



सूक्ष्म, लघु एवं मध्यम उद्यम मंत्रालय
DEVELOPMENT COMMISSIONER
MINISTRY OF MICRO, SMALL & MEDIUM
ENTERPRISES

MSME TECHNOLOGY CENTRE



Skill India
कौशल भारत - कुशल भारत

[Please refer Guidelines for STT/LTT/Apprenticeship /OEM Qualification File](#)

QUALIFICATION FILE

Associate Developer AR VR

Short Term Training (STT) Long Term Training (LTT) Apprenticeship

Up skilling Dual/Flexi Qualification For ToT For ToA

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

NCrF/NSQF Level: 4.5

Submitted By:

MSME TECHNOLOGY CENTRE

O/o DC MSME, Ministry of Micro, Small and Medium Enterprises

Govt. of India

A-Wing, 7th Floor, Nirman Bhawan, Maulana Azad Road,

New Delhi-110108

Contact No. +91-674-2654700,

Email- msmetcab@gmail.com

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Section 1: Basic Details

1.	Qualification Name	Associate Developer AR VR										
2.	Sector/s	Media & Entertainment										
3.	Type of Qualification: <input checked="" type="checkbox"/> New <input type="checkbox"/> Revised <input type="checkbox"/> Has Electives/Options <input type="checkbox"/> OEM	NQR Code & version of existing/previous qualification: <i>(change to previous, once approved)</i> QG-4.5-ME-02602-2024-V1-MSMETC & V-1	Qualification Name of existing/previous version:									
4.	a. OEM Name b. Qualification Name <i>(Wherever applicable)</i>	NA -										
5.	National Qualification Register (NQR) Code & Version <i>(Will be issued after NSQC approval)</i>	QG-4.5-ME-02602-2024-V1-MSMETC & V-1	6. NCrF/NSQF Level: 4.5									
7.	Award (Certificate/Diploma/Advance Diploma/Any Other) <i>(Wherever applicable specify multiple entry/exits also & provide details in annexure)</i>	Certificate										
8.	Brief Description of the Qualification	The qualification containing different modules which is required for the job role AR VR Developer, this qualification ultimately helps learner in the following: <ul style="list-style-type: none"> To be expertise in AR & VR Applications To get an employment in Media & Entertainment Industries To become an entrepreneur 										
9.	Eligibility Criteria for Entry for Student/Trainee/Learner/ Employee	a. Entry Qualification & Relevant Experience: <table border="1"> <thead> <tr> <th>S. No.</th> <th>Academic/Skill Qualification (with Specialization - if applicable)</th> <th>Required Experience (with Specialization - if applicable)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>12th pass</td> <td>1.5 year relevant experience</td> </tr> <tr> <td>2</td> <td>Previous relevant Qualification of NSQF Level 4</td> <td>2 year relevant experience</td> </tr> </tbody> </table> b. Age:		S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)	1	12th pass	1.5 year relevant experience	2	Previous relevant Qualification of NSQF Level 4	2 year relevant experience
S. No.	Academic/Skill Qualification (with Specialization - if applicable)	Required Experience (with Specialization - if applicable)										
1	12th pass	1.5 year relevant experience										
2	Previous relevant Qualification of NSQF Level 4	2 year relevant experience										
10.	Credits Assigned to this Qualification, Subject to Assessment <i>(as per National Credit Framework (NCrF))</i>	20	11. Common Cost Norm Category (I/II/III) <i>(wherever applicable):</i> I									

