



Higher National Unit Specification

General information

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

Unit code: J0L6 34

Superclass: XL

Publication date: August 2018

Source: Scottish Qualifications Authority

Version: 02

Unit purpose

This unit is designed to develop learners' understanding and skills in the use of audio within multimedia artefacts. The learner will investigate the use of audio within a variety of multimedia contexts before planning, creating and applying audio within a multimedia context. The learner will also gain knowledge and skills in specifying technical requirements for audio within a multimedia context. This unit is intended for learners hoping to pursue a career in audio production for multimedia artefacts and those interested in sound production skills within this area.

Outcomes

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

- 1 Investigate the use of audio within multimedia contexts.
- 2 Plan the use of audio within multimedia contexts.
- 3 Create appropriate audio for use within a multimedia context.
- 4 Apply audio within a multimedia context.

Credit points and level

2 Higher National Unit credit(s) at SCQF level 7: (16 SCQF credit points at SCQF level 7)

Higher National Unit Specification: General information (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

Recommended entry to the unit

Access to this unit is at the discretion of the centre. Learners would benefit from having some experience of manipulating digital audio within a multimedia environment. An understanding of music creation and digital audio recording and editing would also be beneficial. This may be evidenced by completion of the HN unit J0L4 34 *Sound Production: Audio for Multimedia* (SCQF level 6).

Core Skills

Achievement of this Unit gives automatic certification of the following:

Complete Core Skill	Problem Solving at SCQF level 5 Information and Communication Technology at SCQF level 5
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Core Skill component	None
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Context for delivery

This is an optional unit in the framework for HN Sound Production. It is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

Learners would benefit from having completed the unit J0L4 34 *Sound Production: Audio for J0;LMultimedia* (SCQF level 6).

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.

Higher National Unit Specification: Statement of standards

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

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

Investigate the use of audio within multimedia contexts.

Knowledge and/or skills

- ◆ Hardware and software requirements
- ◆ Digital audio file formats (lossy and lossless)
- ◆ Storage requirements for digital audio
- ◆ Use of audio in different multimedia contexts
- ◆ Specific audio applications and techniques for a chosen context

Outcome 2

Plan the use of audio within multimedia contexts.

Knowledge and/or skills

- ◆ Identification of audio requirements in response to a brief
- ◆ Plan the collation of appropriate sound sources
- ◆ Copyright
- ◆ Identification of audio file formats appropriate to the context

Outcome 3

Create appropriate audio for use within a multimedia context.

Knowledge and/or skills

- ◆ Selection of appropriate pre-recorded audio
- ◆ Synthesis of appropriate audio
- ◆ Capture of original audio
- ◆ File management
- ◆ Editing of audio appropriate to the context

Higher National Unit Specification: Statement of standards (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

Outcome 4

Apply audio within a multimedia context.

Knowledge and/or skills

- ◆ Appropriate placement and synchronisation of audio within an audio application
- ◆ Appropriate balance of audio
- ◆ Effect processing of audio
- ◆ Appropriate spatial placement of audio
- ◆ Testing
- ◆ Appropriate revisions in response to the testing
- ◆ Delivery of finished audio in an appropriate format

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:

For Outcome 1:

- ◆ Identify hardware and software requirements for audio in a minimum of three multimedia contexts
- ◆ Describe current digital audio file formats, both lossy and lossless, and their use within a minimum of three multimedia contexts
- ◆ Explain storage requirements for digital audio for a minimum of three multimedia contexts
- ◆ Describe the use of audio in a minimum of three multimedia contexts
- ◆ Explain specific audio applications and techniques for a chosen context

Evidence for Outcome 1 should be generated in open-book supervised conditions. The learner should generate a written and/or oral response to a centre-devised assessment.

For Outcome 2:

- ◆ Identify specific audio requirements in response to a brief
- ◆ Plan the collation of appropriate sound sources based on the identified audio requirements
- ◆ Explain any copyright issues arising and any related action required
- ◆ Identify audio file formats appropriate to the context of the brief

Evidence for Outcome 2 should be generated in open-book supervised conditions. The learner should generate a written and/or oral response to a centre-devised brief.

