QUALIFICATION FILE

3D Digital Game Art

☒ **Worldskills** ☐ **Short Term Training (STT)** ☐ **Long Term Training (LTT)** ☐ **Apprenticeship**

☐ **Upskilling** ☐ **Dual/Flexi Qualification** ☐ **For ToT** ☐ **For ToA**

☐General ☐ **Multi-skill (MS)** ☐ **Cross Sectoral (CS)** ☐ **Future Skills** ☐ **OEM**

NCrF/NSQF Level: NSQF Level 4.5

Submitted By:

Media & Entertainment Skills Council

522-524, DLF Tower-A, Jasola, New Delhi

110025

Table of Contents

Section 1: Basic Details

1.	Qualification Name	3D Digital Game Art	
2.	Sector/s	**Media & Entertainment**	
3.	Type of Qualification: ☒ New　☐ Revised　☐ Has Electives/Options ☐OEM	**NQR Code & version of existing/previous qualification:** *(change to previous, once approved)*	**Qualification Name of existing/previous version:**
4.	a.　OEM Name b.　Qualification Name *(Wherever applicable)*		
5.	National Qualification Register (NQR) Code &Version *(Will be issued after NSQC approval)*	QG-4.5-ME-01800-2024-V1-MESC　　V1.0	**6.　NCrF/NSQF Level:** NSQF Level 4.5
7.	Award (Certificate/Diploma/Advance Diploma/ Any Other *(Wherever applicable specify multiple entry/exits also & provide details in annexure)*	Certificate	
8.	Brief Description of the Qualification	The 3D Digital Game Artist takes a designer's brief and, through a combination of conceptualization, creativity, selectivity, technical, and specialist skills, completes the brief to the satisfaction of clients. The 3D Digital Game Artist receives, conceptualizes, and interprets design briefs on the basis of their market knowledge and skill sets, and the given scope and limits of the briefs. The skills required of the 3D Digital Game Artist can be broken down further into 2D concept art, texture painting, 3D modelling, rigging, and animating.	

9.	Eligibility Criteria for Entry for Student/Trainee/Learner/Employee	a.　**Entry Qualification & Relevant Experience:**

S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)
1.	12th plus 2 Years Diploma in design	NA
2.	2nd Year of Graduation in related field	NA
3.	12th Pass	4 Years Experience in design

b.　**Age: Maximum 22 years**

10.	Credits Assigned to this Qualification, Subject to Assessment *(as per National Credit Framework (NCrF))*	17	**11. Common Cost Norm Category (I/II/III)** *(wherever applicable)*: I
12.	Any Licensing requirements for Undertaking Training on This Qualification *(wherever applicable)*	NA	

| 13. | **Training Duration by Modes of Training Delivery** *(Specify **Total Duration** as per selected training delivery modes and as per requirement of the qualification)* | ☒Offline ☐Online ☒Blended | | | | | |

Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)
Classroom (offline)	135	375			510
Online					

(Refer Blended Learning Annexure for details)

14.	**Aligned to NCO/ISCO Code/s** *(if no code is available mention the same)*	NCO-2015/2166.0202
15.	**Progression path after attaining the qualification** *(Please show Professional and Academic progression)*	
16.	**Other Indian languages in which the Qualification & Model Curriculum are being submitted**	
17.	**Is similar Qualification(s) available on NQR-if yes, justification for this qualification**	☐ Yes ☒ No URLs of similar Qualifications:
18.	**Is the Job Role Amenable to Persons with Disability**	☐ Yes ☒ No **If "Yes", specify applicable type of Disability:**
19.	**How Participation of Women will be Encouraged**	
20.	**Are Greening/ Environment Sustainability Aspects Covered** *(Specify the NOS/Module which covers it)*	☐ Yes ☒ No
21.	**Is Qualification Suitable to be Offered in Schools/Colleges**	Schools ☒ Yes ☐ No Colleges ☒ Yes ☐ No
22.	**Name and Contact Details of Submitting / Awarding Body SPOC** *(In case of CS or MS, provide details of both Lead AB & Supporting ABs)*	**Name: Mohit Soni** **Position in the organization: Chief Executive Officer** **Address if different from above:** **Tel number(s): 01149048335/ 49048336** **E-mail address: ceo@mescindia.org**
23.	**Final Approval Date by NSQC:** 06- Feb- 2024	**24. Validity Duration: 2 Years**	**25. Next Review Date:** 06- Feb- 2026

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Section 2: Module Summary

NOS/s of Qualifications
(In exceptional cases these could be described as components)

Mandatory NOS/s:

Specify the training duration and assessment criteria at NOS/ Module level. For further details refer curriculum document.

