

CEM 552 – Risk Management in Construction

Four credit hours

Winter Term

One four –hour session, timed to coincide with Business coursework.

Location to be determined

Instructor:

Dr. David N. Sillars

Owen 213

Office hours to be announced

Office phone: 541.737.8058

Email: david.sillars@oregonstate.edu

Prerequisite:

Graduate Standing, and

CEM or CE degree or yrs prof. constr. experience/ OR

Instructor Approval

Reference materials

Primary text (Required)

“Project and Program Risk: A Guide to Managing Project Risks and Opportunities”

Author: R. Max Wideman

Project Management Institute; (May, 1992)

“Managing Risk in Construction Projects”

Author: Nigel J. Smith

Blackwell Science, Inc. (January, 1999)

Other references:

Journal of Construction Management and Engineering

Course Description

This course provides an introduction to the concept of risk in construction projects and construction firms. Course content includes risk definition and identification, risk assessment and management techniques, contractual risk control, risk sharing and risk shedding, and contingency management.

Course Objectives

The student will develop an understanding of:

1. The concept of risk;
2. Methods to identify and assess risk;
3. Means to respond to identified risk;
4. Means to respond to unknown risks; and
5. Risk allocation among project team members.

Calendar

WK	Topic	Objective
1	Construction Risk Management <ul style="list-style-type: none"> ✍ Uncertainty, opportunity, risk ✍ Pro-active risk management 	1
2	General Approach <ul style="list-style-type: none"> ✍ Risk management definition ✍ Variation of risk factors through the project life-cycle ✍ Risk management sequence 	1
3	Risk Identification <ul style="list-style-type: none"> ✍ Project and Corporate risk ✍ Risk identification, configuration, and factoring 	1,2
4	Risk Assessment and Methodology <ul style="list-style-type: none"> ✍ Assessment methodology ✍ Probability basics ✍ Risk in quality and schedule 	2
5	Computer Applications <ul style="list-style-type: none"> ✍ PERT techniques ✍ Range estimating 	2,3
6	Risk Response and Documentation <ul style="list-style-type: none"> ✍ Response options ✍ Preventive planning ✍ Insurance 	3
7	Contingency Management <ul style="list-style-type: none"> ✍ Unknown risks ✍ Contingency allowances 	4
8	Environmental Risk <ul style="list-style-type: none"> ✍ The project environment ✍ Physical and organizational risks ✍ Managing by stakeholder groups 	4,5
9	Contractual Risk Management <ul style="list-style-type: none"> ✍ Strategic risk sharing ✍ Contractual implications 	4,5
10	Review Upcoming trends in risk allocation	1,5
FINAL		

Course Requirements/ Grading

Grade evaluations will be based on the following weighting:

Assignments and Quizzes:	25%
Mid-term exam:	25%
Final exam:	25%
Term project:	25%

Classroom lectures, presentations, and in-class group discussions are an integral part of the course; therefore, attendance is considered mandatory to obtain full benefit of the course.

Tardiness is disruptive and inconsiderate of those in attendance.

In-class participation is a key element in the learning experience. Each student is expected to share experiences and participate in the exploratory and analytical portions of the class.

Other

Syllabus may be adjusted during the term to accommodate guest speakers, etc..

Quizzes or exams may be given in-class or using the Blackboard or other electronic system. Students are expected to be familiar with the use of Blackboard for such quizzes or other class communication.

Missed exams and assignments will be counted as no points in the final grade, unless prior arrangements have been made. Any request to change the time of an examination should be presented at least two weeks in advance of the exam date. Students need to be aware that rescheduling the Final Examination may not be possible even for the most meritorious reasons. Approvals are normally limited to the following reasons.

- a) Conflict with working hours on a job that has been held consistently during the term, and for which working schedules cannot be readily adjusted, despite a sincere attempt by the student to reschedule the working hours. Example: driving a school bus;
- b) Religious reasons;
- c) Four finals in one day, where amicable agreement cannot be reached by the student and the other instructors;
- d) Military obligations verified in writing. Example: military orders, preinduction physical; and
- e) Other exceptional hardship cases.

Petitions for reasons of personal convenience are generally not approved.

Students with documented disabilities who may need accommodations, who have any emergency medical information the instructor should be aware of, or who need special arrangements in the event of evacuation, should make an appointment with the instructor as early as possible, and no later than the first week of the term. Class materials will be made available in accessible format upon request.