

Higher National Unit specification

General information for centres

Unit title: Project Management: Managing Multiple Projects

Unit code: F1F1 36

Unit purpose: This Unit is designed to provide the candidate with the knowledge and skills required to manage and control multiple projects and their resources within the context of efficient management of risk and change.

This Unit is intended for project managers working in the public, private or voluntary sectors. They will have experience in managing individual projects but require to extend their competencies to manage more than one project at a time.

On completion of the Unit the candidate should be able to:

- 1 Analyse the organisational environment.
- 2 Establish a portfolio of multiple projects.
- 3 Track and control multiple projects.

Credit points and level: 1 HN credit at SCQF level 9: (8 SCQF credit points at SCQF level 9*)

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. Candidates should have well developed communication and inter-personal skills and be able to demonstrate the ability to think analytically and systematically. They should be able to use these skills to give an account of their experiences, reflect on them and make valid conclusions. It is expected that the candidate will have experience in managing individual projects including their stakeholders, resources and risks.

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills component.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes. It could be delivered as a stand-alone Unit at the discretion of the Centre if it is determined that the knowledge and skills developed within this Unit are all that are required to enhance the capability of the candidate. It may be used to supplement the PDA in Project Management.

Concepts and terminology should be presented in the context of the organisation in which the candidate is employed.

General information for centres (cont)

Assessment: The Knowledge and Skills elements of this Unit are predominantly practical and workplace based. Therefore, it is intended that the Outcomes be assessed by means of the development of project management documentation, covering all of the requirements of the three Outcomes, for a real portfolio of projects for which the candidate has responsibility. Whether this is delivered as a single assessment or as a series of several assessments matching the progression of the Outcomes, is at the discretion of the centre.

This Unit is suitable for holistic assessment and it is recommended that it be assessed using a portfolio or catalogue of evidence approach.

If a catalogue of evidence is used, it will probably include several different types of item covering both product and process. These could be personal reflective accounts by candidates, records of interview(s) between the assessor and candidates, feedback from others involved in the process such as witness testimony, products of the process and so on. It would also include project documentation such as project plans, schedules, budgets, monitoring data and evaluation reports.

All assessments are assignment or catalogue of evidence based. Assessors should assure themselves of the authenticity of each candidate's submission.

Higher National Unit specification: statement of standards

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The sections of the Unit stating the Outcomes, Knowledge and/or Skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the Knowledge and/or Skills section must be taught and available for assessment.

Outcome 1

Analyse the organisational environment

Knowledge and/or Skills

- ◆ Strategic objectives and operational priorities of the organisation
- ◆ Approach to project management in the organisation
- ◆ Project management maturity
- ◆ Portfolio of projects
- ◆ Differences between programme management and multiple independent projects

Evidence Requirements

The candidate must cover all knowledge and/or skills above by providing evidence which demonstrates their knowledge and understanding of the dynamics and issues of a multi-project environment in an organisational context.

In providing evidence to demonstrate knowledge and skills in the analysis of the organisational context and environment in which they are managing a portfolio of projects the candidate should:

- ◆ analyse the organisation's project management approach in terms of its methodology, structures, resources and procedures in order to establish the level of maturity of project management within the organisation
- ◆ provide an analysis of the impact of strategic and operational priorities, influences and issues of relevance to the proposed portfolio of projects which takes into account the differences between programme and project management in the organisation
- ◆ identify and explain organisation specific critical success factors and high risk areas associated with the proposed portfolio of projects

Evidence must be generated from a real-life situation. This may be through the workplace or other relevant activity. Tutors/assessors should ensure that the portfolio of projects chosen should be able to generate sufficient evidence to meet the Outcomes of the Unit.

Assessment Guidelines

It is recommended that this evidence should form part of an ongoing catalogue of evidence. The entries in the catalogue of evidence should satisfy the Evidence Requirements of this Outcome.

Higher National Unit specification: statement of standards (cont)

Unit title: Project Management: Managing Multiple Projects

The assessment for this Outcome should be based on a real-life portfolio of projects for which the candidate has responsibility. Selection of a suitable portfolio of projects should be made in consultation with candidate's assessor/line manager/tutor. Suitability of the portfolio of projects for assessment purposes will be determined by the Centre. The Candidate should use the same portfolio of projects for all Unit Outcomes.

