

Course Outline**Winter 2005**

Division: Business, Engineering & Information Technology	
Program/Dept:	Architectural Engineering Drafting
Course Number:	TDR 270 Credits: 5.0 Variable:
Course Title:	Advanced Estimating
Inst. Intent:	21 Vocational Preparatory CIP: 15.1304
Fee:	No Type:

Degree/Certificate Requirement:	Yes
Name of Degree/	Architectural Engineering Drafting
Certificate Requirements:	Associate of Applied Science Degree.
Distribution Requirement for AA/AAS:	Yes
Transfer Status to 4-year institution:	No.
If yes, please describe:	May transfer to certain schools w/special transfer agreements.
Course Length:	Based on 11 wks/qtr. Class Size: 24
Course Contact Hours:	55
Lecture:	55 Lab: Clinical: Other:
Prerequisite:	Yes If yes, please describe: TDR 269 or instructor permission
Required Placement Tests:	No If yes, please describe:
Comments:	

Course Description:

A continuation of TDR 269. Covers labor and business costs. Develops a system to prepare estimates for complete jobs from current contract documents.

Course Outcomes/Learning Objectives:

1. To develop student skills in making accurate material take offs, computing unit material and labor costs, and the preparation of complete estimates.
2. To familiarize the student with different estimating procedures, classification of costs for different materials, and buying procedures.
3. To familiarize the student with systems of post-bid analysis and refining costs factors through construction management.
4. To familiarize the student with the “Critical Path Method” of construction scheduling.

NSCC General Education Outcomes and/or Related Instructional Outcomes (for technical courses) Met by Course:

- Outcome 2 Demonstrate the ability to use quantitative reasoning processes to understand, analyze, interpret and solve quantitative problems.
- Outcome 4 Demonstrate the ability to access, evaluate and apply information from a variety of sources and a variety of contexts.

Topical Outline and/or Major Divisions:

- I Introduction To Advanced Construction estimating**
 - A. Course contents, class procedures, texts and references
- II Materials Pricing**
 - A. Review of buying procedures and cost classification
 - B. Pricing procedures
 - C. Class co-operative pricing assignment to obtain material costs to be used in class estimates
- III. Labor Costs**
 - A. Introduction to construction labor unions
 - B. Class co-operative labor wage rate project
 - C. Introduction to Associated General Contractors (AGC) and calculation of labor additives
- IV. Competitive Bidding**
 - A. Prepare quantity survey and summary sheets
 - B. Complete bids and submit for bid opening
 - C. Post bid analysis
- V. Construction Management**
 - A. Office and site organization
 - B. Material and labor cost accounting
- VI. Weight Estimation**
 - A. Weight estimation project for footing design and quantity survey
- VII. Critical Path Method of Scheduling**
 - A. Introduction to Critical Path Method (CPM)
 - B. Manual method CPM and class project
 - C. Computers, CPM and estimating
- VIII. Professional Ethics**
 - A. Current industrial/political events
 - B. Sub-contractor, general and estimator guest lectures when available
 - C. Graduate guest lecture
- IX. Student, Instructor and Course Evaluation**

Course Requirements (Expectation of Students):

Performance on assignments, projects, and tests.

Methods of Assessment/Evaluation:

Grade is based on accumulated points from assignments, projects and tests.

Required Text(s) and/or Materials:

Construction Estimating Reference Guide, Craftsman Publishing Co

Supplemental Text(s) and/or Materials:

Materials as selected by Instructor.

Outline Developed by: Mark V. Hillman **Date:** 4/89

Revised by: James Wall **Date:** 3/94, 2/97, 2/02, 5/04