

## **SQA Advanced Unit specification**

### **General information**

**Unit title:** Project Management for IT (SCQF level 7)

**Unit code:** HR7J 47

**Superclass:** CY

**Publication date:** August 2017

**Source:** Scottish Qualifications Authority

**Version:** 01

### **Unit purpose**

This unit is designed to develop an understanding of the concepts and principles, the boundaries and scope of project management with emphasis on issues and problems faced by managers of projects. The unit also offers the candidate the opportunity to develop a project schedule using project management software to demonstrate how the use of such software can assist a project manager to deal with these particular issues and problems when managing projects.

The unit forms part of an SQA Advanced Group Award, and is intended for candidates in the computing and IT sector. It may be used, however, in a wide range of other areas where skills in project management are required. The unit is also capable of being delivered as a stand-alone unit and may be of interest to candidates with appropriate work experience who hold positions such as project team leaders or team members who wish to broaden their knowledge and understanding of the principles and procedures, as well as software available to help manage a project.

### **Outcomes**

On successful completion of the unit, the learner will be able to:

- 1 Demonstrate knowledge of project management principles.
- 2 Develop a project schedule.
- 3 Demonstrate an understanding of the problems faced by project managers.

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### **Credit points and level**

1 SQA Credit at SCQF level 7: (8 SCQF credit points at SCQF level 7)

### **Recommended entry to the unit**

Access to this unit will be at the discretion of the centre.

### **Core Skills**

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes for this unit specification.

There is no automatic certification of Core Skills or Core Skill components in this unit.

### **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.

The Assessment Exemplar Pack for this unit provides sample assessment materials including assessor checklists, practical tasks and an instrument of assessment for the knowledge. Centres wishing to develop their own assessments should refer to the Assessment Exemplar Pack to ensure a comparable standard.

The Assessment Support Pack (ASP) for this unit provides assessment and marking guidelines that exemplify the national standard for achievement. It is a valid, reliable and practicable assessment. Centres wishing to develop their own assessments should refer to the ASP to ensure a comparable standard. A list of existing ASPs is available to download from SQA's website (<http://www.sqa.org.uk/sqa/46233.2769.html>).

### **Equality and inclusion**

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods or considering alternative evidence.

Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

## **Unit specification: Statement of standards**

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Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

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. Learners should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

### **Outcome 1**

Demonstrate knowledge of project management principles.

#### **Knowledge and/or Skills**

- ◆ Project management terms and concepts
- ◆ Project manager skills
- ◆ Issues affecting project teams
- ◆ The project life cycle
- ◆ Project management software

### **Outcome 2**

Develop a project schedule.

#### **Knowledge and/or Skills**

- ◆ Identifying project tasks
- ◆ Organising tasks using a work breakdown structure
- ◆ Establishing task durations, relationships and sequence
- ◆ Establishing project milestones and deliverables
- ◆ Assigning resources
- ◆ Identifying the critical path and critical tasks
- ◆ Modify a project schedule

### **Outcome 3**

Demonstrate an understanding of the problems faced by project managers.

#### **Knowledge and/or Skills**

- ◆ Change control
- ◆ Quality assurance
- ◆ Team management

### Evidence Requirements for this unit

Learners will need to provide evidence to demonstrate their Knowledge and/or Skills across all Outcomes by showing that they can:

#### Outcome 1

- ◆ Project management terms and concepts
  - definition of a project
  - task
  - resource
  - schedule
  - performance risk
  - scope and scope creep
  - critical path
  - estimating project duration and costs
- ◆ Project manager skills
  - planning
  - organisational
  - communication
  - problem-solving
- ◆ Issues affecting project teams
  - assessing internal skills
  - creating a team
  - managing team issues
  - using external resources
  - meetings (frequency, purpose, documentation)
- ◆ The project life cycle
  - initiating
  - planning
  - project execution (monitoring and controlling)
  - evaluating
- ◆ Project management software
  - benefits of bespoke software
  - using project management software to track progress
  - using successful project models as templates

Evidence for all Knowledge and Skills in this Outcome will be assessed using a representative sample of twenty written and/or oral recorded questions. The instrument of assessment must provide opportunities for the Outcome to be fulfilled by means of sampling across the range of the content for Outcome 1. This assessment must change on each assessment occasion. Achievement can be decided by use of a 60% cut-off score.