12.	Any Licensing requirements for Undertaking Training on This Qualification (wherever applicable)	NO																								
13.	Training Duration by Modes of Training Delivery (Specify Total Duration as per selected training delivery modes and as per requirement of the qualification)	<p><input type="checkbox"/> Offline <input type="checkbox"/> Online <input checked="" type="checkbox"/> Blended</p> <table border="1"> <thead> <tr> <th>Training Delivery Modes</th> <th>Theory (Hours)</th> <th>Practical (Hours)</th> <th>OJT Mandatory (Hours)</th> <th>OJT Recommended (Hours)</th> <th>Total (Hours)</th> </tr> </thead> <tbody> <tr> <td>Classroom (offline)</td> <td>120</td> <td>240</td> <td>-</td> <td>-</td> <td>360</td> </tr> <tr> <td>Online</td> <td>120</td> <td>120</td> <td>-</td> <td>-</td> <td>240</td> </tr> <tr> <td>Total</td> <td>240</td> <td>360</td> <td></td> <td></td> <td>600</td> </tr> </tbody> </table> <p>(Refer Blended Learning Annexure for details)</p>	Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)	Classroom (offline)	120	240	-	-	360	Online	120	120	-	-	240	Total	240	360			600
Training Delivery Modes	Theory (Hours)	Practical (Hours)	OJT Mandatory (Hours)	OJT Recommended (Hours)	Total (Hours)																					
Classroom (offline)	120	240	-	-	360																					
Online	120	120	-	-	240																					
Total	240	360			600																					
14.	Aligned to NCO/ISCO Code/s(if no code is available mention the same)	-																								
15.	Progression path after attaining the qualification (Please show Professional and Academic progression)	<p>Professional/Career Progress: Assistant Manager</p>																								
16.	Other Indian languages in which the Qualification & Model Curriculum are being submitted	Hindi																								
17.	Is similar Qualification(s) available on NQR-if yes, justification for this qualification	<p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No URLs of similar Qualifications:</p>																								
18.	Is the Job Role Amenable to Persons with Disability	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If "Yes", specify applicable type of Disability: As per the Govt. norms.</p>																								
19.	How Participation of Women will be Encouraged	Seats are reserved as per government Norms.																								
20.	Are Greening/ Environment Sustainability Aspects Covered (Specify the NOS/Module which covers it)	<p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No The said aspect is covered in the module name Employability Skill</p>																								
21.	Is Qualification Suitable to be Offered in Schools/Colleges	<p>Schools <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Colleges <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Subject to availability of resources.</p>																								
22.	Name and Contact Details of Submitting / Awarding Body SPOC (In case of CS or MS, provide details of both Lead AB & Supporting ABs)	<p>Name: Sh. Vijay Mahipatrao Bankar Contact No. +0755 3501078 Email-msmetcab@gmail.com</p>																								

23.	Final Approval Date by NSQC: 30th May 2024	24. Validity Duration: 3 years	25. Next Review Date: 30th May 2027
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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					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Pro j.	Viva	Total	Weightage (%) (if applicable)
1	Understand and Create Computer Graphics	MSME/ARVR/01	Core	4.5	4	60	60	-	-	120	100	100	-	-	200	
2	Acquire Knowledge to Develop an VR Application	MSME/ARVR/02	Core	4.5	7	60	150	-	-	210	-	100	-	-	100	
3	Acquire Knowledge to Develop an AR Application	MSME/ARVR/03	Core	4.5	7	60	150	-	-	210	-	100	-	-	100	
4	Employability Skill	MSME/ES/02	None Core	4.5	2	60	-	-	-	60	100	-	-	-	100	
Duration (in Hours) / Total Credit / Marks					20	240	360			600	200	300			500	

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					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)

Optional 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					
						Th.	Pr.	OJT-Man.	OJT-Rec.	Total	Th.	Pr.	Proj.	Viva	Total	Weightage (%) (if applicable)

Assessment - Minimum Qualifying Percentage:

Specify any one of the following:

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

Minimum Marks to pass Theory Exam: 40%

Minimum Marks to pass Practical Exam: 60%

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

Minimum Marks to pass Theory Exam: 40%

Minimum Marks to pass Practical Exam: 60%

Section 3: Training Related

1.	Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Diploma/ Degree in Computer Graphics, VR Application Development, AR Application Development, Employability Skill Engineering or Equivalent with Practical skills and knowledge required in the relevant job role at least one level higher i.e., level 4 and above in related field and minimum 2 years of experience in Production Environment in the Media & Entertainment organization will become a trainer, (Preferably TOT/ Certified from reputed agency to be deployed for the training)
2.	Master Trainer's Qualification and experience in the relevant sector (in years) (as per NCVET guidelines)	Degree in Engineering (Computer Graphics, VR Application Development, AR Application Development, Employability Skill) or equivalent with 3 to 5 years of experience in Production/ Training from any Media & Entertainment organization will become as a Master Trainer.
3.	Tools and Equipment Required for Training	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (If "Yes", details to be provided in Annexure)
4.	In Case of Revised Qualification, Details of Any Upskilling Required for Trainer	Yes

Section 4: Assessment Related

1.	Assessor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Diploma / Degree in Engineering (Computer Graphics, VR Application Development, AR Application Development, Employability Skill) or equivalent with 3 years of experience in Production/ Training from any reputed Media & Entertainment organization. Only (TOA) certified assessors will be able to conduct the assessments.
2.	Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Degree in Engineering (Computer Graphics, VR Application Development, AR Application Development, Employability Skill) or equivalent with 5 years of experience in Production/ Training from any reputed Media & Entertainment organization.
3.	Lead Assessor's/Proctor's Qualification and experience in relevant sector (in years) (as per NCVET guidelines)	Post Graduate Diploma/Advanced Diploma / Diploma / ITI Certificate / in the relevant discipline with minimum 5 years of experience in their professional fields (including minimum 3 years of relevant industry experience).
4.	Assessment Mode(Specify the assessment mode)	Blended Type (Online + Offline)