Higher National Unit Specification: Statement of standards (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

For Outcome 3:

- ◆ Select, edit and collate required pre-recorded audio
- ◆ Synthesise, edit and collate required audio
- ◆ Capture, edit and collate required original audio
- ◆ Organise all audio files effectively with a consistent naming convention

For Outcome 4:

- ◆ Place audio appropriately within an audio application, ensuring accurate synchronisation where relevant
- ◆ Balance audio appropriately
- ◆ Apply at least two examples of audio effect processing
- ◆ Place audio within a spatial audio field appropriate for the multimedia context
- ◆ Test all audio elements in context with associated media
- ◆ Make appropriate revisions in response to the testing stage
- ◆ Deliver the finished audio in a format appropriate for the multimedia context

Evidence for Outcomes 3 and 4 should be generated in open-book supervised conditions. The learner should create product evidence in a format appropriate for the brief, and the assessor should maintain an assessment checklist.

For all outcomes, assessment should be undertaken in open-book conditions at appropriate points throughout the unit. Delivering centres should take appropriate measures to guarantee the authenticity of the learner's submitted evidence.



Higher National Unit Support Notes

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

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 80 hours.

Guidance on the content and context for this unit

This unit is designed to give learners an understanding of the use of audio within a variety of multimedia contexts and an opportunity to develop their practical skills in creating audio for use within a multimedia context.

Outcome 1 requires the learner to consider in a variety of different multimedia contexts up to the last evidence requirement where they should 'specialise' and choose a single context to investigate in more detail.

Outcomes 2–4 have been designed in such a way that learners can undertake the creation of audio for any multimedia context. Centres may choose to guide their learners towards a specific multimedia context or allow learners to choose their own. The unit has also been designed in such a way that the platform used by the students to create their audio is at the discretion of the centre/learner; it may be undertaken in a 'traditional' digital audio workstation, a visual audio programming environment, a games engine or any other appropriate platform.

Guidance on approaches to delivery of this unit

For Outcome 1 it is recommended that learners are shown examples of the use of audio in a wide variety of contexts which may include but are not limited to:

- ◆ Films
- ◆ Television programmes
- ◆ Games
- ◆ Websites
- ◆ Computer and mobile applications
- ◆ Sound/art installations

Learners should be encouraged to research and analyse examples of audio in multimedia contexts which are of interest to them.

Current industry and consumer standard file formats should be covered and understood by learners, but it is not necessary to cover in-depth technical details; an understanding of their pros and cons and their common usage is sufficient. However, learners should demonstrate that they understand the difference between lossless and lossy formats.

Higher National Unit Support Notes (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

It would be beneficial for learners to be taught the difference between different conventions for defining the properties of audio files (ie, sample rate and bit depth vs bit rate) and how to calculate storage requirements. In terms of storage requirements for different multimedia contexts, learners should be made aware of file format requirements for different contexts which may be based on industry/delivery requirements (ie, for broadcast scenarios) or file size/storage requirements (ie, for smartphone apps) depending on the given context.

It is recommended that Outcomes 2, 3 and 4 are approached as a single holistic project. Centres should generate a brief or a choice of briefs for the learner to choose from. The nature of the brief will determine the most appropriate choice of audio platform and the choice of file format, which should be identified by the learner through the planning process before undertaking the practical elements of the unit.

At the testing stage it would be beneficial for assessors to arrange peer review sessions or to feedback individually to learners to inform the process of making revisions to the project.

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.

Evidence for Outcome 1 could be generated through a report/presentation or in response to a series of extended response questions. Three multimedia contexts should be covered by the learner for the first four evidence requirements, with a single multimedia context covered in more detail in the last evidence requirement.

Evidence for Outcomes 2–4 could be generated through responding to a centre-devised brief in which the learner produces a production plan (Outcome 2), collates all necessary audio artefacts (Outcome 3) and undertakes all of the planned activities to produce a finished multimedia artefact. The nature of the multimedia context will define what evidence is produced by each learner, however all audio files and related software files should be retained along with the finished product.