The questions presented must change on **each** assessment occasion. The assessment will be supervised, controlled and under closed-book conditions and should last no more than 1 hour.

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### Outcome 2

This assessment is open-book where a candidate is required to demonstrate their understanding of all the Knowledge and/or Skills bullet points by producing a project schedule for a given brief.

The scope and size of the project is at the discretion of the centre, however, the brief should also allow for the organisation of tasks in such a way that there will be a sufficient number of tasks to produce a schedule which covers all these points.

### Outcome 3

Evidence of all the Knowledge and/or Skills in this Outcome will be assessed using a representative sample covering the bullet points below showing that a candidate demonstrates an understanding of:

- ◆ Change control
  - defining the need for change
  - establishing change control
  - implementing project changes
- ◆ Quality assurance
  - defining quality
  - quality of the deliverables
  - quality of the process
  - creating a strategy for quality
  - implementing quality assurance
  - the project triangle of (time, cost and quality)
- ◆ Team management
  - leading the team
  - team dynamics
  - establishing the project authority
  - mechanics of leading a team
  - team meetings
  - maintaining team leadership
  - motivating the team

Evidence for all Knowledge and Skills in this Outcome will be assessed using a representative sample of written and/or oral recorded questions. The instrument of assessment must provide opportunities for the Outcome to be fulfilled by means of sampling across the range of the content of Outcome 3. This assessment must change on each assessment occasion. Achievement can be decided by use of a 60% cut-off score.

The questions presented must change on each assessment occasion. The assessment will be supervised, controlled and under closed-book conditions and should last no more than 1 hour.

### Unit Support Notes

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Unit Support Notes are offered as guidance and 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

Project management plays a large role in the development of a wide range of organisational requirements, eg government, construction, engineering, medicine, and especially, in computing and information technology. This unit is intended to provide candidates with the pre-requisite knowledge and skills required to conduct and manage a project. Candidates should acquire knowledge about the fundamental issues and problems of project management, as well as gain skills in the use of project management techniques. This may include the use of project management software solutions. Candidates should be encouraged to work with project specifications and use these to learn about the various aspects of project management. Although the unit is expressed in generic terms, it should be related to a context that is familiar to candidates. If necessary, the terminology used in the unit can be adapted to suit the relevant workplace situation.

**Outcome 1** considers the terminology and definitions used in project management, and introduce the candidate to the issues involved in the managing of projects, as distinct from the issues of conventional management. Candidates should become familiar with relevant terminology and should make use of this in describing project management.

**Outcome 2** concerns the practical application of project management techniques in the development, maintenance and modification of a project schedule. This may be either produced in a paper based format, or a candidate may make use of available project management software, or any other suitable software which meets the criteria of the Outcome. The candidate will learn how to organise the project elements into a meaningful and structured schedule.

**Outcome 3** examines some of the problems faced by project managers such as coping with changes required to the project and developing a strategy to deal with such changes; also the need to develop a strategy to deal with quality assurance issues; and finally the problems and issues faced by project managers in organising and managing project teams.

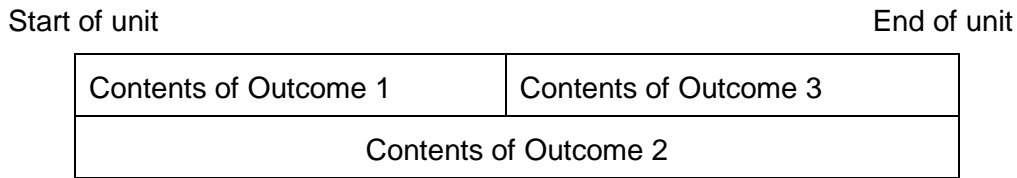
### Guidance on approaches to delivery of this unit

Wherever possible, links should be drawn with situations which candidates will understand, eg all problem-solving situations that have a definite start and a definite end could be considered as projects, such as planning the curriculum for their academic year is a project containing many individual projects.

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However, the following is suggested as a possible delivery plan.

