

Instructor prepared materials