Outcome 2

Establish a portfolio of multiple projects

Knowledge and/or Skills

- ◆ Project selection, prioritisation and initiation
- ◆ Risk management in a multi-project environment
- ◆ Portfolio resource management
- ◆ Roles and HR issues in a multi-project environment
- ◆ Planning and scheduling multiple projects

Evidence Requirements

The candidate must provide evidence to cover all knowledge and/or skills above by producing documentation to demonstrate that they can:

- ◆ design and implement a valid process to select, prioritise and initiate projects within a multi-project environment
- ◆ create and prioritise the project portfolio identifying and classifying projects by the business needs they satisfy, their risks, resource capability and other factors
- ◆ establish an effective structure, roles and responsibilities for managing and controlling the portfolio of projects
- ◆ define the specific resource and HR-related challenges for the portfolio of projects and propose effective solutions to meet these challenges
- ◆ produce project documentation in a recognised format to manage multi-project issues, risks and changes including supporting logs and monitoring reports
- ◆ select and apply effective and appropriate multi-project scheduling and planning techniques, tools and estimating methods for the portfolio of projects

Evidence must be generated from a real-life situation. This may be through the workplace or other relevant activity. Tutors/assessors should ensure that the portfolio of projects chosen should be able to generate sufficient evidence to meet the Outcomes of the Unit.

Assessment Guidelines

It is recommended that this evidence should form part of an ongoing catalogue of evidence. The entries in the catalogue of evidence should satisfy the Evidence Requirements of this Outcome.

The assessment for this Outcome should be based on a real-life portfolio of projects for which the candidate has responsibility. Selection of a suitable portfolio of projects should be made in consultation with candidate's assessor/line manager/tutor. Suitability of the portfolio of projects for assessment purposes will be determined by the Centre. The Candidate should use the same portfolio of projects for all Unit Outcomes.

Higher National Unit specification: statement of standards (cont)

Unit title: Project Management: Managing Multiple Projects

Outcome 3

Track and control multiple projects

Knowledge and/or Skills

- ◆ Multi-project budget control
- ◆ Managing multiple critical paths
- ◆ Cross-project change impact analysis
- ◆ Multi-project reporting techniques

Evidence Requirements

The candidate must provide evidence to cover all knowledge and/or skills above by producing project documentation which demonstrates their ability to monitor and control the tasks and resources of multiple projects over a number of reporting periods.

To demonstrate the required knowledge and skills the candidate should:

- ◆ create and implement tools to track, hours, budgets and progress on each project
- ◆ make use of at least three accepted project management techniques to negotiate rational schedules and budgets
- ◆ update multi-project plans and analyse the extent of revision to the plans required to ensure that possible conflicts between projects are minimised
- ◆ provide an analysis of the impact on projects of cross-project risks, issues and changes
- ◆ evaluate the effectiveness of the reporting techniques adopted for the control of the project portfolio

Evidence must be generated from a real-life situation. This may be through the workplace or other relevant activity. Tutors/assessors should ensure that the portfolio of projects chosen should be able to generate sufficient evidence to meet the Outcomes of the Unit.

Assessment Guidelines

It is recommended that this evidence should form part of an ongoing catalogue of evidence. The entries in the catalogue of evidence should satisfy the Evidence Requirements of this Outcome.

The assessment for this Outcome should be based on a real-life portfolio of projects for which the candidate has responsibility. Selection of a suitable portfolio of projects should be made in consultation with candidate's assessor/line manager/tutor. Suitability of the portfolio of projects for assessment purposes will be determined by the Centre. The Candidate should use the same portfolio of projects for all Unit Outcomes.

Administrative Information

Unit code: F1F1 36

Unit title: Project Management: Managing Multiple Projects

Superclass category: AG

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Version	Description of change	Date

Source: SQA

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Higher National Unit specification: support notes

Unit title: Project Management: Managing Multiple Projects

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

Managing multiple independent projects presents many unique challenges to a project manager. When introducing the real life limitation of resources and other outside influences into the multi-project environment, the challenges of managing individual projects are magnified and new challenges introduced.

Trying to keep numerous projects and assignments going at the same time involves many risks and stakeholders. Project managers need to prioritise and delegate wisely in order to manage multiple projects effectively. To succeed requires an understanding of how risk, resources, and schedules must be integrated to keep all projects running smoothly.

In addition to developing an integrated project plan, the project manager must satisfy conflicting stakeholder needs, prepare for complex project risks, and adhere to strict budgetary guidelines. In doing so the project manager must lead several diverse, cross-functional teams towards well-defined goals. The leadership aspects of this role are not covered by this Unit. Candidates who wish to improve their competence in managing project relationships including the project team and other stakeholders are advised to consider other complementary Unit(s) from the SQA portfolio which will enhance their effectiveness as project managers by developing their communications and interpersonal skills.

This Unit is intended for project managers working in the public, private or voluntary sectors. They will have experience in managing individual projects but require to extend their competencies to manage more than one project at a time. This Unit is designed to provide the project manager with the knowledge and skills to manage and control multiple independent projects and their resources within the context of efficient management of risk and change. Although many of the principles and techniques are applicable, this Unit does not provide the coverage required for programme management (management of a strategic-focused portfolio of related projects).