5.	Tools and Equipment Required for Assessment	<input checked="" type="checkbox"/> Same as for training <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>(details to be provided in Annexure-if it is different for Assessment)</i>
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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, IMTS-Skills-Gap-Report-2020
2.	Latest Market Research Reports or any other source (not older than 2years) (Yes/No): Yes Human Resource and Skill Requirement in the Media Entertainment Sector (2020-25) Jan 2022 v7
3.	Government /Industry initiatives/ requirement (Yes/No): Yes
4.	Number of Industry validation provided: 30
5.	Estimated nos. of persons to be trained and employed:
6.	Evidence of Concurrence/Consultation with Line Ministry/State Departments: Yes 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 <i>(Mandatory)</i>	<i>Annexure-I</i>
2.	Annexure: List of tools and equipment relevant for qualification <i>(Mandatory, except in case of online course)</i>	<i>Annexure-II</i>
3.	Annexure: Industry Validations Summary	<i>Annexure-III</i>

4.	Annexure: Training & Employment Details	<i>Annexure-IV</i>
5.	Annexure: Blended Learning (<i>Mandatory, in case selected Mode of delivery is “Blended Learning”</i>)	<i>Annexure-V</i>
6.	Annexure: Detailed Assessment Criteria (<i>Mandatory</i>)	<i>Annexure-VI</i>
7.	Annexure: Assessment Strategy (<i>Mandatory</i>)	<i>Annexure-VII</i>
8.	Annexure: Acronym and Glossary (<i>Optional</i>)	<i>Annexure- VIII</i>
9.	Annexure: Multiple Entry-Exit Details (<i>Mandatory, in case qualification has multiple Entry-Exit</i>)	NA
10.	Supporting Document: Model Curriculum (<i>Mandatory – Public view</i>)	<i>Annexure- IX</i>
11.	Supporting Document: Career Progression (<i>Mandatory - Public view</i>)	<i>This aspect mentioned in point no. 15</i>
12.	Supporting Document: Occupational Map (<i>Mandatory</i>)	<i>Annexure-X</i>
13.	Supporting Document: Assessment SOP (<i>Mandatory</i>)	<i>Annexure- XI</i>
14.	Any other document you wish to submit:	NA

Annexure I: 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
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<p>Professional Theoretical Knowledge/Process</p>	<p>Advanced multidisciplinary and specialized knowledge</p> <ul style="list-style-type: none"> • Proficient in interdisciplinary knowledge including tech with specialized expertise in related fields; knowledgeable in emerging trends, change management, and problem-solving. 	<ul style="list-style-type: none"> • Advanced knowledge about a multidisciplinary/ interdisciplinary/ cross disciplinary field of technology/ skills/ job role, with specialized in-depth knowledge in one or more related fields. • Has awareness and knowledge of the emerging and futuristic developments and issues in the chosen fields of technology/ skills/ job role. • Has advanced understanding and Knowledge about the Change management processes and systems. • Acquired advanced knowledge and skills on a wide range of sources for identifying problems and issues relating to the chosen fields of learning, and future improvements 	<p>5.5</p>
<p>Professional and Technical Skills/ Expertise/ Professional Knowledge</p>	<p>Advanced Technical and Managerial Skills</p> <ul style="list-style-type: none"> • Proficiently skilled in advanced cognitive abilities, project management, techno-commercial aspects, and future adaptability, with social intelligence. 	<p>Possesses a range of advanced cognitive, professional and technical skills required for performing and accomplishing complex tasks relating to the chosen fields of technology/ skills/ job role.</p> <ul style="list-style-type: none"> • Wide range of cognitive and practical skills required to create innovative and feasible solutions to complex problems and situations in uncertain environment. • Project Management Skills • Understanding and application of technoCommercial aspect of technology/associated skills or job role. Skills to adapt to the future of work and to the demands of the fast pace of innovations and technological developments. 	<p>5.5</p>

