

National Unit Specification: general information

UNIT Music: Performing with Technology (Advanced Higher)

CODE DV4F 13

COURSE Music (Advanced Higher)

SUMMARY

This Unit is intended for candidates who wish to develop their skills in performing and in the use of music technology. At this level candidates will be expected to have previous experience of solo and/or group performance in one of the combinations below:

- ◆ one instrument or voice
and
- ◆ MIDI Sequencing or Sound Engineering and Production at Higher

Candidates will develop performance skills on one instrument or voice. They will also produce audio folios of performances using MIDI Sequencing to record, edit and mix pieces of music using a computer with a music sequencing package; **or** use multi-track recording equipment to record and mix musical performances from a variety of sources. The focus of the Unit is practical, but candidates will also build their knowledge and understanding of key concepts and techniques used in technology. In performing, this Unit builds on previous levels of attainment by making increased demands in terms of length of performance programme and of levels of technical and musical difficulty. Candidates may study the Unit as part of a general education, as a leisure interest, or for vocational reasons. The Unit has been designed as part of the Advanced Higher Music Course, but may also be used as a stand-alone Unit.

OUTCOMES

1. Perform music in various styles.
2. Demonstrate understanding of concepts and techniques involved in producing musical performances using technology.

Administrative Information

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National Unit Specification: general information (cont)

UNIT Music: Performing with Technology (Advanced Higher)

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:

- ◆ Higher Music
- ◆ Music: Performing with Technology Unit at Higher

CREDIT VALUE

1 credit at Advanced Higher (8 SCQF credit points at SCQF level 7*)

**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

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

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

Perform music in various styles.

Performance Criteria

- a) Perform the chosen pieces with sufficient accuracy in pitch and rhythm to communicate the sense
- b) Perform the chosen pieces musically, by maintaining the musical flow and by realising and interpreting the composer's intentions with regard to tempo, phrasing and dynamics

Evidence requirements for Outcome 1

Performance evidence supported by an assessor's written record of all performance evidence is required to demonstrate satisfactory attainment of the Outcome and Performance Criteria.

Assessment will take place under controlled conditions in the course of live performances by the candidate of the prepared programme. The pieces may be performed and assessed in a single event or assessment evidence may be gathered on a number of occasions during delivery of the Unit. Performances may take place in the presence of the assessor only, or in the presence of an audience, at the discretion of the centre.

Lists of permitted instruments, combinations of instruments, and exemplification of appropriate levels of difficulty are to be found in SQA's *National Qualifications in Music: Performing*.

Performance evidence will be based on a programme on one instrument/voice, solo and/or in a group containing at least two contrasting pieces of music, and lasting 10 minutes.

The National Assessment Bank item for this Unit illustrates the standard to be applied, the breadth of coverage and includes an assessor checklist. Centres wishing to devise their own instruments of assessment should refer to the National Assessment Bank to ensure a comparable standard.

National Unit Specification: statement of standards (cont)

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OUTCOME 2

Demonstrate understanding of concepts and techniques involved in producing musical performances using technology.

Performance Criteria

- a) Set up equipment for selected music technology effectively according to safe and correct practice
- b) Operate equipment for selected music technology effectively according to safe and correct practice
- c) Organise and manage practical tasks effectively
- d) Apply concepts and techniques skilfully and creatively in practical tasks to create, develop and refine recordings
- e) Accurately identify and explain concepts and techniques used in the selected area of music technology

Evidence requirements for Outcome 2

Written/oral and performance evidence is required which demonstrates that the candidate has knowledge and understanding of the key concepts and techniques used in the selected area of music technology. The evidence must cover all of the Performance Criteria.

Evidence will be based on:

- ◆ Assessor observations – Candidates will be given an assignment brief which details the practical tasks to be undertaken in **either** MIDI Sequencing **or** Sound Engineering and Production. The assessor will record the candidate's progress on an observation checklist which must be maintained and kept up to date. The observation checklist must be retained for moderation purposes.