Th.-Theory **Pr.**-*Practical* **OJT**-*On the Job* **Man.**-*Mandatory Training* **Rec.**-*Recommended* **Proj.**-*Project*

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					Weightage (%) (if applicable)
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	
1.	Work Organization and Management	MES/N2546	Core	4.5	2	15	45			60	2	6		2	10	5
2.	Communication and Interpersonal Skills	MES/N2547	Core	4.5	2	15	45			60	2	6		2	10	5
3.	Concept Art	MES/N2548	Core	4.5	2	15	45			60	3	9		3	15	15
4.	3D Modelling	MES/N2549	Core	4.5	2	15	45			60	3	9		3	15	25
5.	UV Unwrapping	MES/N2550	Core	4.5	2	15	45			60	3	9		3	15	10
6.	Texturing	MES/N2551	Core	4.5	2	15	45			60	2	6		2	10	18
7.	Rigging and Animation	MES/N2552	Core	4.5	2	15	45			60	2	6		2	10	12
8.	Technical Art and Game Engine	MES/N2553	Core	4.5	3	30	60			90	3	9		3	15	10
	Duration (in Hours) / Total Marks				17	135	375			510	20	60		20	100	100

Elective NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NS QF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					Weightage (%) (if applicable)
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	
1.																
2.																
Duration (in Hours) / Total Marks																

Optional NOS/s:

S. No	NOS/Module Name	NOS/Module Code & Version (if applicable)	Core/ Non-Core	NCrF/NSQF Level	Credits as per NCrF	Training Duration (Hours)					Assessment Marks					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)
1.																
2.																
Duration (in Hours) / Total Marks																

Assessment - Minimum Qualifying Percentage

*Please specify **any one** of the following:*

Minimum Pass Percentage – Aggregate at qualification level: 70   % *(Every Trainee should score specified minimum aggregate passing percentage at qualification level to successfully clear the assessment.)*

Minimum Pass Percentage – NOS/Module-wise: 70   % *(Every Trainee should score specified minimum passing percentage in each mandatory and selected elective NOS/Module to successfully clear the assessment.)*

Section 3: Training Related

1.	**Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Graduate in Design or Art related field with 3 years of experience in Game Designing or Game Art with 1 Year experience in training/teaching.** **Post-Graduate in Design or Art related field with 2 Years of Experience in Game design or Game Art with 1 Year experience in training/Teaching.**
2.	**Master Trainer's Qualification and experience in the relevant sector (in years)** *(as per NCVET guidelines)*	**Graduate in Design or Art related field with 5 years of experience in Game Designing or Game Art with 1 Year experience in training/teaching.** **Post-Graduate in Design or Art related field with 3 Years of Experience in Game design or Game Art with 1 Year experience in training/Teaching.**
3.	**Tools and Equipment Required for Training**	☒Yes ☐No *(If "Yes", details to be provided in Annexure)*
4.	**In Case of Revised Qualification, Details of Any Upskilling Required for Trainer**	

Section 4: Assessment Related

1.	**Assessor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Graduate in Design or Art related field with 10 years of experience in Game Designing or Game Art.** **Post-Graduate in Design or Art related field with 10 Years of Experience in Game design or Game Art.**
2.	**Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Graduate in Design or Art related field with 3 years of experience**
3.	**Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years)** *(as per NCVET guidelines)*	**Post-Graduate in Design or Art related field with 15 Years of Experience in Game design or Game Art.**
4.	**Assessment Mode** *(Specify the assessment mode)*	**Blended**
5.	**Tools and Equipment Required for Assessment**	☒ Same as for training ☐ Yes ☐ No *(details to be provided in Annexure-if it is different for Assessment)*

Section 5: Evidence of the need for the Qualification

Provide Annexure/Supporting documents name.