		<ul style="list-style-type: none"> • Social Intelligence 	
<p>Employment Readiness & Entrepreneurship Skills & Mind-set/Professional Skill</p>	<ol style="list-style-type: none"> 1. Understand Personal Strengths \ Value, Digital Literacy, Money Matters and Preparing for Employment & Self Employment 	<ul style="list-style-type: none"> • Learner can Develop communication competence, report writing skills & preparation of Resumes or Curriculum Vitae, Learner can be able to Interact effectively with co-workers and can apply the Engineering Ethics and Human Values at workplace. • Learner can understand the basic process of becoming an entrepreneur & start up and can get benefits from various government schemes applicable. 	<p>5.5</p>
<p>Broad Learning Outcomes/Core Skill</p>	<ol style="list-style-type: none"> 1. Lerner will achieve a high level of proficiency in computer graphics, including software usage, file management, and understanding different file types, resolution, and color modes. 2. Learners will develop strong skills in Web Design Tools 3. Learner s will develop essential employability skills, including effective communication, teamwork, time management, and professionalism. They will also gain an understanding of entrepreneurship, accessing funding, and government schemes for startups. 4. Learner s will cultivate creative problem-solving skills, enabling them to tackle challenges in computer graphics and Web. 	<ul style="list-style-type: none"> • Learners demonstrate proficiency in computer graphics software, including file management, different file types, resolution, and color modes. • Learners showcase skills in creating and optimizing websites/web apps, and utilizing keyframe animation techniques. • Learners demonstrate effective communication, teamwork, time management, and professionalism, along with an understanding of entrepreneurship and government schemes for startups. • Learners exhibit the ability to creatively solve problems and express their artistic vision through visually appealing and engaging animations. • Learners will achieve a high level of proficiency in computer graphics, including software usage, file management, and 	<p>5.5</p>

		understanding different file types, resolution, and color modes and web tools.	
Responsibility	<ul style="list-style-type: none"> Responsible for own work and learning as well as for the subordinates. <p>Takes complete responsibility for delivery and quality of own work and output.</p>	<ul style="list-style-type: none"> Learner is expected to perform the task as per given instructions, taking responsibility of proper execution of the program generated and its actions for the operation, quality and accuracy of the work. Independently for certain tasks and collaboratively and takes responsibility fully for own work, he/she is expected to have openness to learning, ability to plan and organize own work and identify and solve problems in the course of working. <p>Understanding the need to take initiative and manage self-work and group tasks to improve efficiency and effectiveness</p>	

Annexure II: Tools and Equipment (Lab Set-Up)

List of Tools and Equipment for Batch Size: 20

S. No.	Tools / Equipment Name	Specification	Quantity for specified Batch size
1	Workstation PC	Industry Standard	20
2	VR Headset		20
3	Game Engine		20
4	Graphic Software		20

Annexure III: 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)
1	Ficus Productions Private Limited	Mr. Rohit D. Ghokshe	CEO, Managing Director	Room No. 58, Chawl no.6, Plot no.4, BMC Colony, Dr. E.Moses Road, Worli Naka, Mumbai 400018	866152165	Info.ficusproduction@gmail.com	
2	Ultra Digital Studio Pvt.Ltd	Mr. Anup Chandekar	Sr. Admin Executive	4th Floor, A4, Ultra Media & Entertainment Pvt Ltd, Peninsula Park, C/O, Off Veera Desai Rd, near Maruti Business Park, Veera Desai Industrial Estate, Andheri West, Mumbai, Maharashtra 400053	9321213141	anup.chandekar@ultraindia.com	
3	Chanchal Engineering works	Mr. DRYHAEBHWAR	PROPRIETOR	gut no.67,plot no.06(B),shivrana audyogik sanstha, wadgaon(ko), area, MIDC, Waluj, Aurangabad, Maharashtra 431133	9765499939	chanchalengineeringworks@gmail.com	
4	Antennae Venture	Mr.Manpreet Singh	Ecosystem Manager	LodhaSupremus, Saki Vihar Rd, opposite Mtnl, off Tunga Village, Tunga Village, Chandivali, Powai, Mumbai, Maharashtra 400076	9082860602	hr@antennae.in	
5	Royal Finesse Studio	Mr.Anchal Joshi	Cofounder	new prerana CHS, C-1, next to modihyundai, Bhakti Mandir, PanchPakhdi, Thane West, Thane, Maharashtra 400602	8356099360	aanchal@royalfinesse.in	
6	IDZ Digital Pvt. Ltd.	Ms. Anuja Dhage	Hr Executive	Kanakia Western Edge II, Western Edge II, B-607, behind Metro Mall, near SuSwagat Hotel, Food Corporation of India Warehouse, Borivali East, Mumbai, Maharashtra 400066	9321738407	careers@idzdigital.com	
7	Yanisa Execution	Sonu Waghmare	Studio Manager	04, 2nd floor, ShyamVihar,MewawalaNiwas, MG Road, near Puppy Tailor, Mulund (w), Mumbai: 80	7977468221	mswsonu@gmail.com	

