

Model Curriculum

Music Programmer

SECTOR	:	Media and Entertainment
SUB-SECTOR	:	Film, Television, Music, Radio, Animation, Gaming, Advertising
OCCUPATION	:	Music Production
REF ID	:	MES/Q1503, V1.0
NSQF LEVEL	:	5



Certificate

CURRICULUM COMPLIANCE TO QUALIFICATION PACK - NATIONAL OCCUPATIONAL STANDARDS

is hereby issued by the

Media and Entertainment Skill Council

for the

MODEL CURRICULUM

Complying to National Occupational Standards of
Job Role/ Qualification Pack: '**Music Programmer**'

QP Ref. No. '**MES/Q1503 NSQF Level 5**'

Date of Issuance: March 11, 2019

Valid up to: March 10, 2022

* Valid up to the next review date of the Qualification Pack



Authorized Signatory
Media and Entertainment Skill Council

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Music Programmer

CURRICULUM / SYLLABUS

This program is aimed at training candidates for the job of a “Music Programmer”, in the “Media and Entertainment” Sector/Industry and aims at building the following key competencies amongst the learner.

Program Name	Music Programmer		
Qualification Pack Name & Reference ID.	MES/Q 1503, Version1.0		
Version No.	1.0	Version Update Date	11 March 2019
Prerequisite for Training	Class XII		
Training Outcomes	<p>After completing this programme, participants will be able to:</p> <ul style="list-style-type: none"> • Configure a Digital Audio Workstation (DAW) to program music • Use a Digital Audio Workstation (DAW) to record sounds • Integrate music software and hardware with a Digital Audio Workstation (DAW) • Use music samplers to program music • Use synthesizers to program music • Employ sound design in music programming • Input music information into a Digital Audio Workstation (DAW) • Program music with realism and authenticity • Sequence and edit music • Maintain workplace health and safety 		

This course encompasses 4 out of 4 National Occupational Standards (NOS) of “Music Programmer” Qualification Pack issued by “Media and Entertainment Skills Council”.

S.No	Module	Key Learning Outcomes	Equipment
1	<p>Introduction and Orientation</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 05:00</p> <p>Corresponding NOS Code Bridge Module</p>	<ul style="list-style-type: none"> Publicise with the sub-sectors within the key Media and Entertainment industry. Recognise the need and use of music within the Media and Entertainment industry. Find music production job roles and entrepreneurial opportunities within the Media and Entertainment industry. Recognise the technology landscape within the Media and Entertainment industry and its impact on music production. Identify the global trends in professional music production and consumption. 	White board, marker, computer, internet access, projector
2	<p>Operate Digital Audio Workstations (DAW)</p> <p>Theory Duration (hh:mm) 30:00</p> <p>Practical Duration (hh:mm) 90:00</p> <p>Corresponding NOS Code MES/N1508</p>	<ul style="list-style-type: none"> Identify music and stylistic requirements specified in the music brief for songs. Identify music and stylistic requirements specified in the music brief for advertisement jingles. Identify music and stylistic requirements specified in the music brief for film/TV/game background scores. Configure templates on the DAW to program music for songs, advertisements and background scores. Setup the DAW using the most suitable template for each music programming task. Connect and configure audio interfaces with a DAW to record and monitor sounds. Connect and configure Musical Instrument Digital Interface (MIDI) controllers with a DAW to program music for songs, advertisements and background scores. Connect and configure suitable sound modules and processors to program music for songs, advertisements and background scores. Communicate with producers, musicians and clients using correct technical, musical and production terminologies. Record musical instruments using correct gain structuring on a DAW. Record musical instruments using correct microphones on a DAW. Record vocals using correct gain structuring on a DAW. 	Computer System, DAW software (Logic, Cubase, etc.), audio & MIDI interface, MIDI controller, headphones or monitor speakers, white board, marker, projector.