1.	**Latest Skill Gap Study (not older than 2 years) (Yes/No):** Yes
2.	**Latest Market Research Reports or any other source (not older than 2 years) (Yes/No):** Yes
3.	**Government /Industry initiatives/ requirement (Yes/No):** Yes Worldskills
4.	**Number of Industry validation provided:** NA
5.	**Estimated nos. of persons to be trained and employed:**
6.	**Evidence of Concurrence/Consultation with Line Ministry/State Departments:** *NA* If "No", why:

Section 6: Annexure & Supporting Documents Check List

Specify Annexure Name / Supporting document file name

1.	**Annexure:** NCrF/NSQF level justification based on NCrF level/NSQF descriptors *(Mandatory)*	*Filled*
2.	**Annexure:** List of tools and equipment relevant for qualification *(Mandatory, except in case of online course)*	*Filled*
3.	**Annexure:** Detailed Assessment Criteria *(Mandatory)*	*Filled*
4.	**Annexure:** Assessment Strategy *(Mandatory)*	*Filled*

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5.	**Annexure:** Blended Learning *(Mandatory, in case selected Mode of delivery is "Blended Learning")*	*Filled*
6.	**Annexure:** Multiple Entry-Exit Details *(Mandatory, in case qualification has multiple Entry-Exit)*	
7.	**Annexure:** Acronym and Glossary *(Optional)*	*Filled*
8.	**Supporting Document:** Model Curriculum *(Mandatory – Public view)*	
9.	**Supporting Document:** Career Progression *(Mandatory - Public view)*	
10.	**Supporting Document:** Occupational Map *(Mandatory)*	
11.	**Supporting Document:** Assessment SOP *(Mandatory)*	
12.	**Any other document you wish to submit:**	

Annexure: Evidence of Level

NCrF/NSQF Level Descriptors	Key requirements of the job role/ outcome of the qualification	How the job role/ outcomes relate to the NCrF/NSQF level descriptor	NCrF/NSQF Level
Professional Theoretical Knowledge/Process	• Work Organization and Management • Communication and Interpersonal Skills • Concept Art • 3D Modelling • UV Unwrapping • Texturing • Rigging and Animation • Technical Art and Game Engine	The practical and theoretical knowledge required by the individual align with the ones as described for NSQF Level 4.5	NSQF Level 4.5
Professional and Technical Skills/ Expertise/ Professional Knowledge	• Work Organization and Management • Communication and Interpersonal Skills • Concept Art • 3D Modelling • UV Unwrapping • Texturing • Rigging and Animation Technical Art and Game Engine	The professional skills and expertise required by the individual align with the ones as described for NSQF Level 4.5	NSQF Level 4.5
Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill	• Work Organization and Management • Communication and Interpersonal Skills • Concept Art • 3D Modelling	The readiness and mindset required by the individual align with the ones as described for NSQF Level 4.5	NSQF Level 4.5

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	• UV Unwrapping • Texturing • Rigging and Animation Technical Art and Game Engine		
Broad Learning Outcomes/Core Skill	• Work Organization and Management • Communication and Interpersonal Skills • Concept Art • 3D Modelling • UV Unwrapping • Texturing • Rigging and Animation Technical Art and Game Engine	The Learning outcome of the individual align with the ones as described for NSQF Level 4.5	NSQF Level 4.5
Responsibility	• Work Organization and Management • Communication and Interpersonal Skills • Concept Art • 3D Modelling • UV Unwrapping • Texturing • Rigging and Animation Technical Art and Game Engine	The responsibilities of the individual align with the ones as described for NSQF Level 4.5	NSQF Level 4.5

Annexure: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment

     Batch Size:

S. No.	Tool / Equipment Name	Specification	Quantity for specified Batch size
1.	High-Performance Computers		
2.	Graphic Tablets		
3.	3D Modeling Software		
4.	Animation Software		
5.	Texturing Software		
6.	Digital Sculpting Tools		
7.	High-Resolution Monitors		
8.	Game Engines		
9.	Color Calibration Tools		

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10.	Ergonomic Furniture		
11.	Mockup and Model Making Tools		
12.	Concept Art Software		
13.	Projector		
14.	Whiteboards or Flipcharts		
15.	Online Collaboration Tools		
16.	Mock Game Development Projects		

Classroom Aids

The aids required to conduct sessions in the classroom are:

1. Laptops
2. Whiteboards and markers
3. Projector
4. Screen
5. Stationery

Annexure: Industry Validations Summary

Provide the summary information of all the industry validations in table. This is not required for OEM qualifications.

