



## **National Unit specification: general information**

**Unit title:** Mobile Technology Systems (SCQF level 5)

**Unit code:** H1T1 11

**Superclass:** CB

**Publication date:** July 2012

**Source:** Scottish Qualifications Authority

**Version:** 01

### **Summary**

The purpose of this Unit is to provide candidates with an opportunity to develop their knowledge and understanding of mobile technology devices and the associated hardware and software that are used on a variety of these devices. Opportunity to research current and future trends in the mobile technology industry will be provided.

Candidates will also develop competence in using a variety of mobile systems.

This Unit is a mandatory Unit in the National Progression Award in Mobile Technology (SCQF level 5) but is also available for candidates wishing to study the Unit on its own.

### **Outcomes**

- 1 Demonstrate knowledge and understanding of different mobile devices, associated hardware and software.
- 2 Carry out a range of tasks using mobile devices.
- 3 Identify and report current and future trends in mobile technology systems.

### **Recommended entry**

While entry is at the discretion of the centre, candidates would normally be expected to have attained one of the following, or equivalent:

*Mobile Technology Systems at SCQF level 4*

## **General information (cont)**

**Unit title:** Mobile Technology Systems (SCQF level 5)

### **Credit points and level**

1 National Unit credit at SCQF level 5: (6 SCQF credit points at SCQF level 5\*)

*\*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.*

### **Core Skills**

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

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

## **National Unit specification: statement of standards**

**Unit title:** Mobile Technology Systems (SCQF level 5)

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.

### **Outcome 1**

Demonstrate knowledge and understanding of different mobile devices, associated hardware and software.

#### **Performance Criteria**

- (a) Describe a range of mobile devices.
- (b) Describe a range of mobile operating systems.
- (c) Describe a range of mobile communication technologies.
- (d) Describe a range of mobile data storage devices.

### **Outcome 2**

Carry out a range of tasks using mobile devices.

#### **Performance Criteria**

- (a) Configure advanced settings on a mobile device.
- (b) Correctly use the features of a range of mobile devices.
- (c) Correctly synchronise a mobile device to a desktop computer system.

### **Outcome 3**

Identify and report current and future trends in mobile technology systems.

#### **Performance Criteria**

- (a) Identify current trends in mobile technology systems.
- (b) Identify future trends in mobile technology systems.
- (c) Document research findings.
- (d) Use technical terms accurately.

## **National Unit specification: statement of standards (cont)**

**Unit title:** Mobile Technology Systems (SCQF level 5)

### **Evidence Requirements for this Unit**

Written and/or oral recorded and performance evidence is required that candidates have achieved all Outcomes and Performance Criteria.

Candidates are encouraged to use the internet in any research; however the evidence produced must be the candidate's own words. Assessors should assure themselves of the authenticity of candidate's evidence.

The assessment for all Outcomes will be supervised, controlled and under closed-book conditions.

#### **Outcome 1**

For Outcome 1 written and/or oral recorded evidence is required which demonstrates that the candidate has achieved the standard specified in the Outcome and Performance Criteria.

Evidence must include:

- ◆ description of five mobile devices
- ◆ description of four operating systems
- ◆ description of three mobile communication technologies
- ◆ description of two mobile data storage devices

#### **Outcome 2**

Performance evidence is required that demonstrates that candidates can:

- ◆ configure advanced settings on at least two mobile devices
- ◆ correctly use the features on at least two mobile devices
- ◆ correctly demonstrate synchronising a mobile device to a desktop computer system

#### **Outcome 3**

Written and/or oral recorded and performance evidence is required that demonstrates that candidates have:

- ◆ identified one current trend in mobile technology systems
- ◆ identified one future trend in mobile technology systems
- ◆ documented research findings
- ◆ used technical terms accurately, which must include a glossary of terms used

## National Unit specification: support notes

### Unit title: Mobile Technology Systems (SCQF level 5)

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

The overall aim of this Unit is to enable candidates to understand the operation of a range of mobile devices. The Unit will provide candidates with information regarding the hardware operating system software used with mobile devices. Candidates will also be introduced to various mobile communication technologies. The candidate will also gain a basic knowledge of how different mobile devices work.

Outcome 1 introduces candidates to a range of different mobile devices and associated hardware. Candidates are then introduced to the different types of backing storage and operating systems used by these devices as well as the different types of mobile communication technologies available for use with these devices.

Outcome 1 uses a variety of different descriptions for mobile devices, backing storage, communication technologies and operating systems. The candidate will be introduced to the following areas:

- ◆ Mobile Device (Mobile Phone, Smartphone, PDA, Ebook reader, MP3 player, MP4 player, GPS navigation device, Tablet PC, Handheld gaming console, Netbook PC).
- ◆ Operating Systems (Blackberry OS, Symbian, Android, webOS, iOS, Windows Phone).
- ◆ Main backing storage (USB flash drives, portable external hard drives, flash memory such as SD cards, MMC cards, CF cards, micro SD cards).
- ◆ Mobile communication technologies (2G, 3G, 4G, wifi, Bluetooth, GPS, GPRS, Edge).

Outcome 2 introduces candidates to the approaches involved when configuring mobile devices. Candidates will be given the opportunity to use mobile devices to carry out a range of complex tasks. Candidates will be introduced to the steps involved in synchronising devices with desktop computers.