Assuming an allocation of 3 hours per week for this unit, it is suggested that one hour per week be allocated to the contents of Outcomes 1 and 3, delivered end-on, while the practical work of Outcome 2 be delivered in the remaining 2 hours. (If your time allocation differs from this, then please allocate your time accordingly). Graphically this would appear as follows:



The practical Assessment of Outcome 2 will occur near the end of the unit, but it is at the discretion of the centre whether the contents of Outcomes 1 and 3 are assessed separately, at the end of each part, or as one single Assessment near the end of the unit.

### Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Centres are reminded that prior verification of centre-devised assessments would help to ensure that the national standard is being met. Where learners experience a range of assessment methods, this helps them to develop different skills that should be transferable to work or further and higher education.

There are three assessments for this unit. Outcome 1 and Outcome 3 will be assessed by means of a written and/or oral recorded exercise under closed-book, supervised conditions. Outcome 2 is a practical assessment which may be either paper based or software based.

It is recommended that project management software be used to complete this assessment, however, it would be acceptable if the project schedule were documented by hand or other software such as a spreadsheet or mind-mapping tool.

Evidence is required that candidates have achieved all Outcomes. Candidates are encouraged to use the Internet in any research, etc however, the evidence produced must be the candidate's own words. Assessors should ensure themselves of the authenticity of candidate's evidence.

Written and/or oral recorded evidence is required which demonstrates that the candidate has achieved the requirements of all of the Outcomes to show that the candidate has appropriate knowledge and understanding of the content of this unit.

It is recommended that Outcomes 1 and 3 be assessed by means of a written and/or oral recorded test under closed-book supervised conditions to assess the candidate's knowledge. These Outcomes can be assessed together in one assessment presentation, however, an assessor must ensure that a candidate has achieved each Outcome.

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Outcome 2 covers the practical skills involved in developing a project schedule, so will be assessed by means of a series of practical tasks to ensure the candidate's knowledge and skills.

Assessors should ensure themselves of the authenticity of the candidate's evidence.

### **Opportunities for e-assessment**

E-assessment may be appropriate for some assessments in this unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or social software. Centres which wish to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at [www.sqa.org.uk/e-assessment](http://www.sqa.org.uk/e-assessment).

### **Opportunities for developing Core and other essential skills**

There may be opportunities to develop elements of the Core Skills of Problem Solving in this unit, although there is no automatic certification of Core Skills or Core Skills components.



## History of changes to unit

Version	Description of change	Date

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

**FURTHER INFORMATION:** Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000. Alternatively, complete our [Centre Feedback Form](#).

### General information for learners

#### Unit title: Project Management for IT (SCQF level 7)

This section will help you decide whether this is the unit for you by explaining what the unit is about, what you should know or be able to do before you start, what you will need to do during the unit and opportunities for further learning and employment.

Managing projects is vastly different from the management skills required within a conventional, more procedural and systematic environment, and requires a different range of knowledge and skills in order to achieve the goals set by project stakeholders. This unit is designed to:

- ◆ Introduce you to the terms and concepts of project management
- ◆ Enable you to develop the practical skills involved in the planning, scheduling and modifying a project
- ◆ Introduce you to a range of issues which affect the success of a project

While studying these points, you will also learn how to schedule the tasks which make up the project along with other important features such as using and assigning resources to the project tasks, scheduling regular meetings and deriving appropriate information from the data set. Finally, you will also look at several tools available to assist you review the quality, the progress and the success of a project.

These skills will provide you with a good foundation for work in a post involving project work.

The unit will also be appropriate if you intend to progress to degree level studies at University.

In Outcome 1, you will consider many of the fundamentals of project management such as: the terminology of project management; the range of skills required by project managers; the stages of the project management development cycle and software which is available to assist the management of projects.

In Outcome 2, you will learn how to plan the development and progress of a project by scheduling the phases and tasks, including resources (human and physical), milestone points, team meetings, and identifying critical and non-critical tasks. This may be achieved either manually or by making use of suitable software. You will also be expected to modify an existing project schedule.

In Outcome 3, you will examine problems sometimes faced by project managers. These include coping with changes assuring quality and dealing with the management of a project team.

On completion of this unit, you will be able to:

- 1 Describe the fundamentals of project management
- 2 Develop a project schedule
- 3 Demonstrate an understanding of the problems faced by project managers