8	Hydrotech Consultant	Prafulchandra Pramodrai Naik	Director Of Hydrotech Consultant	Admin office: 32, Sumit Samarth Arcade, A wing, Aarey Road, Goregaon (W), Mumbai - 400104 Regd. Office: Sarvodaya Bhuvan 'B', Gokhale Road (N), Dadar (West), Mumbai - 400028	9892177917	info@hydrotechconsultant.com	
9	G.T. Engineering Works	Karuppaswamy Yadav	Partner	17, Vardhaman Indl. Estate, Opp. Nahur Station ,Village Road, Bhandup-(W),Mumbai-78	9702277955	gtengineeringworks@gmail.com	
10	Prabhavshali News	Stevan Jhon Badiger	Chief Editor	Ram Heritage Building, Plot No. 32, Sector - 12, Shop No. 19, Kamothe, Navi Mumbai - 410209	9324847296	prabhavshalinews@gmail.com	
11	Shree Swami Samartha Media Private Limited	Nilesh Gajanan Karanje	Director	Pratiksha Nagar, Palm Acres CHS, M-5, B Wing, Second floor, Flat Number-205, Pratikshanagar, Sion (East), Mumbai- 400022	9930461343	Nileshkaranje@gmail.com nilesh@shreeswamisamarthamedia.com	
12	Manik Machinery Manufacturer Pvt. Ltd.	Manojkumar Patil	Design Engineer	21/24, Sons Udyog, Parsi Panchayat Road, Andheri (East) mumbai- 400069	9892209289	manoj.patil@pilotindia.com	
13	Additional Ambarnath Manufacturer's Association (AAMA)	Umesh Tayade	AAMA - Chairman	P-42, AAMA Welfare Centre, Anandnagar, Additional Ambarnath MIDC, Ambarnath - 421506, Dist - Thane	9422073611	aama.ambarnath@gmail.com	
14	Word Publishing	Karan Jadhav	Talent Acquisition Manager	Office no. 117, First Floor,lobby no. 4Rupa Solitaire, MBP, Mahape Navi Mumbai Nearest Station: Ghansoli, Navi Mumbai	9619225867	karan.jadhav@wpsgp.com	
15	Ad On Enterprises	Sudhir Parte	Director	505/ B, Neelkantheshwar Apt, Lonin Nagar, Nitin Company Signal, Thane (W), Maharashtra - 400602	9821802203	enterprises.adon@gmail.com	
16	DigitalCube Tech Private Limited	Devayani Bendale	HR Executive	B- 203, Sai Siddhivinayak Apt, Near Tondvalkar School, Dombivil West. 421202	8485025073	hr@digitalcube.tech	

17	AV LASERCRAFTS	Aniket Jadhav	Managing Director	ADD- SHOP-3, GAUREE LEELA APT, KADRAP BADLAPUR EAST.	9067788666	avalscrafts@gmail.com	
18	Daynil Group Solutions Pvt. Ltd.	Ms. Shruti Ghodke	HR Associate	Unit no. 212, Globe Estate, Tata Power Circle, 1, near Vikas Naka, MIDC, Dombivli, Maharashtra 421203	8668215445	hr@daynilgroup.com	
19	Allied Engineering Pvt Ltd	Alumer Gadkari	Application Engineer	Plot No. D-222/14 , TTC Industrial Area, MIDC, Nerul, Navi Mumbai, Maharashtra - 400706	7977806044 / 8291195952	sales@alliedengineering.co.in info@alliedengineering.co.in	
20	Evertiz Solutions	Shavin Kamble	Sr Hr Executive	Seawoods west, Sector 44A, Navi Mumbai, Maharashtra,	7900054498	shavin.kamble@evertiz.com	
21	Aja Consultants and Engineers	Aniruddha Pradhan	Partner	701, Swami Sankul, Vasant Patil Marg, Chunabhatti, Sion, Mumbai - 400022	9892675218	aapradhan@ajconsult.com	
22	A to Z Placement Service	Amit Varma	Director	office no. 004, Ground floor, Manas Sarovar CHSL, B wing, Beturkar Pada, Near M.K. College, kalyan (W) - 421301	7977261570	amitkumar.verma@atozjobs.in	
23	BrainHap	Amruta Suki	Executive- HR	35/151, 1st Floor, Shree laxmi Vijay Industrial Premises, New Link Road, Sab TV lane	9970747512	admin@aerobott.com	
24	Softcon Automation	Sanjay Narayan Sheth	Partner	Unit No.7, Bldg., No.1, Sector No. 11, Millennium Business Park, Mahape, MIDC, Navi Mumbai. 4c0710	9324645875	sanjay@softconautomation.com	
25	Tibe Allianz Pvt Ltd	Shraddha Nijai	General Manager	Regd Address: Tibe House, Main Road, Opp. Panchayat Samiti, Murbad, Maharashtra 421401	8459857541	tibeallianz@gmail.com connect@tibeallianz.com	
26	S.N. Engineering works	Sneha	CEO	Chaudhary, Sambhaji Nagar	9822859974	snehag858@gmail.com	
27	Pranav Enterprises	Padharinath Devkar	Owner	Plot No C-40, Midc Area, Waluj MIDC, Aurangabad-Maharashtra - 431136	9371671146	pranavent@gmail.com	
28	R.P. Industries	Prashant Patil	CEO	H-5/27, MIDC Industrial Area, Chikalthana, Aurangabad- 431210, Maharashtra, India.	8007222251	prashantpatil@gmail.com	