Candidates should base their work on published music scores, their own arrangements of music or on their own compositions.

- ◆ Test of knowledge and understanding – Candidates will respond to a set of questions testing knowledge and understanding, including questions about audio excerpts. Evidence should be produced in supervised, closed-book conditions with a time limit of one hour. Responses may be written or in the form of an oral recording. The test will include alternative sections relating to MIDI Sequencing **or** Sound Engineering and Production.

Details of the mandatory concepts and techniques specified for this level of music technology are given in the Appendix to this Unit.

Assessors should note the following conditions:

- ◆ In MIDI Sequencing candidates may not use commercial files or music files edited by anyone else as part of a submission for assessment
- ◆ In Sound Engineering and Production candidates may not use professional recordings or material recorded by anyone else as part of a submission for assessment

National Unit Specification: statement of standards (cont)

UNIT Music: Performing with Technology (Advanced Higher)

The National Assessment Bank item for this Unit illustrates the standard to be applied, the breadth of coverage and includes an assignment brief, an assessor's observation checklist and a test of knowledge and understanding. Centres who wish to develop their own instrument of assessment should refer to the National Assessment Bank to ensure a comparable standard.

National Unit Specification: support notes

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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

Candidates will have the opportunity to develop and refine their technical and musical competence in performing. The study of a variety of musical styles and genres will provide a context for development of these performing skills and for acquisition, through practical activity, of conceptual knowledge and understanding. While the development of musical literacy is to be encouraged, it is not a mandatory route to performing.

Candidates studying this Unit as part of the Advanced Higher Course will benefit from a breadth of performance opportunities, solo and in group, as appropriate, in preparation for the course assessment where, in the course of a prepared recital, they will demonstrate the ability to perform with accuracy in pitch and rhythm and to play musically, maintaining the musical flow and realising and interpreting the composer's intentions with regard to tempo, phrasing and dynamics.

Exemplification of appropriate levels of difficulty is to be found in *SQA's National Qualifications in Music: Performing*.

Candidates who study this Unit will develop knowledge, understanding and practical skills in either MIDI Sequencing *or* Sound Engineering and Production.

They will demonstrate their abilities in processes followed throughout the Unit and in a test of knowledge and understanding. Candidates should keep a log of their recordings to identify the equipment used, the music performed (with a score or a performance plan included), the performers, and the editing processes used.

Where candidates are taking the Unit as part of the Advanced Higher Music Course, the final product folio will be submitted for course assessment. For the Advanced Higher Music Course, an appreciation of compositional concepts achieved through studying this Unit is of particular relevance, where an integrated understanding arises from the experience of performing, listening and composing.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

This Unit can be delivered in a variety of teaching situations:

Outcome 1

For Performing, preparation may be in class and/or in the course of individual or group instrumental lessons, either in or outside the centre. A variety of repertoire in addition to that used for assessment purposes could be explored, with candidates having the opportunity to play solo and in group situations as appropriate. Candidates will have the opportunity to extend, develop and refine their technical and musical competence in performing. The study of a variety of musical styles and genres will provide a context for developing of these performing skills and, through practical activity, conceptual knowledge and understanding.

National Unit Specification: support notes (cont)

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In Performing, opportunities could be created to enable candidates to perform to members of their class and to others.

Where this Unit is being taken as part of the Advanced Higher Music Course, candidates will gain an understanding of style and compositional techniques from the repertoire studied.

Outcome 2

In the chosen area of music technology, candidates will base their work on published music scores, their own arrangements of music, or on their own compositions to demonstrate creative use of MIDI Sequencing *or* Sound Engineering and Production. Personal decisions about organising, setting up, creating tracks, evaluating the music and refining the final mix should demonstrate an objective, constructive and imaginative understanding of the concepts and techniques involved in achieving an effective musical production. The mandatory concepts for the optional areas of music technology, detailed in the Appendix, should be used to indicate the breadth of candidates' practical skills in assignments which lead to completed recordings.

Useful classroom activities might include tutor demonstrations of good practice, peer-group opinions and support, and independent work.

