

## Unit 381 IT Project Management Level 3

**Credit value 10**

### Rationale

The aim of this unit is to enable candidates to understand the business environment within which new projects are initiated. Candidates will develop an understanding of the organisation, planning, and techniques for monitoring and controlling a project.

### Outcomes

There are 7 seven outcomes to this unit. The candidate will be able to

1. Describe Programmes, Projects and Project Management, and the key differences when compared to Business As Usual (BAU).
2. Apply the principles of Project Risk Management.
3. Apply the principles of Project Quality Management, Change Control and Configuration Management.
4. Use different styles of management and types of communication within a project environment.
5. [Understand Team Building and Team Dynamics using standard models](#)
6. Describe typical activities and the practical problems of estimating throughout a project / system development lifecycle.
7. Apply project planning, monitoring, and control techniques

### Guided learning hours

The recommended guided learning hours for this unit are **60** hours.

### Key Skills links

Communication	C3.1a, C3.1b, C3.2
Application of Number	N3.1, N3.2, N3.3
Information technology	None
Working with others	None
Improving own learning	LP3.1, LP3.2
Problem solving	PS3.1, PS3.2, PS3.3

### Assessment

Assessment will be by means of a portfolio of evidence gathered in the workplace.

**Outcome 1: Describe Programmes, Projects and Project Management, and the key differences when compared to Business As Usual (BAU).**

**Practical activities**

The candidate will be able to:

1. Draw representations of 3 different types of project organisation structure
2. Create key project documentation
  - Project Brief
  - The Business Case
  - The PMP / PID
  - The Project Plan

**Underpinning knowledge**

The candidate will be able to:

1. List the key roles and explain the responsibilities within a project's organisation structure i.e.
  - Programme Manager
  - Sponsor (Executive)
  - Sponsoring Group
  - The Project Board
  - Users
  - Suppliers
  - Project Assurance
  - Project Manager
  - Team Manager (Leader)
  - Project Support Office
2. Explain the distinguishing factors between
  - Programme
  - Project
  - Business As Usual
3. Describe 3 different types of project organisation structure
  - Hierarchical
  - Matrix
  - Project
4. Compare and contrast the 3 different types of project organisation structure
5. Describe the purpose and content of key project documentation
  - Project Brief
  - The Business Case
  - The PMP / PID
  - The Project Plan
6. Explain the source and content of the project objectives and requirements.
7. List and explain the key criteria required in order to deliver a successful project
  - Objectives
  - Constraints
  - Requirements
  - Stated benefits
8. Differentiate between constraints and dependencies

## Outcome 2: Apply the principles of Project Risk Management

### Practical activities

The candidate will be able to:

1. Specify and prioritise Project Risks
2. Specify a risk as an opportunity or a threat in a work placement / business situation
3. Create and maintain a Risk Log / Register
4. Compile an assessment of Risk Exposure for a given project

### Underpinning knowledge

The candidate will be able to

1. Explain the term Risk Management
2. Describe the Risk Management process
3. Describe risk evaluation criteria
4. Explain the assessment of Risk Exposure
  - o Probability
  - o Impact
  - o Proximity
  - o Quantitative assessment
  - o Qualitative assessment
5. Compare and contrast risk reduction activities versus contingency actions
6. Describe appropriate action that can be taken to minimise risk
  - o Prevent
  - o Acceptance
  - o Contingency
  - o Transference of Risk
  - o Reduction
7. Describe typical project risks
8. Explain the assessment of the value of risk reduction activities
9. Describe the content of a typical Risk Log / Register
10. Explain the terms:
  - o Risk Owner
  - o Risk Manager
- Describe the importance of risk reduction and the reasons for selecting an appropriate project approach i.e. prototyping.

