

King Fahd University of Petroleum & Minerals  
College of Environmental Design  
Construction Engineering & Management Department

CEM 510 (041)  
SYLLABUS

Instructor: Dr. Mohammed AlKhalil  
Office # 19/432  
Office hours: Sundays & Tuesdays, 1:00-2:30  
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Synopsis:

Planning, scheduling, and control of construction projects using the critical path methods (CPM). Major topics include arrow diagram networks, precedence diagram networks, project control, time-cost trade-off, resource scheduling and resource leveling, and PERT.

Textbook:

Harris, Robert, "Precedence and Arrow Networking Techniques for Construction", 1978, John Wiley.

Grade Structure:

Home-work	20%
Article Presentation	5%
2 Exams	45%
Final Exam	30%

Schedule:

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Date	Topic
12 Sept	Introduction
14	Project Breakdown
19	Basic Arrow Diagramming
21	Basic Precedence Diagramming
26-03 Oct	Scheduling Computations for Arrow Networks
05-12	Scheduling Computations for Precedence Networks
17	Exam 1
19	Communicating the schedule
24-02 Nov	Time/Cost Trade-off (Network Compression/Decompression)
04-20	Id Alfitr Break
21-23	Time/Cost Trade-off (Network Compression/Decompression)
28-05 Dec	Resource Leveling
07	Exam 2
12-14	Project Control
19-28	PERT
02 Jan	Review

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