

Sub

FORMAT 1

10. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):



11. COMPLETE CATALOG DESCRIPTION including dept., number, title and credits (50 words or less, if possible):

ALL SIGNATURES MUST BE OBTAINED PRIOR TO SUBMISSION TO THE GOVERNANCE OFFICE

	Date	
Signature, Chair, UAF Faculty Senate Curriculum Review Committee		

ADDITIONAL SIGNATURES: (As needed for cross-listing and/or stacking)

	Date	
Signature, Chair, Program/Department of:		

	Date	
Signature, Chair, College/School Curriculum Council for:		

	Date	
Signature, Dean, College/School of:		

Syllabus

Prerequisites: None. Recommended: College degree in engineering or science or any college degree with construction experience

Meets Monday and Wednesday in the UAF Center for Distance Education conference room, corner of University and Davis Rd., and a remote location, 3PM to 5:15 PM, January 21 to February 9.

Instructor: Dr. Robert Perkins, PE, 253 Duckering, 474 7694, ffrap@uaf.edu, Office Hours 9:30 to 12, Tues and Thurs or by appointment.

Course material is available on:

<http://www.faculty.uaf.edu/ffrap/CM%20Course%20Info/CM%20Index.html>

There is no required textbook. Two documents from the web should be downloaded to your computer and/or printed:

Goals, Description, and Schedule

Goal: Students will develop a basic understanding of risk in project management practice with applications to construction management. They will be able to write a project risk management plan and apply some risk principles to estimates using Excel and Crystal Ball.

Course outline

Classes 1, Wednesday, January 21, 2009

Introduction

Decisions, Certainty, Uncertainty, and Risk.

Risk and Projects

Qualitative Risk Analysis

Class 2, Monday, January 26

Construction

Construction and Risks

Estimating and Risks

Work Breakdown Structure

Class 3, Wednesday, January 28

Quantitative Risk Analysis

Probability Basics

Excel

Simulation with Crystal Ball

Class 4, Monday, February 2

Guest lecture, Bonding and Insurance

Risk Assessment

Planning, Identification and Assessment

FHWA, CalTrans, NCHRP, PMBOK

Class 5, Wednesday, February 4

Risk Management

Monitoring and Response

Public
Applications to Projects - Changes
Contractors Risks
Bid
Changes
Owners Risks

Class 6, Wednesday, February 9
Presentations

Project

Develop a risk management plan for a (hypothetical) small project from the owners and the contractor's perspective. Develop cost and schedule estimates with statements of probability. Note other risks.

Cast an estimate in terms of risk and defend the final result.

Instructional methods: Lecture in class or by video conferencing.

References. These are also on the class web site

1. Guide to Risk Assessment and Allocation for Highway Construction Management, US DOT, FHWA, October 2006, available on-line from:

<http://international.fhwa.dot.gov/riskassess/pl06032.pdf>

Note this is a 10 meg file and takes a while to download. Also, it reads better if you can print it out on color printer.

2. Caltrans risk management handbook and three related documents, available on-line from

http://www.dot.ca.gov/hq/projmgmt/guidance_prmhb.htm

(The Excel sheets have some macros and you may need to downgrade your security settings to open them.)

A third document, NCHRP is about cost estimating, but since so many risks relate to costs, much of it is quite relevant.

http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_574.pdf

This is a two meg file.

Students will be required to download a computer program, Crystal Ball, from the web.

<http://www.oracle.com/crystalball/index.html> However, do not do that until you are told. (The trial version is limited and cannot be reactivated without purchasing.)

Evaluation: Grades will be awarded based on the instructor subject evaluation of the student's attainment of the course goals. Input to that evaluation will include: Class attendance and participation, 10%, quiz, 30%, project 60%.

[The following is required by UAF standard policies]

Course policies:

Attendance: Attendance at all classes

Cheating

Accepting or giving unauthorized help on graded work is cheating. A