**Comment [p1]:** Please give examples of typical project risks

**Comment [p2]:** Please would you clarify what you mean by this – the statement could be better worded eg explain the value of assessing risk reduction – if that is what you mean

**Comment [p3]:** Please give examples of typical content of risk log/register that you would expect to see

### **Outcome 3: Apply the principles of Project Quality Management, Change Control and Configuration Management.**

#### **Practical activities**

The candidate will be able to:

1. Complete a supplier evaluation process from given data
2. Compose a Quality Plan for a given project
3. Devise suitable measurements for given quality characteristics
4. Decide the action to be taken for a Request for Change (RFC)
5. Devise a suitable Configuration Item Record (CIR) for a given product

#### **Underpinning knowledge**

The candidate will be able to

1. Define the terms
  - o Quality
  - o Quality Control (QC)
  - o Quality Assurance (QA)
2. Describe an example of a measurement of quality characteristic
  - o Functionality
  - o Reliability
  - o Usability
  - o Efficiency
  - o Maintainability
  - o Portability
3. Define Quality Criteria
4. State the typical content of a Project Quality Plan
5. Explain the timing and comparative costs involved, in the detection of defects during the project lifecycle
6. Explain quality procedures: entry process, and exit requirements
7. Explain defect removal processes
  - o Testing
  - o Reviews
8. Explain types of quality testing
  - o Unit Testing
  - o Integration Testing
  - o User Acceptance Testing (UAT)
  - o Regression Testing
9. Describe the inspection process
10. Explain the term Peer reviews
11. Explain the principles of ISO 9001:2000 quality management systems
12. Describe supplier evaluation methods.
13. Explain the reasons for change control and configuration management
14. List change management roles and responsibilities
  - o Change requestor
  - o Change Manager
  - o Change feasibility Group
  - o Change control board
  - o Change implementation group

**Comment [p4]:** Please give examples of quality criteria you would expect to see

**Comment [p5]:** Please give examples of typical content you would expect to see in PJQ

15. Describe a change control procedure
  - o Submission of RFC
  - o Log and review
  - o Impact analysis
  - o Approval / rejection
  - o implementation
16. State the role of the change control board
17. Explain the generation, evaluation and authorisation of change requests
18. Describe configuration management procedures
19. Explain the identification of configuration items
20. Define the following with respect to configuration management
  - o Baseline
  - o Release
  - o Configuration Audit
  - o Status accounting
  - o Verification

## Outcome 4: Use different styles of management and types of communication within a project environment

### Practical activities

The candidate will be able to:

1. Use communication methods to suit the purpose of the communication
2. Use a management style to suit the requirements of the situation

### Underpinning knowledge

The candidate will be able to

1. List the characteristics of different management styles
  - o Autocratic
  - o Democratic
  - o Consultative
  - o Task orientated
  - o Relationship orientated
2. Explain management styles, using standard models
  - o Adair – action-centred Leadership
  - o Blake & Moulton – Managerial grid
  - o McGregor – Theory X / Theory Y.
3. Differentiate between project communication methods, explaining advantages and disadvantages of each type
4. Categorise methods of communication
  - o Active
  - o Passive
  - o Formal
  - o Informal
  - o Same time / same place
  - o Same time different place
  - o Different time / same place
  - o Different time / different place

**Comment [p6]:** Please give examples of advantages and disadvantages of different types of communication methods

## **Outcome 5: Understand Team Building and Team Dynamics using standard models**

### **Underpinning knowledge**

The candidate will be able to:

1. Differentiate between the stages of team development recognising characteristic behaviours of each stage
2. Describe the desirable characteristics in terms of both skill and behaviour of a Project Manager
  - o Skills
    - Leadership
    - Motivation
    - Planning
    - Negotiation
    - Delegation
  - o Behaviours
    - Responsible
    - Reliable
    - Available
    - Intelligence
    - Sociable
    - Approachable
    - Knowledgeable
3. Describe the Tuckman model of Team Development
  - o Forming
  - o Storming
  - o Norming
  - o Performing
  - o Adjourning (mourning)
4. Explain the use of models such as Tuckman in developing an effective team (team building)
5. List and characterise the main attributes of the nine Belbin Team Types
  - o Shaper
  - o Plant
  - o Resource Investigator
  - o Co-ordinator
  - o Monitor Evaluator
  - o Team-worker
  - o Completer finisher
  - o Implementer
  - o Specialist