		<ul style="list-style-type: none"> Record vocals using correct microphones on a DAW. Determine appropriate microphone techniques based on principles of acoustics to record sounds. Monitor input and output levels correctly using headphones and speakers while recording sounds on a DAW. Choose suitable virtual instruments and configure them to program music for songs, advertisement jingles and background scores. Program music for songs on a DAW using external sound libraries and plug-ins. Program music for advertisement jingles on a DAW using external sound libraries and plug-ins. Program music for film/TV/game background scores on a DAW using external sound libraries and plug-ins. Manipulate virtual instrument controls in a DAW using MIDI controllers to program music. Make use of correct MIDI protocol to program music efficiently for songs, advertisement jingles and background scores. 	
3	<p>Sample and synthesise sounds</p> <p>Theory Duration (hh:mm) 45:00</p> <p>Practical Duration (hh:mm) 130:00</p> <p>Corresponding NOS Code MES/N1509</p>	<ul style="list-style-type: none"> Setup and configure samplers to program music for songs, advertisement jingles and background scores. Create original music samples of live instrument sounds by recording them. Re-sample existing audio material to create music samples. Shape sampled sounds by controlling and manipulating envelope parameters (Attack, Decay, Sustain, and Release etc.). Enhance sampled sounds using pitch and time stretching techniques. Create percussive instrument sounds using synthesizers. Create bowed strings and pad sounds using synthesizers. Create bass and plucked instrument sounds using synthesizers. Create woodwind and brass instrument sounds using synthesizers. Create lead instrument sounds using synthesizers. 	<p>Computer System, DAW software (Logic, Cubase, etc.), sampler and synthesiser software, audio & MIDI interface, MIDI controller, headphones or monitor speakers, white board, marker, projector</p>

		<ul style="list-style-type: none"> • Shape original sounds using suitable synthesis techniques. • Design musical sounds on a DAW using automation, panning, glitching, and reversal techniques. • Use equalisation (EQ) techniques to design musical sounds for songs, advertisement jingles and background scores. • Using reverb and delay techniques to design musical sounds for songs, advertisement jingles and background scores. • Use compression and gating techniques to design musical sounds for songs, advertisement jingles and background scores. • Manipulate MIDI and audio files within samplers and synthesisers to design musical sounds for songs, advertisement jingles and background scores. • Create new textures and timbres by layering different types of sounds. 	.
4	<p>Program, sequence and edit music</p> <p>Theory Duration (hh:mm) 60:00</p> <p>Practical Duration (hh:mm) 160:00</p> <p>Corresponding NOS Code MES/N1510</p>	<ul style="list-style-type: none"> • Use the piano roll to input notes and events of melodies, chord progressions and rhythms into the DAW. • Use a MIDI controller to input notes and events of melodies, chord progressions and rhythms into the DAW. • Enhance programmed music by transposing, moving, quantizing, transforming, and varying the speed of MIDI events as required. • Assign suitable virtual instruments for percussion parts in the arrangement to reproduce music as intended. • Assign suitable virtual instruments for string and pad instrument parts in the arrangement to reproduce music as intended. • Assign suitable virtual instruments for woodwind instrument parts in the arrangement to reproduce music as intended. • Assign suitable virtual instruments for brass instrument parts in the arrangement to reproduce music as intended. • Manage the different notes in the same music track according to the needs by switching and assigning different MIDI channels. • Use instrument sounds that emulate the stylistic characteristics of songs. 	<p>Computer System, DAW software (Logic, Cubase, etc.), sampler and synthesiser software, audio & MIDI interface, MIDI controller, headphones or monitor speakers, white board, marker, projector</p>

		<ul style="list-style-type: none"> • Use instrument sounds that emulate the stylistic characteristics of the music required for advertisements. • Use instrument sounds that emulate the stylistic characteristics of the background score required for film/TV/games. • Shape sounds to achieve textures and timbre that suit the intended musical characteristics. • Arrangement of program brass instruments using correct playing techniques. • Simulate realism in programmed music by adjusting velocity, modulation and expression. • Perform tempo-mapping and humanization to achieve realism in programmed music. • Program different articulations for the same instrument in a track using key switches or different MIDI channels. • Sequence programmed music parts as needed by automating DAW, sampler and synthesizer parameters. • Prepare specified “cuts” or lengths of music for songs, advertisement jingles and background scores by editing MIDI tracks and data. • Prepare specified “cuts” or lengths of music for songs, advertisement jingles and background scores by editing audio tracks. • Optimize the DAW performance by controlling and managing the Central Processing Unit (CPU), Random Access Memory (RAM) and storage use of the computer. 	
5	<p>Maintain workplace health and safety</p> <p>Theory Duration (hh:mm) 10:00</p> <p>Practical Duration (hh:mm) 10:00</p> <p>Corresponding NOS Code MES/N0104</p>	<ul style="list-style-type: none"> • Maintain one's posture and position to minimize fatigue and the risk of injury. • Maintain first aid kit and keep oneself updated on the first aid procedures • Identify and document potential risks like sitting postures while using computer, eye fatigues and other hazards in the workplace. • Maintain accident reports. • Report health and safety risks/ hazards to concerned personnel. • Participate in organization health and safety knowledge sessions and drills. • Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency. • Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms. 	White board, marker, computer, internet access, projector