The Unit is written in generic terms, since the concepts involved are applicable and valid in all contexts of multiple project management. The terminology should be adapted to suit the relevant workplace situation. The key concepts of a multi-project environment covered by this Unit include:

- ◆ Roles
- ◆ Resources
- ◆ Schedules
- ◆ Budgets
- ◆ Risks
- ◆ Controls
- ◆ Critical success factors

Higher National Unit specification: support notes (cont)

Unit title: Project Management: Managing Multiple Projects

Although the Unit includes a range of concepts, knowledge and skills, which will require that candidates be provided with a suitable and sufficiently wide range of exercises to practice with, a holistic approach should still be considered by means of an integrated approach for the summative assessment.

This Unit may be used to supplement the PDA in Project Management which focuses on the knowledge and skills required to manage and control individual projects.

Outcome 1

This Outcome provides the knowledge and skills required to analyse the organisational context and environment in which a portfolio of projects is being managed. This includes an understanding of the dynamics and issues of a multi-project environment.

A useful resource to support the evaluation of the maturity of project management within the organisation is the Office of Government Commerce's (OGC) 'Portfolio, Programme & Project Management Maturity Model (p3m3)'. This is available to download from the OGC website: <http://www.ogc.gov.uk/sdtoolkit/reference/tools/p3m3.pdf#search='project%20management%20maturity>

Outcome 2

This Outcome focuses on the establishment of a portfolio of multiple projects. In addition to implementation of an effective organisation structure for management of the project portfolio it covers the knowledge and skills required to manage multi-project risks and resources. This includes the planning and scheduling of these resources and project tasks.

Techniques for the management of the project portfolio might include:

- ◆ Network/dependency modelling
- ◆ Goal-setting
- ◆ Integrated planning and scheduling
- ◆ Resourcing
- ◆ Estimating
- ◆ Prioritising
- ◆ Risk assessment and reduction
- ◆ Optimisation.

For example, resource management includes such topics as:

- ◆ Resource requirements
- ◆ Resource pool creation and management
- ◆ Assigning resources
- ◆ Resource loading and levelling
- ◆ Monitoring and adjusting usage
- ◆ Budgets
- ◆ Cost control

Higher National Unit specification: support notes (cont)

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Outcome 3

Outcome 3 covers the requirements for the monitoring and controlling of the tasks and resources of multiple projects including analysis of the impact of cross-project risks and change. The knowledge and skills provided include planning, scheduling and progress reporting against plans.

Examples of techniques which may be applied in this Outcome include:

- ◆ Performance variance analysis
- ◆ Impact analysis
- ◆ Cross-project risks, issues, changes
- ◆ Critical path analysis
- ◆ Managing multiple critical paths
- ◆ Communication strategies
- ◆ Reporting
- ◆ Status
- ◆ Priorities
- ◆ Health assessments
- ◆ Resources
- ◆ Risks
- ◆ Progress

Guidance on the delivery and assessment of this Unit

This Unit consists of three Outcomes, which develop progressively the knowledge and skills required to manage and control several projects simultaneously including integration of schedules, resources and budgets within the context of efficient management of risk and change.

As the candidate is expected to be in employment with current project management responsibility, it is recommended that a suitable portfolio of projects be selected at their place of work which can be used as the basis of development and assessment for all three Outcomes. Live projects will offer a more substantive experience for the candidate.

Selection of a suitable portfolio of projects should be made in consultation with candidate's assessor/line manager/tutor. The portfolio of projects should be appropriate to the development of skills at SCQF level 9. Suitability of the portfolio of projects for assessment purposes will be determined by the Centre. The Candidate should use the same portfolio of projects for all three Unit Outcomes.

It is intended that delivery of this Unit be based on practice with a suitable and sufficiently wide range of exercises, simulations and case studies to support this approach. All assessments should be based on a real multiple project environment.

Assessment evidence in support of achievement of Outcome knowledge and skills at the required level should form part of a candidate's ongoing catalogue of evidence. The entries in the catalogue of evidence should satisfy the Evidence Requirements of all Outcomes. It is at the discretion of the Centre however whether a single assessment is used or whether several assessments are used, in stages, matching the sequence of the Outcomes. The catalogue of evidence should be presented as a

Higher National Unit specification: support notes (cont)

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coherent and logical whole rather than a collection of disparate items of evidence. Essentially, the catalogue of evidence is a record of the learning journey undertaken by candidates.

The Unit takes a holistic approach to assessment and all three Outcomes are closely and systematically connected. Candidates can be encouraged to seek opportunities to generate evidence that would span more than one of the Outcomes. For example, it would be appropriate to consider cross-assessment of those dynamic elements of Outcomes 2 and 3 which are revisited throughout the management of a portfolio of projects.