29	Madhura Die Cast Private Limited	Madhura	CEO	D-168 MIDC Shendra, Aurangabad - 431 154	9422204622	madhuradiecast@gaikegroup.in	
30	Gayatri Auto Components	Ranjeet Mete	Lead Designer	Plot No. K39, Chh, MIDC, Ranjangaon, Waluj, Aurangabad, Ghanegaon, Maharashtra 431136	7385613842	info@gayatriauto.in	

Annexure IV: 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
2024-25	500	500	100	100	-	-
2025-26	700	700	150	150	-	-
2026-27	1000	1000	200	200	-	-

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
Future Skills Qualification	-	-	-	-	-	-	-	-	-	-	-	-	-

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:

Content availability for previous versions of qualifications:

Participant Handbook Facilitator Guide Digital Content Qualification Handbook Any Other:

Languages in which Content are available:

English

Annexure V: 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/wp-content/uploads/2023/01/Guidelines-for-Blended-Learning-for-Vocational-Education-Training-Skilling.pdf>

S. No.	Select the Components of the Qualification	List Recommended Tools – for all Selected Components	Offline : Online Ratio
1	<input type="checkbox"/> Theory/ Lectures - Imparting theoretical and conceptual knowledge	Books/ e-books, Presentations, Reference Material, Audio / Video Modules with 2D and 3D animation Self-Learning Videos /Broadcasts /Mobile Learning /Curated Digital content	40:60
2	<input type="checkbox"/> Imparting Soft Skills, Life Skills, and Employability Skills /Mentorship to Learners	Self-Learning Videos, Broadcasts, Mobile Learning, Curated Digital content	40:60
3	<input type="checkbox"/> Showing Practical Demonstrations to the learners	Video Content, E-Resource library	100:00
4	<input type="checkbox"/> Imparting Practical Hands-on Skills/ Lab Work/ workshop/ shop floor training	AR VR Set up, Workstation, Game Engine Software, AR -VR Software	40:60

5	<input type="checkbox"/> Tutorials/ Assignments/ Practice	Online Question Bank, Mobile Quick test app, MCQ based tests, Practical Test	50:50
6	<input type="checkbox"/> Proctored Monitoring/ Assessment/ Evaluation/ Examinations	Assessment engine for Essays, Up-loadable file examinations, Mock test sessions	50:50
7	<input type="checkbox"/> On the Job Training (OJT)	Live Project at concern Industry/ Institution	100:0

Annexure VI: 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
NOS / Module: Understand and Create Computer Graphics MSME/ARVR/01	PC.1 Basics of computer graphics and software installation. PC.2 Start workspace, document creation, and platform differences. PC.3 Artboards, software panels, and customization. PC.4 Keyboard shortcuts, workspaces, and interface shading. PC.5 Screen modes, multiple document management, and tab preferences. PC.6 File types, RAW formats, and resolution concepts. PC.7 Image resizing, color modes, and selection tools. PC.8 Marquee selections, feathering, and copying/pasting. PC.9 Scaling, modifying selections, and advanced selection tools. PC.10 Layer management, groups, and opacity settings.	100	100	-	-

	<p>PC.11 Blend modes, masks, and layer styles.</p> <p>PC.12 Cropping techniques, canvas adjustments, and transformations.</p> <p>PC.13 Histogram analysis and adjustment layers.</p> <p>PC.14 Levels, curves, and color adjustments.</p> <p>PC.15 Healing and patch tools, content-aware features.</p> <p>PC.16 Eraser tools and image sharpening.</p> <p>PC.17 Text manipulation with type and area type tools.</p> <p>PC.18 Rulers, guides, and grid usage.</p> <p>PC.19 Creative and shared libraries, file saving, and quick export.</p>				
<p>NOS / Module:</p> <p>Acquire Knowledge to Develop an VR Application</p> <p>MSME/ARVR/02</p>	<p>PC.1 Demonstrates understanding of VR vs. traditional media.</p> <p>PC.2 Addresses motion sickness in VR experiences.</p> <p>PC.3 Proficiently explores locomotion methods in VR.</p> <p>PC.4 Manages high-performance requirements in VR applications.</p> <p>PC.5 Chooses between geometry and normal maps in VR graphics.</p> <p>PC.6 Plans VR Museum experiences for immersive learning.</p> <p>PC.7 Sets up custom VR game modes effectively.</p> <p>PC.8 Creates customized VR characters tailored to projects.</p> <p>PC.9 Integrates VR characters seamlessly into VR environments.</p> <p>PC.10 Implements character possession mechanics in VR.</p> <p>PC.11 Attaches objects to VR cameras for interactive experiences.</p> <p>PC.12 Constructs gaze overlap Blueprints for VR character interactions.</p> <p>PC.13 Builds collision volumes for VR interactions and obstacles.</p> <p>PC.14 Establishes communication between pawn and level Blueprints.</p> <p>PC.15 Implements teleportation mechanics for character movement.</p> <p>PC.16 Configures button controls for teleportation activation.</p>	<p>-</p>	<p>100</p>	<p>-</p>	<p>-</p>