		<ul style="list-style-type: none"> Identify aspects of your workplace that could cause potential risk to own and others health and safety. Ensure own personal health and safety, and that of others in the workplace through precautionary measures. Identify and recommend opportunities for improving health, safety, and security to the designated person. Report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected. Follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority. 	
	<p>Total Duration 550:00</p> <p>Theory Duration 155:00</p> <p>Practical Duration 395:00</p>	<p>Unique Equipment Required:</p> <p>Computer System, DAW software (Logic, Cubase, etc.), Sampler and synthesiser software, Audio & MIDI interface, MIDI controller, Headphones or monitor speakers, white board, marker, projector.</p>	

Grand Total Course Duration: **550 Hours 0 Minutes**

(This syllabus/ curriculum has been approved by Media and Entertainment Skills Council)

Trainer Pre-requisites for Job role: “Music Programmer” mapped to the Qualification Pack: “MES/Q1503, version 1.0”

Sr. No.	Area	Details
1	Job Description	To deliver accredited training service, mapped to the curriculum detailed above, in accordance with Qualification Pack “ <u>MES/Q1503</u> ”
2	Personal Attributes	<p>The candidate should have a caring attitude and must be committed to mentor the development of professional skills among students to ensure competent, employable candidates at the end of the training.</p> <p>The individual in this role must be able to communicate fluently in English and the local/regional language. The person must be creative, with a high degree of responsibility, and must uphold a positive attitude. Those in this role should be open-minded, willing to accept students with a wide range of behavioral attributes and learning aptitudes, and comfortable taking advice from unexpected sources.</p> <p>The ideal trainer should also maintain a consistent appetite for continuous self-improvement and drive for professional development and industry engagement through professional work.</p>
3	Minimum Educational Qualifications	Vocational Diploma / NSQF Level 5 Certificate or above. Advanced DAW User / Trainer Certificate (Logic, Cubase, etc.) (Suggested)
4a	Domain Certification	Certified for Job Role: “Music Programmer” mapped to QP: “ <u>MES/Q1503</u> ”, version 1.0. Minimum accepted score as per SSC guidelines is 70%.
4b	Platform Certification	Recommended that the Trainer is certified for the Job Role: “ <u>Trainer</u> ”, mapped to the Qualification Pack: “ <u>MEP/Q2601</u> ” with scoring of minimum 80%.
5	Experience	The trainer must have sufficient professional experience (2-3 years recommended) in working with music technology to program music for professional purposes, preferably in a supervisory role. The candidate must be well versed with occupational health and safety regulations, policies and practices.

Annexure: Assessment Criteria

Assessment Criteria for Music Programmer	
Job Role	Music Programmer
Qualification Pack	MES/Q1503, version 1.0
Sector Skill Council	Media and Entertainment Skills Council

Guidelines for Assessment
<ol style="list-style-type: none"> Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC. The assessment for the theory part will be based on knowledge bank of questions created by the SSC. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below). Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment. In case of <i>unsuccessful completion</i>, the trainee may seek reassessment on the Qualification Pack.

Compulsory NOS		Marks Allocation			
Total Marks: 400		Total Mark	Out Of	Theory	Practical Skills
Assessment Outcome	Assessment Criteria for outcomes				
MES/N1508 (Operate Digital Audio Workstations)	PC1. interpret music and stylistic requirements of the production from the music brief.	100	10	4	6
	PC2. prepare music programming templates and supervise the setup of sessions in the DAW according to music programming requirements.		10	4	6
	PC3. supervise the setup and configuration of audio interfaces, Musical Instrument Digital Interface (MIDI) controllers, sound modules and processors to program music.		10	4	6
	PC4. use correct technical, musical and production terminologies (e.g. samples rate, buffer size, I/O devices, form, etc.) to communicate music programming requirements		10	4	6