At this level there should be greater independence of study; candidates should already have a secure working knowledge of the equipment necessary to complete the Technology Outcomes of this Unit.

The following conditions should be noted:

- ◆ In MIDI Sequencing candidates may not use commercial files or music files edited by anyone else as part of a submission for assessment
- ◆ In Sound Engineering and Production candidates may not use professional recordings or material recorded by anyone else as part of a submission for assessment

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Centres will know from their preparation of candidates, and from formative assessment of work in progress, when candidates are ready for formal Unit assessment. It is likely that assessment of practical skills will take place towards the end of the Unit, allowing time for any re-evaluation, re-editing and re-assessment which may be required from the candidate. It is important that the assessor's observation checklist and a candidate's log are maintained throughout the Unit in order to inform assessment of the candidate's development in the creative use of technology.

The National Assessment Bank items for this Unit provide useful checklists and guidance for assessing candidate performance against the Performance Criteria detailed in the Statement of Standards.

National Unit Specification: support notes (cont)

UNIT Music: Performing with Technology (Advanced Higher)

Assessment of the Unit will consist of:

- ◆ a performance programme, solo and/or in group, on one instrument/voice, lasting 10 minutes
- ◆ evidence of attainment of Outcomes and Performance Criteria in MIDI Sequencing *or* Sound Engineering and Production derived from assessor observation checklists and from a test of knowledge and understanding

If this Unit is taken as part of the Advanced Higher Music Course, a completed audio folio of instrumental or vocal performances and MIDI Sequencing *or* Sound Engineering and Production mixes will be submitted for course assessment. Details of this are given in the Course Assessment Specification.

CANDIDATES WITH ADDITIONAL SUPPORT NEEDS

This Unit Specification is intended to ensure that there are no artificial barriers to learning or assessment. 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. For information on these, please refer to the document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* (SQA, 2004).

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APPENDIX

Sound Engineering and Production Mandatory Concepts

Advanced Higher subsumes the concepts from all lower levels

ACCESS 3 (MANDATORY) Sound Engineering	EQUIPMENT, CONTROLS, EFFECTS, PROCESSES, TECHNIQUES AND TECHNICAL SPECIFICATIONS		OTHER MUSICAL FEATURES
	Amplifier CD Channel Connector Count-in Distortion Dry Echo Fader Fade in Fade out Gain Headphones Input Jack plug Lead/cable	Level Loudspeaker Meter Microphone Microphone stand Mix Mono(phonic) Noise Output Phono plug Recorder Session log Stereo(phonic) Track Trim Wet	Guitar Backing vocals Bass guitar Drum kit Introduction Lead vocal Riff Synthesiser Vocals

INTERMEDIATE 1 (MANDATORY) Sound Engineering	EQUIPMENT, CONTROLS, EFFECTS, PROCESSES, TECHNIQUES AND TECHNICAL SPECIFICATIONS		OTHER MUSICAL FEATURES
	Balance Buss Cardioid/ uni-directional microphone Click track Close mic'd DI box Effects unit Equalisation (EQ) Final mix Foldback Mixing desk/Mixer Monitor Multi-track	Mute/cut Omni-directional microphone Overdrive Overdub Pan(ning) Peak Popping and blasting Pop-shield Reverb(eration) Stereo master Talkback Time domain effects Windshield XLR	Acoustic guitar Chorus (in a song structure) Dynamics/Expression Electric guitar Guide vocal Solo Verse

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APPENDIX (cont)

Sound Engineering and Production Mandatory Concepts (cont)

INTERMEDIATE 2 (MANDATORY)	EQUIPMENT, CONTROLS, EFFECTS, PROCESSES, TECHNIQUES AND TECHNICAL SPECIFICATIONS		OTHER MUSICAL FEATURES
	Sound Engineering	AFL/Solo Analogue Auxilliary send/return Boost (EQ) Chorus(effect) Compressor Condenser microphone Delay (effect) Digital Dynamic mic Dynamic range EQ Cut Feedback Filter	Frequency response Impedance Leakage Line level Mic level Noise gate PFL Phantom power Proximity effect Punch in/out – Drop in/out Sibilance Signal path Spillage