S. No	Organization Name	Representative Name	Designation	Contact Address	Contact Phone No	E-mail ID	LinkedIn Profile *(if available)*

Annexure: Training & Employment Details

Training and Employment Projections:

Year	Total Candidates		Women		People with Disability	
	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities	Estimated Training #	Estimated Employment Opportunities

Data to be provided year-wise for next 3 years

Training, Assessment, Certification, and Placement Data for previous versions of qualifications:

Qualification Version	Year	Total Candidates				Women				People with Disability			
		Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed	Trained	Assessed	Certified	Placed

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Applicable for revised qualifications only, data to be provided year-wise for past 3 years.

List Schemes in which the previous version of Qualification was implemented:

1.
2.

Content availability for previous versions of qualifications:

☐ Participant Handbook   ☐ Facilitator Guide ☐ Digital Content   ☐ Qualification Handbook ☐ Any Other:

Languages in which Content is available:

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Annexure: Blended Learning

Blended Learning Estimated Ratio & Recommended Tools:

Refer NCVET "Guidelines for Blended Learning for Vocational Education, Training & Skilling" available on:
https://ncvet.gov.in/sites/default/files/Guidelines%20for%20Blended%20Learning%20for%20Vocational%20Education,%20Training%20&%20Skilling.pdf

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	☐Theory/ Lectures - Imparting theoretical and conceptual knowledge	LCD, Projector, Laptop, MSOffice Suite, Flipchart, whiteboard, Markers, wi-fi connectivity	50:50
2	☐Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners		
3	☐Showing Practical Demonstrations to the learners	LCD, Projector, Laptop, MSOffice Suite, various tools and software, computer camera, computer speakers, wi-fi connectivity	50:50
4	☐Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	Computer systems for all students, printers, wi-fi connectivity	50:50
5	☐Tutorials/ Assignments/ Drill/ Practice	Learning management system	0:100
6	☐Proctored Monitoring/ Assessment/ Evaluation/ Examinations	Online assessment portals, tablet for each student	0:100
7	☐On the Job Training (OJT)/ Project Work Internship/ Apprenticeship Training	Access to industry partner in relevant field	100:0

Annexure: Detailed Assessment Criteria

Detailed assessment criteria for each NOS/Module are as follows:

NOS/Module Name	Assessment Criteria for Performance Criteria/Learning Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
Work Organization and Management	• Conform to professional standards at all times				
	• Take responsibility for all production processes				
	• Set-up and maintain file structures and naming conventions				
	• Manage workload under pressure and within time constraints				
	• Recover from setbacks				
	• Communicate and work with others for the common benefit				
	Total Marks	2	6		2

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Communication and Interpersonal Skills	• Listen, reflect, and respond positively and constructively to feedback from stakeholders				
	• Adhere to game design briefs and technical guidelines, transforming them into sustainable deliverables (as defined in the asset list), and then present the outcomes to stakeholders				
	• Professionally present creative ideas or concepts				
	• Manage effective verbal, and written communications with stakeholders				
	• Reflect on and respond appropriately to questions and ideas from stakeholders				
	Total Marks	2	6		2
Concept Art	• Use imagination and inspiration to generate original visuals				
	• Conform to the defined art style, colours, and themes				
	• Digitally paint to demonstrate form, line, shading, perspective, proportion, light, and shadow				
	• Use digital techniques to produce appropriate effects and make • efficient use of time				
	• Choose appropriate software to paint concept art pieces in with • maximum production in the swiftest time				
	• Review and select each piece of concept art to inform the look of finished 3D models				
	Total Marks	3	9		3
3D Modelling	• Use innovative and optimization techniques on the 3D game • models to ensure the scalability and sustainability of the game production				
	• Select appropriate 3D modelling software to begin models, e.g. 3DS Max or Maya for hard surface modelling, or a sculpting tool for organic sculpts				
	• Utilize skills in sculpting, edge modelling, or box modelling to • produce the basic form of models				
	• Use tools and modifiers to create further details on models				
	• Constantly review models from all angles to determine refinements, • improvements, and additional detail				
	Total Marks	3	9		3

