

National Unit Specification: general information

UNIT Digital Media: Audio Editing (SCQF level 5)

CODE F1KT 11

SUMMARY

The overall aim of this Unit is to enable candidates to edit and manipulate sound in a digital format for use in IT applications. This Unit will provide candidates with information about the principles that underpin the editing and manipulation of digital sound files. The candidates will also be made aware of the various file formats in which digital audio is stored, the sampling rates that determine the quality of recorded sound and compression standards in common use.

Throughout the Unit candidates should have frequent exposure to common audio editing software so that they can capture, store and manipulate audio to meet the standards and requirements of a given brief.

This Unit is aimed at candidates who have some previous experience of capturing and storing sound in digital formats, although it may also suit candidates who have experience of recording sound in analogue formats.

OUTCOMES

1. Demonstrate knowledge of the properties of audio and audio effects.
2. Identify and plan the acquisition of digital audio for a specified brief.
3. Perform the acquisition of digital audio for a specified brief.
4. Manipulate and store the acquired digital audio to the form required by a specified brief.
5. Evaluate finished product and own performance in meeting the requirements of a specified brief.

RECOMMENDED ENTRY

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

D01D 10 Information Technology (Intermediate 2)

or equivalent qualification or experience.

Administrative Information

Superclass: CB

Publication date: June 2007

Source: Scottish Qualifications Authority

Version: 01

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CREDIT VALUE

1 credit(s) at Intermediate 2 (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

While there is no automatic certification of Core Skills in Unit there may be opportunities for developing aspects of Core Skills.

National 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 the Scottish Qualifications Authority.

OUTCOME 1

Demonstrate knowledge of the properties of audio and audio effects.

Performance Criteria

- (a) Describe the properties of audio in relation to digital storage.
- (b) Describe the effects of sampling rate on digital audio and its quality.
- (c) Describe different audio effects.
- (d) Describe different amplitude effects.

OUTCOME 2

Identify and plan the acquisition of digital audio for a specified brief.

Performance Criteria

- (a) State the expected quantity, type and quality of digital audio from the brief.
- (b) State the possible sources of digital audio and potential copyright issues.
- (c) Identify the hardware requirements for acquisition of digital audio for the brief.
- (d) Plan a schedule for digital audio acquisition to meet the requirements of the brief.

OUTCOME 3

Perform the acquisition of digital audio for a specified brief.

Performance Criteria

- (a) Connect, set up and adjust recording and computer equipment.
- (b) Safely complete the recording to the quality required.
- (c) Convert audio files to the formats required by the brief.
- (d) Store and label the completed recording in accordance with copyright legislation.

OUTCOME 4

Manipulate and store the acquired digital audio to the form required by the specified brief.

Performance Criteria

- (a) Manipulate digital audio in accordance with the brief.
- (b) Store and label the manipulated audio file in accord with the brief.

National Unit Specification: statement of standards (cont)

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OUTCOME 5

Evaluate finished product and own performance in meeting the requirements of a specified brief

Performance Criteria

- (a) Describe problems encountered and explain strategies employed to resolve problems.
- (b) Describe audio source and quality chosen and explain choice with reference to the specified brief.
- (c) Draw conclusions on the experience of meeting the specified brief.

EVIDENCE REQUIREMENTS FOR THIS UNIT

Evidence is required that candidates have achieved all Outcomes and Performance Criteria.

Candidates are encouraged to use the internet in any research etc, however, the evidence produced must be the candidate's own words. Assessors should assure 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 and Performance Criteria to show that the candidate has appropriate knowledge and understanding of the content of this Unit.

Candidates are required to provide written and/or oral recorded evidence for Outcome 1. The evidence for this Outcome must be obtained under controlled, supervised conditions. The assessment will be closed-book and should last no more than 45 minutes. The instrument of assessment will provide opportunities for the Outcome to be fulfilled by means of sampling across the range of the content of Outcome 1. Where re-assessment is required it should contain a different sample from the range of mandatory content. Achievement can be decided by use of a cut-off score. Each sample must include the following:

- ◆ **two** properties of audio in relation to digital storage on a computer based system
- ◆ **two** sampling rates in relation to digital audio
- ◆ identification of the effect on the quality of recorded audio for **two** different types of compression techniques
- ◆ **two** audio file types including their characteristics and usage
- ◆ **two** component parts of a sound wave.

For Outcomes 2, 3 and 4 candidates are required to provide written and/or oral recorded, product and performance evidence is required which demonstrates that the candidate has achieved the standard specified in the Performance Criteria of Outcomes 2, 3 and 4. The assessment must be presented within a supervised, controlled and open-book conditions and over an extended period of time.

Candidates are required to meet the requirements of a specified brief which will indicate the time scales for production and the quality and amount of audio required.

National Unit Specification: statement of standards (cont)

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Candidates are required to produce a plan which consists of the following:

- ◆ An A/V script or storyboard relevant to the specified brief
- ◆ A detailed plan of activities (production schedule) for acquisition of digital audio media
- ◆ Risk assessments for planned acquisition activities
- ◆ A list of the hardware and software resources required
- ◆ A candidate activity log of activities undertaken including evidence of technical and operational problems encountered and resolved
- ◆ A list of all acquired digital audio content with storage locations and appropriate filenames
- ◆ A list of the copyright status of all elements of the audio and where required, records of copyright clearances

Candidates will produce a report of at least 150 words of the self evaluation of the audio production and their personal contribution to the final product.

Product evidence is required to demonstrate that the candidate can present the completed audio production in an appropriate format. The assessor must authenticate that the evidence produced is the candidate's own work.