	<p>PC.17 Designs visual indicators for teleportation in VR.</p> <p>PC.18 Toggles indicator lights based on user gaze.</p> <p>PC.19 Integrates puzzle box animations into Matinee.</p> <p>PC.20 Activates Matinee sequences through the level Blueprint.</p> <p>PC.21 Creates fade effects using Matinee for transitions.</p> <p>PC.22 Controls teleportation using Matinee event tracks.</p> <p>PC.23 Tests and evaluates motion sickness reduction strategies.</p> <p>PC.24 Optimizes VR applications for high performance.</p> <p>PC.25 Selects mapping techniques based on project requirements.</p> <p>PC.26 Designs engaging and educational VR museum environments.</p> <p>PC.27 Adapts custom VR characters to suit specific project needs.</p> <p>PC.28 Tests and troubleshoots VR character interactions effectively.</p> <p>PC.29 Configures collision volumes accurately for VR gameplay.</p> <p>PC.30 Ensures seamless data exchange between pawn and level Blueprints.</p> <p>PC.31 Validates the usability and realism of object attachment in VR.</p> <p>PC.32 Fine-tunes and optimizes gaze-based interaction mechanisms.</p> <p>PC.33 Analyzes user feedback and iteratively improves gaze overlap Blueprints.</p> <p>PC.34 Refines collision volume settings based on user testing.</p> <p>PC.35 Analyzes and troubleshoots communication issues between Blueprints.</p>				
<p>NOS / Module:</p> <p>Acquire Knowledge to Develop an AR Application</p> <p>MSME/ARVR/03</p>	<p>PC.1 Introduction</p> <p>PC.2 How to Make a Video Game</p> <p>PC.3 Introduction to Augmented Reality</p> <p>PC.4 What is Dartboard Game</p> <p>PC.5 Resources and Links</p>	<p>-</p>	<p>100</p>	<p>-</p>	<p>-</p>

PC.6	Download and Install AR Software				
PC.7	Create New Unity Project				
PC.8	Different Ways of Testing Unity Project on Device				
PC.9	Basic Understanding of Unity Editor				
PC.10	Augmented Reality Supported Devices				
PC.11	Setting up Project with AR Foundation				
PC.12	Create First AR Scene				
PC.13	Adding a 3D Cube in AR				
PC.14	Adding Visuals to detected Surface				
PC.15	Restrict Surface Detection only to Vertical Area				
PC.16	Change the Scanning Visuals				
PC.17	Create a Placement Indicator				
PC.18	Place a Dartboard on the Wall				
PC.19	Restrict to Place a Single Dartboard				
PC.20	Create an Event to Broadcast an Action				
PC.21	Disable Surface Detection on Placement				
PC.22	Instantiate a Dart				
PC.23	Throw a Dart				
PC.24	Throw Dart and Load Next Dart				
PC.25	Dart Stick to Dartboard				
PC.26	Using Mesh Collider on Dartboard				
PC.27	Performance Tips				
PC.28	Show er Distance from Dartboard in Real-time				
PC.29	Sound Integration				
PC.30	Placement Indicator Direction				
PC.31	Create Android Production Build				
PC.32	Publishing App on Google Store				

	PC.33 App Publishing Overview on Apple AppStore PC.34 Important Steps for Switching Platform to iOS in an Augmented Reality Project PC.35 iOS Development and Production Build Process Step by Step				
NOS/Module: MSME/ES/02 Employability Skills	PC.1 Discuss the Employability Skills required for jobs in various industries PC.2 List different learning and employability related GOI and private portals and their usage PC.3 Explain the constitutional values, including civic rights and duties, citizenship, responsibility towards society and personal values and ethics such as honesty, integrity, caring and respecting others that are required to become a responsible citizen PC.4 Show how to practice different environmentally sustainable practices. PC.5 Discuss importance of relevant 21st century skills. PC.6 Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life. PC.7 Describe the benefits of continuous learning.	100	-	-	-

