



SACRAMENTO STATE

Construction Management

CALIFORNIA STATE UNIVERSITY, SACRAMENTO

College of Engineering and Computer Science

Construction Management Program

CM125

Email: rmindt@ascentbuilders.com

Advanced Estimating

Course Syllabus

Spring 2009

Class Hours and Locations

Lecture-T/R 5:00 – 5:50 pm

Brighton Hall 210

Lab T/R 6:00-8:50 pm Riverside Hall, Room 4003

Lecture Instructor: Russ Mindt

Cell phone: (916) 743-8520

Lab Instructor: Dr. Justin Reginato

Office phone: 916-278-6592

Email: jreginato@csus.edu

Meetings by Appointment

COURSE DESCRIPTION

We will study the process and practices of estimating and bidding in the construction industry.

PREREQUISITES

This is an upper-division course in the Construction Management curriculum. The prerequisite classes are CM120 and CM 121.

ACADEMIC DISHONESTY

The principles of truth and honesty are recognized as fundamental to a community of scholars and teachers. California State University, Sacramento (CSUS) expects that both faculty and students will honor these principles, and in so doing, will protect the integrity of academic work and student grades. See link <http://www.csus.edu/admbus/umanual/>

Giving aid to a student during an exam or taking information from another student or student's exam constitutes academic dishonesty. Students caught cheating during an exam will receive a failing grade in the course and can be dismissed from the university. Students are encouraged to work together to solve homework problems, but **copying is obviously prohibited**.

Course Objectives

Upon completion of this course, the student should be able to determine:

- o Conceptual scope strategies and quantities for a commercial building project;
- o Understand how LEED affects a construction estimate;
- o Understand how LEAN construction principles affect a construction estimate;
- o Understand how medical construction estimates are affected by OSHPOD in California; Explain the correlation between planning, design, estimating and scheduling;
- o Describe the structure of a General Contractor's Estimating Dept.
- o Organize and develop Conceptual, Schematic, Design Development and Construction Document's estimates.
- o Develop strategies for all components of an estimate.
- o Analyze subcontractor quotes and select the appropriate subcontract bid.
- o Identify and address client needs orally and in writing.
- o Effectively participate in the development and presentation of a bid proposal as a member of a bidding team
- o Understand and have the ability to prepare a development proforma

TEXTBOOKS and OTHER MATERIALS

Required:

- o Construction Cost Estimating, Process and Practices;
By Len Holm, John E. Schaufelberger, Dennis Griffin, Thomas Cole.
- o *RS Means Building Construction Cost Data – Western Edition 2004, 17th edition* **OR**
- o *RS Means Building Construction Cost Data – Western Edition 2008, 21st edition*
- o Project Drawings and Specifications for Liberty II Office Building. **PROVIDED** Provided.
- o A set of colored pencils or highlighters (at least five colors)
- o A medium for storing course information (i.e., CD-RW, JumpDrive, floppy disk, etc.)
- o Architect and Engineer Scales.
- o Scale Master.

References: Construction Graphics: A Practical Guide to Interpreting Working Drawings, by Keith A. Bisharat

Current edition, Walker's Building Estimator's Reference Book

Prior to beginning this class, students should be able to:

- Identify the key components of a detailed estimate and explain their interrelationships
- Explain the elements of labor costs and calculate them for a variety of trades in union and open shop companies alike
- Develop crews and calculate production rates and the associated cost for a variety of construction tasks
- Develop material and labor quantity take-offs for key construction systems that exhibit effective take-off skills: thoughtful analysis, efficiency, a useful format, legibility, and a good audit trail
- Assemble an estimate for a building construction project including direct, indirect, and subcontract costs; insurance and bond premiums; and margin

COURSE ORGANIZATION

This course includes both a discussion section and a laboratory section. Students must be enrolled in both sections. Students are expected to read the assigned material prior to each class and participate in the class discussions.

There will be weekly assignments for the students to complete outside of the classroom time. Some assignments may require computer solutions. Student teams will be formed with work assignments to be completed.

EVALUATION

Grades are based on overall percentage received on quizzes and exercises

- o **Attendance** is critical.
- o Student are required to submit a neatly compiled three-ring binder, with divider tabs, all course notes, assignments, handouts, quizzes, exams, and other course work. Notebooks will be returned to the