The activity log will show that the candidate has completed all of the tasks, with due regard to health and safety. An assessor must endorse each candidate activity log with the candidate's name, their name, signature and the relevant date(s).

An assessor observation checklist will 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, their name, signature and date.

The Assessment Support Pack (ASP) for this Unit provides sample assessment material including an instrument of assessment for the knowledge and a given brief. Centres wishing to develop their own assessments should refer to Assessment Support Pack to ensure a comparable standard.

National Unit Specification: support notes

UNIT Digital Media: Audio Editing (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 xx hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

The overall aim of this Unit is to enable candidates to be able to successfully capture, edit and manipulate audio files to a given brief. The Unit will provide candidates with the knowledge and skills required to manipulate an audio file to a professional standard using industry standard file types. The candidate will also gain knowledge of the correct use of appropriate file types and correct storage and labelling processes. The candidate will have the knowledge of copyright law and its application in the field of audio. The candidate will also be made aware of risk assessments and health and safety when setting up and working with audio equipment.

Any appropriate software can be used to deliver the Unit and is not prescriptive, providing that the software is capable of providing manipulation processes required. The candidate will evaluate their own performance of the finished product and will draw conclusions from their activity.

Candidates could be exposed to the different acquisition sources or methods through short practical or demonstration sessions.

The brief should provide enough scope to allow for a variety of interpretations on the part of the candidate. Candidates should not only identify possible acquisition sources or methods but also explain why they are making choices as to which sources or methods they will employ. The brief should not prescribe to candidates where they should acquire their audio. Candidates will provide explanations according to the requirements of the brief.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Outcome 1

The candidate should be given the background knowledge of audio files and digital audio storage on a computer based system. The advantages and disadvantages of digital storage should be outlined. The candidate should be given the knowledge of sampling rate and its affect on frequency response. These items should be discussed and demonstrated to the candidate. The effect of compression on file sizes. Types of compression and compression techniques should be demonstrated. The candidate should be given information on 4 common audio file types, their characteristics, how audio is stored on a computer based system and common usage eg m4a, wma, etc.

The candidate should be given the knowledge of the component parts of a sound wave including amplitude and frequency. The concept of waves in general and in particular sound waves could be introduced here to ensure the candidate has an understanding of the concept. Captures of sound waves should be shown on screen so that the candidate can visualise the waveform.

National Unit Specification: support notes (cont)

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Outcome 2

The candidate should be given examples of how to plan the acquisition of audio from a brief. The plan could be in a report form and should outline suitable audio quality for the purpose, the potential sources of the audio, potential copyright issues of these sources and clearance for these if required. The report should outline clearly the hardware and software that will be required to perform the acquisition and its set up.

Outcome 3

The candidate should engage in practical tasks to perform audio capture to a given brief for the purposes of the assessment. The candidate should be given a brief to work to and should work on their own unaided, this will allow the performance criterion to be assessed correctly. The candidates, at this level, should have skills to be able to make decisions related to the capture and justify them.

Outcome 4

Performance Criterion (a) relates to the commonly used effects that are used when manipulating sound waves these are to include reverb, chorus, flange and compression. An explanation and demonstration of each type of effect should be given and guidance on how to apply such effects and when. The candidate should be given opportunity to apply such effects to enable them to pick up skills in the application of such effects.

Performance Criterion (b) relates to amplitude or volume related effects. These can be *fade-ins* at the start of a track or *fade-outs* at the end. The concept of gain should be introduced and how it can be applied. Candidates should be aware that careful attention should be given when applying gain in order to avoid clipping or overloading the signal.

Performance Criterion (c) relates to cut points and edits. The purpose of these is to either remove unwanted areas of the audio file or to repeat certain parts of the file by cutting and pasting areas. The candidates should be given opportunity to apply cut points and edits.

Outcome 5

This Outcome involves the candidates reflecting on their decisions and performance throughout the Unit. This should be in the form of a report. The candidate should describe the problems encountered and explain what strategies they had employed to resolve these problems, the candidate should include a description of audio source used, quality chosen. The choice should be justified with reference to the project brief.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Outcome 1 should be assessed separately, towards the end of the Unit to enable candidates to acquire the knowledge through the practical activities covered in other Outcomes. Outcome 1 lends itself to the use of an objective test. The instrument of assessment should provide opportunities for the Outcome to be fulfilled by means of sampling across the range of the content of Outcome 1. Where re-assessment is required it should contain a different sample from the range of mandatory content. Achievement can be decided by use of a cut-off score.

National Unit Specification: support notes

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If a centre is presenting Outcome 1 of these assessments on-line the following assessment methods, where appropriate, may be selected:

Multiple choice
Drag and drop
Multiple response
Mix and match
Or a combination of the above

Outcomes 2, 3, and 4 should be assessed by the production of the evidence materials which will be generated by a brief supplied by the centre. The brief will include details such as:

- ◆ quantity of work required
- ◆ quality of the material to be acquired
- ◆ timescale for production

Centres should also consider providing a candidate activity log which can include guided prompts for candidates to follow.

The activity log will show that the candidate has completed all of the tasks, with due regard to health and safety. An assessor must endorse each candidate activity log with the candidate's name, their name, signature and the relevant date(s).

An assessor observation checklist will 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, their name, signature and date.

The Assessment Support Pack (ASP) for this Unit provides sample assessment material including an instrument of assessment for the knowledge, and a sample activity log and an assessor checklist. Centres wishing to develop their own assessments should refer to Assessment Support Pack to ensure a comparable standard.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit candidates are required to interpret a given brief for sound capture. This may provide opportunity for developing aspects of the Core Skill in Problem Solving as well as aspects of the Core Skills in Communication.

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).