	to the team.				
	PC5. supervise the recording of instruments and vocals while monitoring input and output levels within the DAW.		10	4	6
	PC6. demonstrate familiarity with the basic principles of acoustics, and competency in microphone placement to record sounds.		10	4	6
	PC7. load, configure and use suitable virtual instruments in a DAW in accordance to the music programming requirements.		10	4	6
	PC8. use external sound libraries and plug-ins while working within a DAW to program music.		10	4	6
	PC9. supervise the linking of external MIDI controllers to the DAW and to specific virtual instrument controls for programming music.		10	4	6
	PC10. work using MIDI protocol (MIDI channels, velocity, programming tools) within a DAW to program music.		10	4	6
		Total	100	40	60
MES/N1509 (Sample and synthesise sounds)	PC1. operate music samplers to program music.	100	10	4	6
	PC2. create original music samples (recording sounds or re-sampling existing audio material) according to music programming requirements.		10	4	6
	PC3. control and manipulate envelope parameters (Attack, Decay, Sustain, Release) and filters to shape sounds creatively.		10	4	6
	PC4. execute pitch and time stretching of sampled sounds to meet music programming requirements.		10	4	6
	PC5. operate synthesizers efficiently to create different types of musical sounds (pads, lead, bass, pluck, etc.) to program music.		10	4	6
	PC6. supervise the shaping of original sounds using various synthesis techniques		10	4	6
	PC7. use techniques such as automation, panning, glitching, reversal, etc. to design sounds		10	4	6

	using a DAW.				
	PC8. apply equalization, reverb, delay, and compression techniques to shape sounds according to music programming requirements.		10	4	6
	PC9. supervise the manipulation of MIDI and audio files within samplers and synthesisers.		10	4	6
	PC10. supervise layering of different types of sounds to create new textures and timbres.		10	4	6
		Total	100	40	60
MES/N1510 (Program, sequence and edit music)	PC1. input music material (melodies, chord progressions and rhythms) accurately into the DAW by inserting notes and events using the piano roll or by playing on a midi controller.	100	5	2	3
	PC2. transpose, move, quantize, transform, control the speed and humanize MIDI events.		10	4	6
	PC3. assign proper virtual instruments for specific music material to be performed according to production requirements.		10	4	6
	PC4. switch and assign different MIDI channels for different notes in the same music track.		10	4	6
	PC5. use sounds, textures and timbre that emulate the stylistic characteristics of the music being programmed.		10	4	6
	PC6. program appropriate playing/performance techniques for the required instruments and music genre.		10	4	6
	PC7. adjust the humanization, velocity, modulation, expression and tempo mapping of music in order to achieve realism.		10	4	6
	PC8. use key switches or different MIDI channels to program different articulations for the same instrument within the same track.		10	4	6
	PC9. automate sequencer, sampler and synthesizer parameters for efficient sequencing of music material.		10	4	6

	PC10. edit audio and/or MIDI tracks according to the specified “cuts” or lengths of music material.		10	4	6
	PC11. control and manage the Central Processing Unit (CPU), Random Access Memory (RAM) and storage use of computers to avoid crashes or delays during programming.		5	2	3
		Total	100	40	60
MES/N0104 (Maintain Workplace Health and Safety)	PC1. maintain one's posture and position to minimize fatigue and the risk of injury	100	10	5	5
	PC2. maintain first aid kit and keep oneself updated on the first aid procedures		10	5	5
	PC3. identify and document potential risks like sitting postures while using computer, eye fatigue and other hazards in the workplace		5	2	3
	PC4. accurately maintain accident reports		5	2	3
	PC5 report health and safety risks/ hazards to concerned personnel		10	5	5
	PC6. participate in organization health and safety knowledge sessions and drills		10	5	5
	PC7. identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency		10	5	5
	PC8. identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms		10	5	5
	PC9. identify aspects of workplace that could cause potential risk to own and others health and safety		5	2	3
	PC10. ensure own personal health and safety, and that of others in the workplace through precautionary measures		5	2	3
	PC11. identify and recommend opportunities for improving health, safety, and security to the designated person		5	2	3

	PC12. report any hazards outside the individual's authority to the relevant person in line with organisational procedures and warn other people who may be affected		5	2	3
	PC13. follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard		5	2	3
	PC14. identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority		5	2	3
		Total	100	46	54