

PROJECT RISK MANAGEMENT SYLLABUS

The syllabus sets out the aim of the subject and its specific learning objectives. The range of knowledge and understanding that is expected of students is set out in subject content.

Any syllabus in a dynamic area of study such as risk management must, of necessity, be written in general terms. It is however the responsibility of students to ensure that their knowledge is up to date, within the broad parameters laid down by the syllabus for any subject. Hence, details included in the syllabus are not to be looked upon as exhaustive.

Aim

To develop students' understanding of the role and purpose of risk management in the effective management of projects.

Learning objectives and subject content

1. General

- a) Demonstrate understanding of the risk management process
- b) Explain the extent to which people seek uncertainty or seek to avoid uncertainty and how this is influenced by their culture
- c) Know the effects of and take into account the influence of heuristics and biases when eliciting estimates of probability and impact
- d) Explain and distinguish between the differing roles in project risk management
- e) Use of risk analysis to select appropriate different corporate strategies/projects

2. Define Project

- a) Carry out stakeholder analysis

3. Focus Risk Management

- a) Produce a risk management plan

4. Risk Identification

- a) Use the appropriate risk identification techniques. Techniques may include:
 - Brainstorming
 - Assumptions analysis
 - Prompt lists
 - Check lists
 - Flowcharting
 - SWOT analysis
 - The Delphi technique
 - Interviews

- b) Use Cause/Risk/Effect to appropriately describe risks

5. Risk Assessment

- a) Assess risks using a number of different techniques
- b) Classify risks
- c) Produce an appropriate risk breakdown structure for a project

5.1 Qualitative Risk Assessment

- a) Develop an appropriate 5x5 Probability/Impact grid for a project
- b) Prioritise risks appropriately using Probability/Impact grids
- c) Use historical data to assess both probability and impact

5.2 Quantitative Risk Assessment

- a) Use
 - Decision trees
 - Sensitivity analysis
 - Cause and effect analysis
 - PERT

In the appropriate circumstances to calculate the effects of risk upon a project

- b) Explain the theory behind Monte Carlo simulation and demonstrate its use through example
- c) Demonstrate by use of examples the uses of different probability distributions
- d) Use correlation correctly
- e) Calculate mean, median, mode and variance
- f) Calculate criticality
- g) Use net present value (NPV) and internal rate of return (IRR) in risk assessment

6. Risk Treatment

6.1 Risk Planning

- a) Suggest appropriate assignment of risk owners
- b) Plan the appropriate risk response for differing (with risk owners)
- c) Calculate cost/benefit analysis of risk responses, direct cost and exposure from secondary risks

- d) Manage risk contingency appropriately
- e) Write a risk assessment report

6.2 Risk Management

- a) Draw up and maintain a risk register
- b) Explain how to get buy-in to risk management from senior management and project managers
- c) Suggest appropriate methodologies to get reluctant owners to manage risks
- d) Explain the relevance of involving people, education and training and motivation
- e) Explain what is required for regular risk reporting
- f) Explain the importance of continued risk ownership and regular risk reviews
- g) Explain how to carry out project reviews to obtain information for future risk management