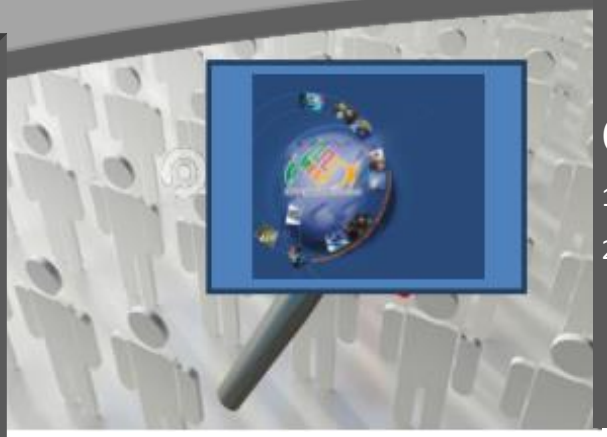
QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR
SKILL COUNCIL FOR PERSONS WITH DISABILITY



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Rights of Persons with Disabilities Act - 2016

Principles for empowerment of persons with disabilities, —

- Respect for inherent dignity, individual autonomy including the freedom to make one's own choices, and independence of persons;
- Non-discrimination;
- Full and effective participation and inclusion in society;
- Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity;
- Equality of opportunity;
- Accessibility;
- Equality between men and women;
- Respect for the evolving capacities of children with disabilities and respect for the right of children with disabilities to preserve their identities

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Introduction

Qualifications Pack- Animator

Qualifications Pack Code	**PWD/MES/ Q 0701**
Sector	**Persons with Disability**
Originating Sector Skill Council	**Media and Entertainment Skill Council**
Version number	**1.0**

Adoption of Job Role for PwD - Job mapping is critical for skill training of PwD so that the livelihood opportunity looks at him/ her not because he/ she is having a disability but because of the skill. Mapping with a disability involves research with subject matter experts (SMEs) with a view on the industry requirement without compromising on performance outcome. In cases, mapping is also supported by the use of assistive tools/ technology.

Mapped to Expository

Sr. No.	Expository Code	Expository Name	Minimum Entry Criteria	Expository Linked On
1	E001	Expository for Locomotor Disability	Same as the Qualification Pack	26/09/2018
2	E004	Expository for Speech and Hearing Impairment	Same as the Qualification Pack	26/09/2018

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MEDIA AND ENTERTAINMENT INDUSTRY

What are Occupational Standard?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

Media &Entertainment Skills Council

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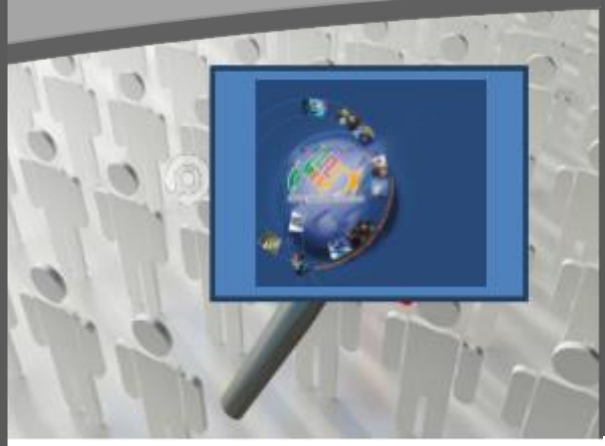

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Introduction

Qualifications Pack-Animator

SECTOR: MEDIA AND ENTERTAINMENT

SUB-SECTOR: Animation, Gaming

OCCUPATION: Animator

REFERENCE ID: MES/ Q 0701

ALIGNED TO: NCO-2004/ 2452.70

Animator- in the Media & Entertainment Industry is also known as Flash Animator/ 3D Animator/ Flash Shadow Artist

Brief Job Description: Individuals at this job need to refer to concept artwork prepared by animation artists to produce a sequence of 2D/3D images using animation software

Personal Attributes: This job requires the individual to know the fundamentals of life drawing including human anatomy, emotions, actions and expressions. The individual must know and keep updated on graphics and animation software and apply principles of design, animation and film-making to create animation sequences. The individual must be able to collaborate and work effectively as a member of a team to deliver work-products within requisite timelines.

