

# CEE-680 CONSTRUCTION PLANNING & SCHEDULING

**Professor:**Dr. Sam Salem  
**Office:**795RH  
**Telephone:**6-3759  
**Email:**[osalem@uc.edu](mailto:osalem@uc.edu)  
**Office Hours:** Tuesdays 2:00 – 5:00 PM

## ABSTRACT

This course provides an overview of construction planning and scheduling techniques. The course focuses on specific aspects of construction project planning, scheduling, acceleration, resource management, time updating, and project control. Homework assignments on specific topics covered in the course will be assigned in addition to a mid-term exam and a final exam.

## TEXT

**Hinze, J. W.** (1998) *Construction Planning and Scheduling*. Prentice-Hall, New Jersey.

## DESCRIPTION

The course includes a combination of lectures, assigned readings, individual assignments, and two exams. It will focus on various techniques of construction scheduling such as Gantt charts, critical path methods, network scheduling, PERT and line of balance. Additionally, It will explain how construction projects can benefit from utilizing effective planning and scheduling.

### *Individual Assignments*

There are some assignments to be completed individually. All students will be expected to make a reasonable effort to find answers on their own, ask questions in a professional manner when necessary, and to hand in assignments which have a professional appearance. Collaboration among the students is encouraged, as long as the integrity of the student's individual work and contribution is maintained (i.e., copying and plagiarism will be severely penalized). Professional presentation, good organization, and proper documentation are very important components of the assignment grade. Assignments must be turned in by 5 p.m. on the day they are due. Late work (max two days after the specified deadline) will be graded with 50% deduction from the total score otherwise no points will be received.

## GRADING (UG)

The breakdown of the final grade is:

- Individual Assignments& quizzes 10 %
  - Mid Term Exam 45 %
  - Final Exam 45 %
- Total:** 100 %

## GRADING (Graduate Student Only)

The breakdown of the final grade is:

- Individual Assignments& quizzes 10 %
  - Project Report 30 %
  - Mid Term Exam 30 %
  - Final Exam 30 %
- Total:** 100 %

<u>Date</u>	<u>Lecture Topic</u>	<u>Assigned Readings</u>
<b><u>WEEK 1</u></b>	Review Course Syllabus	
	Introduction: Project Planning and Bar Charts	Introduction & Chapter 1
<b><u>WEEK 2</u></b>	Network Models	Chapter 1
	Arrow Diagrams	Chapter 2
<b><u>WEEK 3</u></b>	Precedence Diagrams	Chapter 4
	CPM Calculations	Chapter 3
<b><u>WEEK 4</u></b>	Advanced Relationships	Chapter 4
	P3 Computer Laboratory	Chapter 10 and P3 Manual
	Least Costs and Least Time Schedules	Chapter 8
<b><u>WEEK 5</u></b>	P3 Computer Laboratory	Chapter 10 and P3 Manual
<b><u>WEEK 6</u></b>	Earned Value	Chapter 11
	<b>MID-TERM EXAM</b>	---
<b><u>WEEK 7</u></b>	PERT Networks	Chapter 16
	Resource Allocation	Chapter 7
<b><u>WEEK 8</u></b>	Resource Leveling	Chapter 7
	P3 Computer Laboratory	Chapter 10 and P3 Manual
<b><u>WEEK 9</u></b>	Linear Scheduling	Chapter 15
	Project Monitoring and Schedule Updating	Chapter 9
<b><u>WEEK 10</u></b>	Short-Interval Schedules	Chapter 14
	Project Delays and Dispute Resolution	Chapter 13
<b><u>WEEK 11</u></b>	<b>FINAL EXAM WEEK</b>	---