There are no hard and fast guidelines on precisely what evidence candidates should present for the Unit, but it is likely that it will include items covering both product and process, such as the following:

- ◆ A narrative describing the systematic process and linking the various pieces of evidence together
- ◆ Accounts written by candidates relating to particular Evidence Requirements
- ◆ Records of interviews between candidates and their assessor
- ◆ A synopsis of progress on projects

For the evidence produced, indicators of success should include:

- ◆ Knowledge of project portfolio planning, delivery and evaluation
- ◆ An ability to progress the portfolio of projects over a prolonged period of time
- ◆ An ability to meet projects milestones and deadlines
- ◆ Achievement of project closure where applicable
- ◆ Achievement of results

This Unit does not cover the development of the necessary leadership, interpersonal and communications skills required by a project manager working in a multi-project environment. Relevant skills expected of participating candidates include:

- ◆ personal action planning
- ◆ time and workload management
- ◆ team leadership
- ◆ communications
- ◆ conflict management and negotiations
- ◆ problem solving
- ◆ stakeholder management

Centres should be assured that Candidates are able to demonstrate an appropriate level of competence in such skills or are actively engaged in developing these skills, perhaps through a complementary Unit(s) from the SQA portfolio.

Though not essential, it would be advantageous for candidates to have experience with and access to project management software for planning and scheduling. For candidates who wish to develop planning and scheduling skills using commercially available project management software such as MS Project there are other Units in the SQA HN portfolio specifically designed for this purpose.

Higher National Unit specification: support notes (cont)

Unit title: Project Management: Managing Multiple Projects

Opportunities for developing Core Skills

There may be opportunities to gather evidence towards the Core Skills in this Unit, although there is no automatic certification of Core Skills or Core skills components.

In managing multiple projects, candidates will have opportunities for developing all five Core Skills. Many discrete Core Skills elements can be developed within the context of assessment. For example, planning, organising and evaluating work and listening and talking with a wide range of people are central to the Unit. Also, the use of technology as a tool to support budgeting, planning, record keeping and presentation of reports is likely to be a key feature.

Open learning

This Unit is suitable for delivery by open or distance learning methods provided that any necessary additional planning and resources are made available for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes. For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (SQA, February 2001 — publication code A1030).

Candidates with disabilities and/or additional support needs

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (www.sqa.org.uk).

General information for candidates

Unit title: Project Management: Managing Multiple Projects

The purpose of this Unit is to provide you with the knowledge and skills required to manage and control several independent projects simultaneously including the integration of their resources within the context of efficient management of risk and change.

It is recommended that in agreement with your line manager and tutor you select a suitable portfolio of projects at your place of work which can be used as the basis of development and assessment across all three Outcomes of this Unit.

In this Unit you have to achieve three Outcomes. Collectively, these Outcomes cover the knowledge and skills required to manage a portfolio of projects. The Unit provides an holistic approach to the application of your professional capability within a complex and challenging multi-project environment.

In **Outcome 1** you will cover the knowledge and skills required to analyse the organisational context and environment of your proposed portfolio of projects. This includes demonstrating an understanding of the dynamics and issues of a multi-project environment.

In **Outcome 2** you will focus on the establishment of a portfolio of multiple projects. In addition to implementation of an effective organisation structure for management of your project portfolio it covers the knowledge and skills required to manage multi-project risks and resources. This includes the planning and scheduling of these resources and project tasks.

Outcome 3 covers the requirements for the monitoring and controlling of the tasks and resources of your project portfolio including analysis of the impact of cross-project risks and change. The knowledge and skills provided include planning, scheduling and progress reporting against plans.

The assessment for this Unit requires you to produce evidence of your multi-project management knowledge and skills by demonstrating analysis of the issues within the multi-project environment and development of recommendations through evidence and experience, in a style appropriate to the requirements of the work and learning level.

You will show that you can apply a range of multi-project management techniques that demonstrate your ability to manage a challenging portfolio of projects. There are no hard and fast guidelines on how you should present this evidence or what items of evidence you should include in it. However, the evidence you produce must be presented in a logical and coherent fashion.

Your evidence is likely to consist of several different types of item covering both product and process. Some examples of items of evidence you might provide are:

- ◆ A narrative describing the systematic process and linking the various pieces of evidence together
- ◆ Accounts relating to particular Evidence Requirements
- ◆ Records of interviews between you and your assessor
- ◆ A synopsis of progress on projects

For the evidence produced, indicators of success should include:

- ◆ Knowledge of project portfolio planning, delivery and evaluation
- ◆ An ability to progress the portfolio of projects over a prolonged period of time
- ◆ An ability to meet projects milestones and deadlines
- ◆ Achievement of project closure where applicable
- ◆ Achievement of results