HIGHER (MANDATORY)	EQUIPMENT, CONTROLS, EFFECTS, PROCESSES, TECHNIQUES AND TECHNICAL SPECIFICATIONS		OTHER MUSICAL FEATURES
	Sound Engineering	Attack Balanced wiring connectors Bouncing Clipping dB Decay Echo/reflection Enhancer/exciter Figure-of-eight mic File compression Graphic equalizer Insert point Limiter	Parametric equalizer Phase cancellation Phasing Pitch shift Pre-fade Post-fade Ratio Shelving equalization Stereo pair Threshold Unbalanced wiring connectors

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APPENDIX (cont)

Sound Engineering and Production Mandatory Concepts (cont)

ADVANCED HIGHER (MANDATORY) Sound Engineering	EQUIPMENT, CONTROLS, EFFECTS, PROCESSES, TECHNIQUES AND TECHNICAL SPECIFICATIONS	OTHER MUSICAL FEATURES
	A/D convertor Bit depth/rate Byte Co-incident pair/ xy pair D/A convertor Dolby DTS DVD Editing Expander Glitch Harmonics Harmoniser Hyper-cardioid Latency LFO	Matched pair Normalising Optical link Playlist Plug-in Pre-delay Quantizing (audio) Ribbon microphone Sample rate/ frequency Scrub SMPTE Spaced pair S/P Dif Super-cardioid Surround sound T Dif

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APPENDIX (cont)

OTHER SOUND ENGINEERING AND PRODUCTION CONCEPTS FOR INFORMATION AND SUPPORT IN THE UNIT

ACCESS 3 (Support concepts)	Acoustic Acoustic screen Arrangements Circuit breaker Control room Live room Mains multi-block Record	Session Signal Take Tape Tone control Track sheets Two-track recorder (2-track)	Arrangements
INTERMEDIATE 1 (Support concepts)	Ambience Boom (stand) Cue Direct sound Earth/ground Indirect sound Master fader	MIDI Overdrive Overload Pick-up Pick-up pattern Remix Stage Monitor Tracking	Flat Wah-wah
INTERMEDIATE 2 (Support concepts)	Attenuate Autolocate Effects loop (FX) Foldback Gated reverb Hard-disk recorder I/O Masking Mini-disc(MD) Patchbay	Patchlead Signal-to-noise ratio (S/N ratio) Shock mount Subgroup Sub-woofer Synchronisation (Sync) Tweeter Woofer	

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APPENDIX 2 (cont)

HIGHER (Support concepts)	AB Comparison ADSR Active Balanced wiring Bandpass filter (BPF) Centre frequency Crosstalk DAT DSP High pass filter (HPF) Master Post -production Pre-production Low pass filter(LPF) Passive	Presence peak/ colouration Q/bandwidth Red book standard Slave SPL Squawker Submix Synchronisation Sweep Transducer Transient TRS jack Waveform Wavelength	
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APPENDIX (cont)

OTHER SOUND ENGINEERING AND PRODUCTION CONCEPTS FOR INFORMATION AND SUPPORT IN THE UNIT (cont)

ADVANCED HIGHER (Support concepts)	ASIO Automated mixing Control surface LFE DAW DVD-audio MS MTC(MIDI time code)	: Pad : PPM : SACD : Total recall : Total reset : Vocoder : VU	
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APPENDIX (cont)

MIDI Sequencing Mandatory Concepts

ACCESS 3 (MANDATORY) MIDI Sequencing	GENERAL TERMS		EQUIPMENT
	Arrange window BPM (beats per minute) Copy/Cut and paste Count-in Event Local control Metronome/click MIDI MIDI files MIDI In MIDI Out Mix/Balance Pan	Record Save Silence Tempo Time signature Track (names) Transport bar/controls Undo Velocity Volume	Amplifier Headphones Interface Loudspeaker MIDI interface Sequencer Synthesizer