**Outcome 6: Describe typical activities and the practical problems of estimating throughout a project / system development lifecycle.**

**Practical Activities**

The candidate will be able to:

1. Draw a system lifecycle for a project
2. Justify the choice of a system development lifecycle
3. Create a project estimate

**Underpinning knowledge**

The candidate will be able to:

1. Define the typical activities in a system development lifecycle (SDLC)
  - o Initiation
  - o Feasibility Study
  - o Project set-up
  - o Requirements analysis and specification
  - o Design
  - o Construction
  - o Acceptance testing
  - o Implementation
  - o Maintenance
2. Identify different development lifecycles
  - o Waterfall method
  - o Incremental model
  - o Iterative model
3. Describe the phases of an extended lifecycle
  - o Concept
  - o Feasibility
  - o Implementation
  - o Operation
  - o Termination
4. Describe and contrast different implementation strategies
  - o direct changeover
  - o parallel running
  - o phased take-on
  - o pilot changeover
5. Describe the effects of over and underestimating
6. Differentiate between effort and duration
7. Explain the relationship between effort and cost
8. Describe the use of estimates to create targets
9. Explain the use of expert judgement
10. Describe the advantages / disadvantages of expert judgement



11. Explain the use of the following estimating methods

- The Delphi approach
- Top-down estimating
- Bottom up estimating
- Parametric approaches
  - Function Point Analysis
  - Size drivers
  - CoCoMo Estimating

12. Describe the use of Checklists when estimating

13. Describe the use of analogy in estimating.

## Outcome 7: Apply project planning, monitoring, and control techniques

### Practical activities

The candidate will be able to:

1. Prepare a representative Work Breakdown Structure (WBS)
2. Construct a representative PBS
3. Produce an Activity on Node (AoN) Network from a list of activities and their dependencies
4. Identify the critical path on a complex project network
5. Calculate the earliest and latest start and finish dates (ES, EF, LS, LF.) and the resulting float (Free and Total)
6. Construct a Gantt chart from an activity network.
7. Update a project schedule to reflect actual progress
8. Compile a Milestone Slippage Chart
9. Create a project progress report for the project sponsor.
10. Demonstrate Resource Smoothing
11. Select resourcing priorities
12. Create a Cumulative resource chart
13. Interpret Earned Value figures
14. Create a graphical representation of progress information
15. Extrapolate Project Outcome using Earned Value Management (EVM) Data

**Comment [p7]:** Please would you provide an explanation of this should it be Project Breakdown Structure? Or something else?

**Comment [p8]:** Please would you use a generic term in place of Gantt

### Underpinning knowledge

The candidate will be able to:

1. Define project deliverables and intermediate products
2. Demonstrate an understanding of the relationship between 'derived from' and 'component of' products.
3. Describe Milestones and Checkpoints
4. Explain the use and derivation of Milestone Slippage Charts
5. Identify factors affecting resource availability
  - o Project Timing
  - o Internal Politics
  - o Resource Availability / numbers
  - o Budget
  - o Overtime
  - o Skill Sets
  - o Holidays
  - o Working hours
  - o Other demands
6. Describe resource allocation
7. Explain the basis of resourcing priorities
8. Explain resource smoothing
9. Explain resource levelling
10. Explain the derivation and use of resource histograms
11. Explain product-based and activity-based approaches to planning

12. Describe the project control lifecycle
  - planning
  - monitoring achievement
  - identifying variances
  - taking corrective action
13. Explain and give examples of controls within the reporting cycle
  - Checkpoints
  - Highlights
  - Exception
  - End Stage Assessments
  - Post-implementation review
14. Describe the principles of Management by Exception
15. Explain and give examples of potential Corrective Action within a project
  - Work harder / longer / faster
  - Re-plan
  - Re-programme (extend the timescale)
  - Increase resources
  - Reduce project scope
  - Terminate the project
16. Describe the principles of EVM