



Online Course in Project Cost and Schedule Risk Simulation

Presented by Graduate School of Technology Management, University of Pretoria,
University of Pretoria

Numerical Simulation has become a valuable tool in many engineering and management disciplines to improve decision making under uncertainty. The availability of desktop and laptop computers enables the manager to apply simulation methods and tools that were not possible a decade or two ago.

Being unique ventures, all projects involve uncertainty. Complex projects have uncertainty in cost, time and the quality of deliverables. Project and risk managers focus efforts on monitoring and managing cost and schedule risk in projects. Several tools and techniques are available for control of project performance. Monte Carlo Simulation (MCS) is one such technique that is useful for the project and risk manager to monitor the effect of risk on the cost and schedule of a project. An initial simulation model can be run multiple times during project execution and the 80% or 90% certainty values for cost and duration can be determined and plotted on a time scale chart. Such charts can be used to study trends during execution and to make timely interventions if the forecasted cost exceeds the budget or the forecasted duration exceeds the planned duration for the project.

The online short course in **Project Cost and Schedule Risk Simulation** provides delegates with the necessary background and theory to develop MCS models. During the course, many examples will be provided for cost, schedule and IRR simulation.

Delegates will learn how numerical simulation can be applied in various functional areas of the business enterprise and specifically in projects. This online course explains how to develop a simulation model and execute the model with or without simulation add-ins.

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Shifting knowledge to insight



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Course content

This course covers the following aspects:

- Introduction to simulation
- Probability and distributions
- Risk Management
- Fundamentals of simulation
- Cost risk simulation
- Schedule risk simulation
- NPV and IRR risk simulation

Learning outcomes

After successfully completing the course, you will be able to

- Develop and apply a MCS model for cost risk
- Develop and apply a MCS model for project schedule risk
- Develop and apply a MCS model for NPV and IIR for a project

Who should enrol?

This course is ideal for you if you are an operations manager, project manager, risk manager, engineering manager, professional scientist or technical manager.

Admission Requirements

Prospective delegates should at least have a Grade 12 senior certificate, attendance and successful completion of a course in Project Management.

Course fees

R7 324.70 per delegate (VAT incl.)

Course fee includes all online course material.

Course fees must be paid in full 14 days prior to course start dates. Proof of payment can be submitted to enrolments@enterprises.up.ac.za.

Accreditation and certification

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Registration and enquiries

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Shifting knowledge to insight

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