Examples of appropriate multimedia contexts for briefs include, but are not limited to:

- ◆ Creating and synchronising audio for a piece of linear visual media (ie, an animation/short film/captured gameplay footage)
- ◆ Creating and integrating audio for a piece of non-linear media (ie, a game/app)
- ◆ Creating and integrating audio for an interactive multimedia/art installation

For Outcome 3 there are three separate evidence requirements for the collation/creation of audio. Learners should ensure they have relevant permission to use all audio. Examples of these may include, but are not limited to:

Higher National Unit Support Notes (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

Evidence requirement	Examples
♦ Select, edit and collate required pre-recorded audio	Sound effects from a sound library, music from a music library, sampled audio
♦ Synthesise, edit and collate required audio	Audio generated by hardware synthesisers, audio generated by virtual instruments
♦ Capture, edit and collate required original audio	Any audio captured by microphones by the learner

For the test/revision stage learners should retain a note of feedback received; their actions in response to the feedback should be evident in the finished product. Assessors should maintain an observation checklist to supplement the evidence described above.

The centre should ensure the assessment briefs provide enough scope for generating the required evidence whilst not being over complicated. Assessment briefs should be designed to ensure that knowledge and skills are being assessed in the context of industry practice where the learner is working with source material and tasks that reflect commonly encountered situations.

For all outcomes, assessment should be undertaken in open-book conditions at appropriate points throughout the unit. However, delivering centres should take appropriate measures to guarantee the authenticity of the learner's submitted evidence. For example, where there is doubt regarding the authenticity of the learner's work, the learner could be questioned about the work they have undertaken and be asked to explain processes they have used.

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.

Opportunities for developing Core and other essential skills

Problem Solving: The learner will employ critical thinking when selecting the appropriate tools and processes for creating their multimedia artefacts.

Communication: The learner will have the opportunity to develop written and/or oral communication skills in Outcome 1 and Outcome 4 at the test/revision stage.

Information and Communication Technology: The learner could have the opportunity to develop skills in accessing information through use of online tutorial resources during delivery of this unit.

Employability skills: The learner will have the opportunity to develop self-management, problem solving, communication and literacy and application of IT elements of employability skills.

Higher National Unit Specification: General information (cont)

Unit title: Sound Production: Audio for Multimedia (SCQF level 7)

This Unit has the Core Skills of Problem Solving and Information and Communication Technology embedded in it, so when learners achieve this Unit their Core Skills profile will be updated to show that they have achieved Problem Solving at SCQF level 5, and Information and Communication Technology at SCQF level 5.

History of changes to unit

Version	Description of change	Date
02	Core Skills Problem Solving and Information and Communication Technology at SCQF level 5 embedded.	31/08/2018

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General information for learners

Unit title: Sound Production: Audio for Multimedia (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.

This unit is about understanding audio within a variety of multimedia contexts, and applying it within a chosen context.

While working on this unit, you will learn how audio is used in a variety of multimedia contexts. These contexts may include films, television programmes, games, websites and software applications. You will have an opportunity to investigate how audio is used in these contexts, including the use of any context-specific techniques.

You will develop knowledge in the different file formats used in multimedia applications and their appropriate use. You will also develop skills in planning and creating audio in response to a brief for a specific multimedia context.

You will be assessed through a mixture of written/oral and practical work, through which you will demonstrate your ability use technology to capture and/or synthesise, edit and collate audio for a specific multimedia context.

There is no automatic certification of core skills within this unit, but you will have the opportunity to develop your *Problem Solving*, *ICT* and *Communication* skills.

You will also have the opportunity to develop employability skills such as self-management, problem solving, communication and literacy and application of IT.

This Unit has the Core Skill of Problem Solving and Information and Communication Technology embedded in it, so when you achieve this Unit your Core Skills profile will be updated to show that you have achieved Problem Solving at SCQF level 5, and Information and Communication Technology at SCQF level 5.