UV Unwrapping	• Use innovative and optimization techniques on the UVs to increase productivity of the game production				
	• Use UV unwrapping tools to project maps on to all the surfaces of 3D assets				
	• Separate surfaces into appropriate shells to flatten over the UV space				
	• Organize shells to make the most of space				
	• Group shells with similar colours together				
	• Export UV coordinates to texture tools or painting software				
	• Bake UV from 3D assets				
	Total Marks	3	9		3
Texturing	• Use innovative and optimisation techniques on the game textures to ensure the scalability and sustainability of the game production				
	• Select appropriate software to produce textures and materials				
	• Paint a variety of physical materials and adapt to the art style set out in the brief (e.g. hand-painted and/or PBR)				
	• Paint or engineer specular maps for controlling shine and glossiness of surfaces				
	• Paint opacity maps, as required, to handle complex objects or sections of assets				
	• Export a variety of maps (normal, specular, ambient occlusion etc) from appropriate pieces of software and import into the preferred 3D software				
	Total Marks	2	6		2
Rigging and Animation	• Create an appropriate bone structure to form a working rig for the in-game asset				
	• Set up a parent child structure for FK or IK chain				
	• Skin the mesh and paint how the bones influence the 3D model				
	• Set simple animation keys to test the motion of the asset in an engine				
	Total Marks	2	6		2
Technical Art and Game Engine	• Conduct performance testing and performance tuning of game • assets				

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	• Choose and use a renderer, pose the object, and select appropriate lighting and settings to highlight the best qualities of the asset				
	• Export 3D models and rig/animation into a game engine				
	• Select an appropriate game engine and stress test the asset for model, UV, and deformation errors				
	Total Marks	3	9		3
	Grand Total	**20**	**60**		**20**

Annexure: Assessment Strategy

This section includes the processes involved in identifying, gathering, and interpreting information to evaluate the Candidate on the required competencies of the program.

Mention the detailed assessment strategy in the provided template.

1. Assessment System Overview:
   - Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
   - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
   - Assessment agency deploys the ToA certified Assessor for executing the assessment
   - SSC monitors the assessment process & records

2. Testing Environment:
   - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
   - Check the duration of the training.
   - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
   - If the batch size is more than 30, then there should be 2 Assessors.
   - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
   - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
   - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
   - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
   - Question papers created by the Subject Matter Experts (SME)
   - Question papers created by the SME verified by the other subject Matter Experts
   - Questions are mapped with NOS and PC
   - Question papers are prepared considering that level 1 to 3 is for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management.
   - Assessor must be ToA certified & trainer must be ToT Certified
   - Assessment agency must follow the assessment guidelines to conduct the assessment.

4. Types of evidence or evidence-gathering protocol:

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- Time-stamped & geotagged reporting of the assessor from assessment location
- Centre photographs with signboards and scheme specific branding
- Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
- Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:
   - Surprise visit to the assessment location
   - Random audit of the batch
   - Random audit of any candidate

6. Method for assessment documentation, archiving, and access
   - Hard copies of the documents are stored
   - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
   - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

Annexure: Acronym and Glossary

Acronym

Acronym	Description
AA	Assessment Agency
AB	Awarding Body
ISCO	International Standard Classification of Occupations
NCO	National Classification of Occupations
NCrF	National Credit Framework
NOS	National Occupational Standard(s)
NQR	National Qualification Register
NSQF	National Skills Qualifications Framework
OJT	On the Job Training

Glossary

Term	Description
National Occupational Standards (NOS)	NOS define the measurable performance outcomes required from an individual engaged in a particular task. They list down what an individual performing that task should know and also do.
Qualification	A formal outcome of an assessment and validation process which is obtained when a competent body determines that an individual has achieved learning outcomes to given standards
Qualification File	A Qualification File is a template designed to capture necessary information of a Qualification from the perspective of NSQF compliance. The Qualification File will be normally submitted by the awarding body for the qualification.
Sector	A grouping of professional activities on the basis of their main economic function, product, service or technology.
Long Term Training	Long-term skilling means any vocational training program undertaken for a year and above. https://ncvet.gov.in/sites/default/files/NCVET.pdf