INTERMEDIATE 1 (MANDATORY) MIDI Sequencing	GENERAL TERMS		EQUIPMENT
	Backup copy Balance Boot Chorus (in a song structure) Controller keyboard Dynamics/ Expression Effects (FX) General MIDI Import/Export Introduction Key change/ Modulation Level Locators Loop Markers	MIDI channel MIDI Thru Modulation controller Mute Octave Pitch Programme change Quantization Reset controller Reverb(eration) Snap Solo Sustain Time signature Track list Transpose Verse	CDR CDRW GM mixer Phono connector USB

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APPENDIX (cont)

MIDI Sequencing Mandatory Concepts (cont)

INTERMEDIATE 2 (MANDATORY) MIDI Sequencing	GENERAL TERMS		EQUIPMENT
	Chorus depth Chorus (effect) Coda Digital Fade in Fade out Fader Introduction Local Key command Master fader Merge Middle 8 Mix(down)	<ul style="list-style-type: none"> · Mono(phonic) · Multi-timbral · Note off · Note on · Outro · Overdub · Pitch bend · Punch In/Out · -Drop In/Out · Real time · Remix · Rhythms · Stereo(phonic) · Tremolo 	Sound card

HIGHER (MANDATORY) MIDI Sequencing	GENERAL TERMS		EQUIPMENT
	<ul style="list-style-type: none"> · Aftertouch · Analogue · dB · Delay · Distortion · Dry · Expression · Glitch · Hiss 	<ul style="list-style-type: none"> · Noise · Nudge · Pitch shifter · Polyphony Portamento · Sample · Wet 	<ul style="list-style-type: none"> · Minidisc(MD) · Mixer · MP3

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APPENDIX (cont)

MIDI Sequencing Mandatory Concepts (cont)

ADVANCED HIGHER (MANDATORY) MIDI Sequencing	GENERAL TERMS		EQUIPMENT
	AIFF(Audio file format) Ambience Audio Audio file Auxiliary send/return Bass Clip Crossfade Envelope(ADSR) EQ Flanging Gate(noise) Gated reverb Harmoniser Hum Instrumental break Limiter	Line level Link passage Mic level Normalize Parametric equalizer Phaser S/P Dif Surround sound Synchronisation T Dif Time compression Time expansion Transient Vocal break Wav Waveform	Audio instrument Audio interface Compressor/Compression A/D convertor D/A convertor DI Harmonizer Microphone Phantom power XLR connector

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APPENDIX (cont)

OTHER MIDI SEQUENCING CONCEPTS FOR INFORMATION AND SUPPORT IN THE UNIT

ACCESS 3 (Support concepts)	Application File management Format Signal Toolbox	CD Computer Jack connector Joystick port Keyboard controller Studio	
INTERMEDIATE 1 (Support concepts)	Cycle/loop modes Input Note number Output Parameter	Patch Production log Timbre Track object Zoom in/out	Monitor Sound module Sustain pedal
INTERMEDIATE 2 (Support concepts)	Continuous controller Cycle/loops mode GS(General Standard MIDI) MIDI implementation chart Step-time recording		
HIGHER (Support concepts)	Automated mixing Bank Frequency response Groove Latency Overload Peak Playlist	Plug-in Sample editor Sample frequency Scrub Softsynth Truncate VST VST instrument	Firewire

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APPENDIX (cont)

OTHER MIDI SEQUENCING CONCEPTS FOR INFORMATION AND SUPPORT IN THE UNIT (cont)

ADVANCED HIGHER (Support concepts)	Arpeggiator ASIO (Sound driver) Bit depth DAE (Digital Audio Extraction) DSP (software) EASI (Enhanced Audio Streaming Interface) LSB	MSB Non-linear Pad Phrasing PPM RTAS (plug-in) SACD (audio format) SD2 (format) Talkback Threshold	DAW (digital interface) Hard disk drive Vocoder
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