The candidate will gain knowledge in the following areas:

- ◆ Advanced configuration of a mobile device, such as setting up email accounts on devices, downloading and installing new applications to devices. Updating device software.
- ◆ Carrying out complex tasks such as adding multiple calendars to the device, setting different camera settings, record video, compose and send e-mail.
- ◆ Synchronising device with desktop pc, including backing up device and transferring files from pc to device such as audio and graphics files.

## National Unit specification: support notes (cont)

### Unit title: Mobile Technology Systems (SCQF level 5)

The performance evidence for Outcome 2 could consist of a log or online blog of the candidate's activity. This method will provide a record of candidate activity during this Unit and also provide evidence that the candidate has satisfied all the Performance Criteria for Outcome 2.

The activity log will show that the candidate has completed all the tasks above, with due regard to health and safety. An assessor observation checklist could be used to record that all the tasks have been undertaken correctly by the candidate. An assessor must endorse each checklist with the candidate's name, assessor signature and date.

Outcome 3 requires candidates to conduct research into the world of mobile devices and to record their findings on current trends in the market (such as mobile gaming, applications, social networking) as well as anticipated future trends (such as the advancement of 3D mobile gaming, mobilePOS and augmented reality).

Candidates should be given ample opportunity throughout the Unit to utilise the internet, printed publications, television broadcasts and other media for relevant and up to date market information. Candidates will be given the opportunity to record their research through online bookmarking.

The evidence will be in the form of a short written report of approximately 500 words or an oral report of equivalent complexity. Evidence may take the form of an online blog or a wiki or a standard word processed report. Alternatively an audio or video presentation of approximately 2–3 minutes duration would also be sufficient.

An assessor observation checklist could be used to record that all the Performance Criteria have been undertaken correctly by the candidate. An assessor must endorse each checklist with the candidate's name, assessor signature and date.

The context for this Unit would be an understanding of the mobile devices that are available for use in the current market, and their everyday application. Advanced system features and functions are also addressed. This will provide a candidate with a sound knowledge of various mobile devices, the operating systems used within these devices and the communication technologies that drive these devices.

The precise content of this Unit will change over time, as mobile technology is a rapidly developing area and new devices are introduced constantly. The following guidance exemplifies the standards in terms of contemporary technology.

## National Unit specification: support notes (cont)

**Unit title:** Mobile Technology Systems (SCQF level 5)

### Guidance on learning and teaching approaches for this Unit

A practical hands-on approach to learning should be adopted to engage learners and exemplify key concepts. However, all practical activities should be underpinned with appropriate knowledge before a candidate commence these activities.

It is recommended that candidates gain hands-on use of a variety of mobile devices as this will allow a greater understanding of the working of a mobile device system. Various operating systems should be available to candidates as these provide very different features across the device range.

An important part of this Unit is that candidates develop an appropriate technical vocabulary relating to mobile devices. Terminology and underpinning knowledge should be introduced in a practical context.

The actual time distribution between Outcomes is at the discretion of the centre. However, one possible distribution is:

Outcome 1: 20 hours

Outcome 2: 10 hours

Outcome 3: 10 hours

This Unit will introduce candidates to the world of mobile technology and the vast array of devices available on the market. Candidates should be encouraged to research and visit the many websites that contain animations and videos of the mobile world in action. Candidates should be encouraged to keep an online blog, journal or bookmarking page of their research as this will then be utilised in Outcome 3.

The use of computing magazines, technical reference manuals and internet research is recommended.

This Unit may be delivered stand-alone or in conjunction with other Units. Where it is delivered alongside other related Units, there is an opportunity to reinforce and deepen the candidates' knowledge.

### Opportunities for developing Core Skills

In this Unit candidates are required to describe a range of mobile devices, mobile operating systems, mobile communication technologies and a range of mobile data storage devices, which can provide opportunities to gather evidence towards aspects of *Communication* at SCQF level 5.

Candidates are also required to configure advanced settings on a mobile device, and use various features on the device, as well as synchronising the device to a computer desktop system. This evidence could be gathered towards aspects of *Information and Communication Technology (ICT)* and *Problem Solving* at SCQF level 5.

## **National Unit specification: support notes (cont)**

**Unit title:** Mobile Technology Systems (SCQF level 5)

### **Guidance on approaches to assessment for this Unit**

Outcome 1 assessment will be carried out towards the end of the Unit once candidates have had an opportunity to acquire the essential knowledge and understanding required to give them a realistic prospect to pass the assessment. The assessment should take the form of short response questions.

The assessment for Outcome 2 could be a practical assessment consisting of observation of the candidate over an extended period of time during which the candidate would be required to maintain a log of activity. It is recommended that this assessment is started at the earliest opportunity, as soon as the candidate has acquired the necessary knowledge and skills to permit him/her to commence the appropriate tasks.

Outcome 3 requires the candidate to conduct research into the world of mobile devices and produce a report on current and future trends. The report may take the form of a word processed document or an online blog or wiki. Alternatively the candidate may wish to produce a presentation or oral or video report. Candidates should keep a record of their research as part of their evidence. The evidence could be in the form of a short written or oral report of approximately 500 words and would include a glossary of the main technological terms used in the report.

### **Opportunities for the use of 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 e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

Outcome 2 and 3 may be assessed by means of an e-portfolio and e-checklists.

### **Disabled candidates and/or those with additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements)



## History of changes to Unit

Version	Description of change	Date

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