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PROJECT MANAGEMENT | PM-015

Advanced Project Economics, Risk & Decision Analysis

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Course content

Why Attend

NTRODUCTION

The three biggest planning challenges are predicting costs, assessing profitability, and risk management.

All these tasks occur in the early stages of capital planning and failure to adequately evaluate these elements can lead to heavy losses.

This Advanced Project Economics, Risk & Decision Analysis training course will highlight:

• Identification of the stages required in the risk analysis process, i.e., preparing, modeling, and running risk analysis

• Development of the risk model, assessing probabilities to various variables, risk analysis, and explore the impact of uncertain variables

• Enable the participants to create reports such as, tornadoes diagrams, scatter plots and cumulative probability functions, using excel

• Application of decision trees and Monte Carlo-based simulations to generate profitability indicators

• Enable the participants to develop probabilistic cashflow reports along with probabilistic profitability indicators for decision-making

Course Methodology

This Advanced Project Economics, Risk & Decision Analysis training course will incorporate a mix of learning methods, including but not limited to, high quality power point slides, short videos and active class participation.

An in-depth knowledge of quantitative risk analysis techniques and hands-on problem solving skills will be developed during this training course . Participants will use PC's to solve a variety of problems better enabling them to utilize the taught material.

Course content

Course Methodology

This Advanced Project Economics, Risk & Decision Analysis training course approach will be facilitated using Microsoft Excel add on @Risk module and will further assist in promoting discussions among the participants.

Organisational Impact

By sending delegates on this Advanced Project Economics, Risk & Decision Analysis training course, your organization will benefit by:

• Learning how to apply economic valuation and risk assessment processes and techniques

• Help the participants to identify and analyze the risk involved in a project

• Assist the participants to apply the decision-making procedures to justify the projects in terms of profitability

• Participants learn the decision analysis process and foundation concepts so they can actively participate in multi-discipline evaluation teams

• Monte Carlo simulation is discussed and experienced in detail in hands-on exercises

• Adding value to company's active projects, through the use of case studies

• Help participants to recognize and identify the influencing parameters

Personal Impact

By attending this training course, you will:

• Learn how to describe the elements of the decision analysis process and grasp how construct a project cashflow model incorporating sensitivity analysis

• Evaluate investment and design alternatives with decision tree analysis

• Gain the operational decision making techniques using @Risk

• Gain valuable knowledge in identifying the important uncertainties in projects

Course content

Course Methodology

• Enhance your awareness of the influential parameters

WHO SHOULD ATTEND?

This Advanced Project Economics, Risk & Decision Analysis training course is designed to provide technical and practical approaches to executing a project in the upstream sector.

This Advanced Project Economics, Risk & Decision Analysis training course is suitable to a wide range of professionals but will greatly benefit:

• Planning Managers

• Project Managers

• Analysts

• Commercial Managers

• Economists

• Government Officials

• Geologists

• Business Advisors

• Asset Managers

• E&P Managers

• Product Managers

• Project Management Professionals

Course Objectives

• Learn how to handle uncertainty in projects

• Understand different economic terms

Course content

Course Objectives

• Understand the expected value concept and learn its impact on decision tree analysis

• Learn expected theory concepts and attitudes towards risk, risk eversion and risk premium

• Acquire spreadsheet skills including simulation software @RISK

• Carry out cashflow analysis for project and use common economic indicators to evaluate between competing alternatives

• Carry out a comprehensive economic study evaluating projects using risk and sensitivity analysis by means of spreadsheets

Course outline

Development Economics

• A brief history of energy usage

• Principles of development economics

• Understanding of economic terms

• Inflation and its impact on nominal & real cashflows

• Project financing

Uncertainty in Investments

• Handling uncertainty in capital projects

• Understanding probability concepts

• The expected value concept: features and pitfalls

• Expected Monetary Value (EMV)

• Expected Profitability Index (EPI)

• Expected Opportunity Loss (EOL)

Risks and Uncertainties

Course content

Course outline

- Risk & uncertainty
- Risk aversion and risk premium
- Exploration project threats and opportunities
- Economic decision criteria
- Decision tree analysis
- Probability distribution
- Monte Carlo simulation

Setting-up Spreadsheet Calculations Using Excel

- Spreadsheet Calculations
- Cashflow analysis
- Sensitivity analysis calculations
- Tornado diagrams
- Introduction to Monte Carlo simulations using @Risk

Practical Use of the @Risk add-on

- Developing an integrated economic model
- Developing and using an @Risk Model Analysis
- Project sensitivity analysis utilizing data from @Risk Model
- Training course final review and close

Seminar dates

Available seminar dates

Live dates and pricing for Advanced Project Economics, Risk & Decision Analysis generated from the course details page.

Date	Location	Format	Fee
9 - 13 November 2026	Rome - Italy	Classroom	**€3,400.-**
14 - 18 December 2026	Munich - Germany	Classroom	**€2,760.-**
18 - 22 January 2027	Barcelona - Spain	Classroom	**€3,080.-**
15 - 19 February 2027	Paris - France	Classroom	**€3,600.-**
15 - 19 March 2027	Frankfurt - Germany	Classroom	**€2,600.-**
19 - 23 April 2027	Barcelona - Spain	Classroom	**€3,080.-**
17 - 21 May 2027	Barcelona - Spain	Classroom	**€3,080.-**
21 - 25 June 2027	Rome - Italy	Classroom	**€3,400.-**
19 - 23 July 2027	Geneva - Switzerland	Classroom	**€4,200.-**
16 - 20 August 2027	Barcelona - Spain	Classroom	**€3,080.-**
20 - 24 September 2027	Paris - France	Classroom	**€3,600.-**
18 - 22 October 2027	Frankfurt - Germany	Classroom	**€2,600.-**
15 - 19 November 2027	Barcelona - Spain	Classroom	**€3,080.-**
20 - 24 December 2027	Barcelona - Spain	Classroom	**€3,080.-**
16 - 20 November 2026	Barcelona - Spain	Classroom	**€3,080.-**
21 - 25 December 2026	Dubai - UAE	Classroom	**€4,200.-**
18 - 22 January 2027	Cape Town - South Africa	Classroom	**€3,600.-**

Seminar dates

Available seminar dates

Live dates and pricing for Advanced Project Economics, Risk & Decision Analysis generated from the course details page.

Date	Location	Format	Fee
15 - 19 February 2027	Amsterdam - Netherlands	Classroom	**€3,400.-**
15 - 19 March 2027	London - U.K	Classroom	**€3,360.-**
19 - 23 April 2027	Istanbul - Turkey	Classroom	**€2,280.-**
17 - 21 May 2027	Munich - Germany	Classroom	**€3,400.-**
21 - 25 June 2027	Paris - France	Classroom	**€3,600.-**
19 - 23 July 2027	Frankfurt - Germany	Classroom	**€2,600.-**
16 - 20 August 2027	Kuala lumpur - Malaysia	Classroom	**€1,800.-**
20 - 24 September 2027	Rome - Italy	Classroom	**€3,400.-**
18 - 22 October 2027	Vienna - Austria	Classroom	**€3,400.-**
15 - 19 November 2027	Geneva - Switzerland	Classroom	**€4,200.-**
20 - 24 December 2027	Madrid - Spain	Classroom	**€3,400.-**

Live online option	Online delivery is available at €1,850.-.