



SACRAMENTO STATE
Construction Management

CM – 127
Planning, Scheduling & Control

Course Syllabus
Spring 2009

Class Hours & Location

Instructors: Justin Reginato & Scott Schriefer

Lecture/Lab, Wednesday: 6:00 – 8:50 PM
Academic Resource Center, Room 1014/1015

Contact Information

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CM-127 Project Management Syllabus

COURSE DESCRIPTION

Study of the concepts used in planning and controlling construction projects. Arrow, PERT, precedence, and linear scheduling methods; resource leveling; time-cost analysis; bar charts; and time-scaled diagrams.

PREREQUISITES

This is an upper-division course in the Construction Management curriculum. The specific prerequisite is CM 120. Students should also be concurrently enrolled in CM 125.

ACADEMIC HONESTY AND GRADING SYSTEM

All students are subject to the policies described in the University Catalogue. In particular, students should be familiar with policies described on pages 81-91, pages 98-106, and pages 328-331 in the 2006-2008 CSUS Catalogue.

The principles of Truth and Honesty are recognized as fundamental to the community of Scholars & Teachers. Giving aid to a Student during an exam or taking information from another Student or Student's exam constitutes academic dishonesty. Students caught cheating will receive a failing grade in the course and can be dismissed from the University. Student's are encouraged to work together to solve homework problems, but copying is clearly prohibited.

COURSE OBJECTIVES

- To reinforce and build upon the concepts of management that were introduced in previous CM classes
- To introduce the concepts and techniques of project planning and scheduling
- To provide an understanding of various techniques for planning and scheduling
- To develop in students the ability to recognize and identify the activities involved in a construction project, and to determine or stipulate their relationships
- To introduce the concepts and techniques for monitoring, evaluating, and controlling project performance and value earned
- To develop an understanding of the correlation between project planning and control, and cost estimating and scheduling
- To introduce time-cost analysis concepts and techniques
- To develop an appreciation of the resources required in a project and their limitations, and to introduce the techniques for analyzing and improving the efficiency of their use
- To increase the awareness of the computer as a tool of construction management, and to improve each student's computer skills

SPECIFIC EDUCATIONAL OUTCOMES – CM 127

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

- Identify the basic groups of activities required to schedule a construction project
- Identify the individual activities within the groups relative to specific types of projects
- List the sources for activity durations and the methods of determining them
- Identify the different types of logical relationships that exist between activities
- Identify the appropriate types of date constraints and when they should be applied
- Determine the minimum time to complete a project
- Explain critical path(s) and sub-critical paths in a project
- Post progress to the activities on a periodic basis
- Identify different categories of required resources for activities
- Assign resource quantities and value of work to individual activities
- Determine the required level of resources and value of work complete as a function of project time
- Determine the optimum method for reducing the time required to complete a project
- Produce tabular and graphical depictions of all of the above
- Utilize a computerized scheduling program to accelerate the scheduling process and ease the creation of complex project schedules

TEXTBOOKS AND OTHER MATERIALS

Required:

- **Construction Scheduling, Principles and Practices** by Jay S. Newitt, Prentice Hall, ISBN 0-13-113337-3.

Recommended References:

- **Planning using Primavera Suretrack Project Manager 3.0** by Paul E. Harris, Eastwood Harris Publishers, ISBN 0-9751503-0-8 A4 (spiral).

COURSE ORGANIZATION & EVALUATION

For the most part, classes will be in a lecture-discussion format. Students will be expected to read the assigned material prior to each class and to participate in the class discussions. Frequently homework problems, including computer applications, will be assigned; and, will be reviewed in class. Some homework assignments will require computer solutions by each student. Computer plotted schedules will also be required for one or more projects for which students will have prepared cost estimates and bids in CM 125. A tentative Schedule of Instruction is attached to this syllabus. Grades will be determined using the University catalogue criteria for letter grades (see page 99 of the 2006-2008 CSUS Catalogue).

GRADING

The grades for this course will be determined using the following weightings:

Attendance, Participation, In-Class Exercises, Quizzes	15%
First Mid-Term	15%
Second Mid-Term	10%
Final Exam	20%
Homework and Projects	30%
Presentation	10%

Total	100%

Further breakdown of 15% “Attendance, Participation, In-Class Exercises, Quizzes” portion of the grading:

Attending the classes are very important. The information given during class time supplements the book, there is interaction in class that is valuable, and as we get into computer work it will be the main vehicle for class deliverables.

The components of the 15% will correlate to the relative amount of time, effort, and learning value for the deliverable.

- Class attendance: 10 points per class
- Participation: encouraged, 20 points total for semester, discretionary, (true, positive class participation that benefits group)
- Quizzes: 20 points per quiz
- In-Class Exercises: some are for instruction and practice and will have no formal credit, but a few will have 5 or 10 points and will be identified in advance
- Extra Credit: will vary based on assignment, usually 10 points

All this will be put into a matrix, based on points, to determine the final 15%.

The 30% “Homework and Projects” portion of the grading will have a similar weighted point structure. However, please note that homework is 30% of total grade while attendance/exercises/quizzes/participation is worth 15%, so homework points carry much more value. Please keep this in mind, and put as much effort as you can into your homework.

+ End of CM 127 Syllabus +