	<p>PC.8 Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone</p> <p>PC.9 Read and interpret text written in basic English</p> <p>PC.10 Write a short note/paragraph / letter/e -mail using basic English</p> <p>PC.11 Create a career development plan with well-defined short- and long-term goals</p> <p>PC.12 Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette.</p> <p>PC.13 Explain the importance of active listening for effective communication</p> <p>PC.14 Discuss the significance of working collaboratively with others in a team</p> <p>PC.15 Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD</p> <p>PC.16 Discuss the significance of escalating sexual harassment issues as per POSH act.</p> <p>PC.17 Outline the importance of selecting the right financial institution, product, and service</p> <p>PC.18 Demonstrate how to carry out offline and online financial transactions, safely and securely</p>				
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PC.19	List the common components of salary and compute income, expenditure, taxes, investments etc.				
PC.20	Discuss the legal rights, laws, and aids				
PC.21	Describe the role of digital technology in today's life				
PC.22	Demonstrate how to operate digital devices and use the associated applications and features, safely and securely				
PC.23	Discuss the significance of displaying responsible online behavior while browsing, using various socialmedia platforms, e-mails, etc., safely and securely				
PC.24	Create sample word documents, excel sheets and presentations using basic features				
PC.25	Utilize virtual collaboration tools to work effectively				
PC.26	Explain the types of entrepreneurship and enterprises				
PC.27	Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan				
PC.28	Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement				
PC.29	Create a sample business plan, for the selected business opportunity				
PC.30	Describe the significance of analyzing different types and needs of customers				

	PC.31 Explain the significance of identifying customer needs and responding to them in a professional manner.				
	PC.32 Discuss the significance of maintaining hygiene and dressing appropriately				
	PC.33 Create a professional Curriculum Vitae (CV)				
	PC.34 Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively				
	PC.35 Discuss the significance of maintaining hygiene and confidence during an interview				
	PC.36 Perform a mock interview				
	PC.37 List the steps for searching and registering for apprenticeship opportunities				
	Total Marks	200	300		

Annexure VII: 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 are assigned to the MSME NSQF Assessment Agency via email for the assessment.
- MSME NSQF Assessment Agency sends the assessment confirmation to respective TC.
- MSME NSQF Assessment Agency deploys the certified Assessor for executing the assessment at respective TC via online / offline mode.
- MSME NSQF Assessment Agency & respective TC Internal Assessment cell monitors the assessment process & records.

2. Testing Environment:

- MSME NSQF Assessment Agency confirms the Assessment location, date and time
- For number of candidates more than 30 separate assessors are assigned for the assessment.
- MSME NSQF Assessment Agency & respective assessor confirms that the allotted time to the candidates to complete Theory & Practical Assessment is correct.

3. Assessment Quality Assurance levels/Framework:

- Each TC Submits the Question Bank for the individual subject Theory & Practice separately, submits to MSME NSQF Assessment Agency and it is verified by the MSME NSQF Assessment Agency Committee members.
- Questions are mapped to the specified assessment criteria
- All the assessors & Trainers are well qualified & trained to carry out the specified task.

4. Types of evidence or evidence-gathering protocol:

- Online Link is send by MSME NSQF Assessment Agency to respective TC & Assessor. Reporting of the assessor from assessment location is verified by the MSME NSQF Assessment Agency through the online Meeting Link. Students are also required to join for the online link for verification by the MSME NSQF Assessment Agency.
- Assessment Photographs are shared with the MSME NSQF Assessment Agency & are also with the respective TC.

5. Method of verification or validation:

- Online Link is send by MSME NSQF Assessment Agency to respective TC & Assessor. Reporting of the assessor from assessment location is verified by the MSME NSQF Assessment Agency through the online Meeting Link. Students are also required to join for the online link for verification by the MSME NSQF Assessment Agency.

6. Method for assessment documentation, archiving, and access:

- The Assessment records are shared with MSME NSQF Assessment Agency & also stored at respective TC.
- Assessor fills the assessment report and shares with the MSME NSQF Assessment Agency.

On the Job Training:

- Each module will be assessed separately.
- The candidate must score 60% marks to successfully complete the OJT.
- Learner will be assessed on the basis of OJT report followed by Viva

- Assessment will ensure that the Learner is able to:
 - ✓ Effective engagement with the customers / Subordinates and team
 - ✓ Understand the working of various tools and equipment
 - ✓ Understand the working environment of the industry

Annexure VIII: 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
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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.
Short Term Training (STT)	STT/ Short -term skilling means any vocational training program undertaken for less than a year (Theory + Practical + OJT). https://ncvet.gov.in/sites/default/files/NCVET.pdf

NSQC Approved