Job Details

Qualifications Pack Code	**MES/ Q 0701**		
Job Role	**Animator**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Sector	**Media and Entertainment**	**Drafted on**	**16/07/13**
Sub-sector	**Animation, Gaming**	**Last reviewed on**	**30/07/13**
Occupation	**Animator**	**Next review date**	**29/07/15**

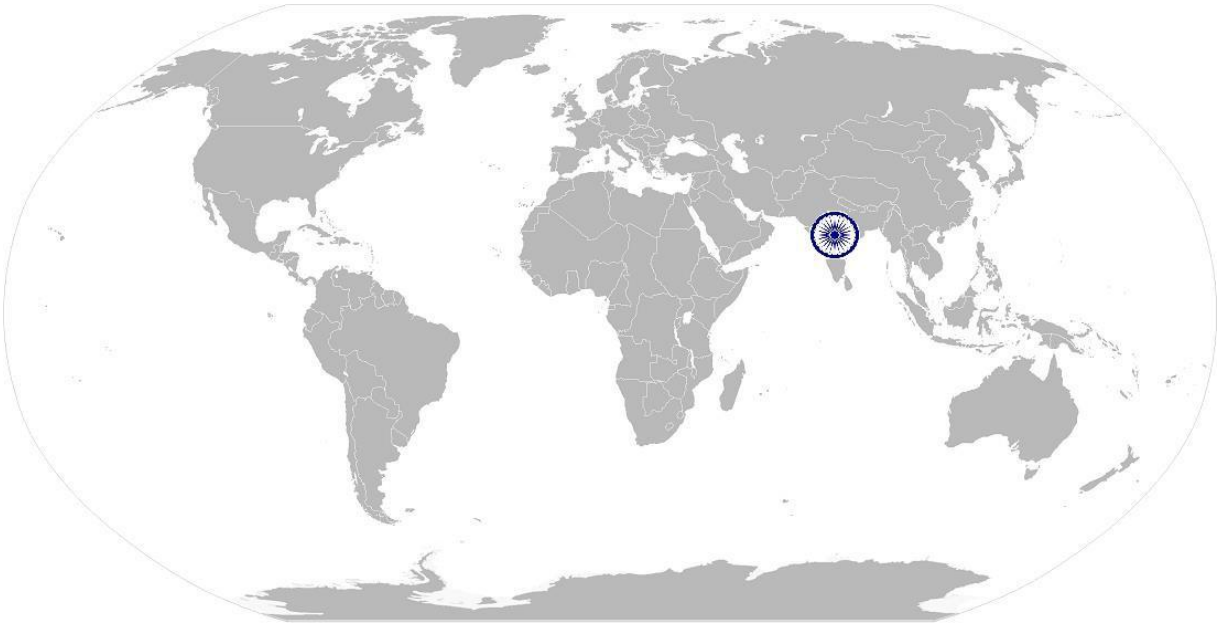
Job Role	**Animator**
Role Description	Producing a sequence of 2D/3D images using animation software
NSQF level	4
Minimum Educational Qualifications	Class X
Maximum Educational Qualifications	Graduation in Fine Arts or equivalent
Training (Suggested but not mandatory)	Study of fundamentals & principles of Animation Training on 2D/3D Software Tools Course in Fine Arts Animation foundation course covering body mechanics, advance acting skills etc.
Minimum Job Entry Age	18 years
Experience	0-2 years Trainee Animator/ Junior Animator 1-3 years Animator
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. MES / N 0701 (Understand Animation Requirements) 2. MES / N 0702 (Conceptualize Creative Ideas for Production) 3. MES / N 0703 (Plan Tools and Workflow) 4. MES / N 0704 (Produce 2D Animation) 5. MES / N 0705 (Produce 3D Animation) 6. MES / N 0706 (Produce Stop Motion Animation) 7. MES / N 0707 (Maintain workplace health and safety) **Optional: N. A**
Performance Criteria	As described in the relevant OS units

Definitions

Keywords /Terms	Description
Animatic	Animatic is a story-board for animation which includes an series of images edited together with dialogues and sound
Budget	Budget is an estimate of the total cost of production that may include a break-up of cost components
Compositing	Compositing is the process of combining layers of images/elements into a single frame
Composition	Composition is the positioning of the character with respect to the background and camera
Creative Brief	Creative brief is a document that captures the key questions that serve as a guide for the production including the vision, objective of the project, target audience, timelines, budgets, milestones, stakeholders etc.
Key Frame	Key Frames are the key poses, usually the start and end poses for a particular animation sequence
Modeling	Modeling is the process of creating three-dimensional models for animation using a specialised software application.
Rendering	Rendering is the process of converting three-dimensional models into two-dimensional images with 3D effects
Rigging	Rigging is the process of adding joints to a static three-dimensional model to aid movement during posing
Timelines	Timelines is a listing of dates by which the production milestones/stages need to be completed
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client industries served by the industry.
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of OS.
Sub-functions	Sub-functions are sub-activities essential to fulfill the achieving the objectives of the function.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Occupational Standards (OS)	OS specify the standards of performance an individual must achieve when carrying out a function in the workplace, together with the knowledge and understanding they need to meet that standard consistently. Occupational Standards are applicable both in the Indian and global contexts.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.

	appropriate OS they are looking for.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual need in order to perform to the required standard.
Organizational Context	Organizational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the OS, these include communication related skills that are applicable to most job roles.
Keywords /Terms	**Description**
NOS	National Occupational Standard(s)
QP	Qualifications Pack
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework

National Occupational Standard



Overview

This unit is about understanding the project brief, product requirements and methodology/technique(s) to be used for production

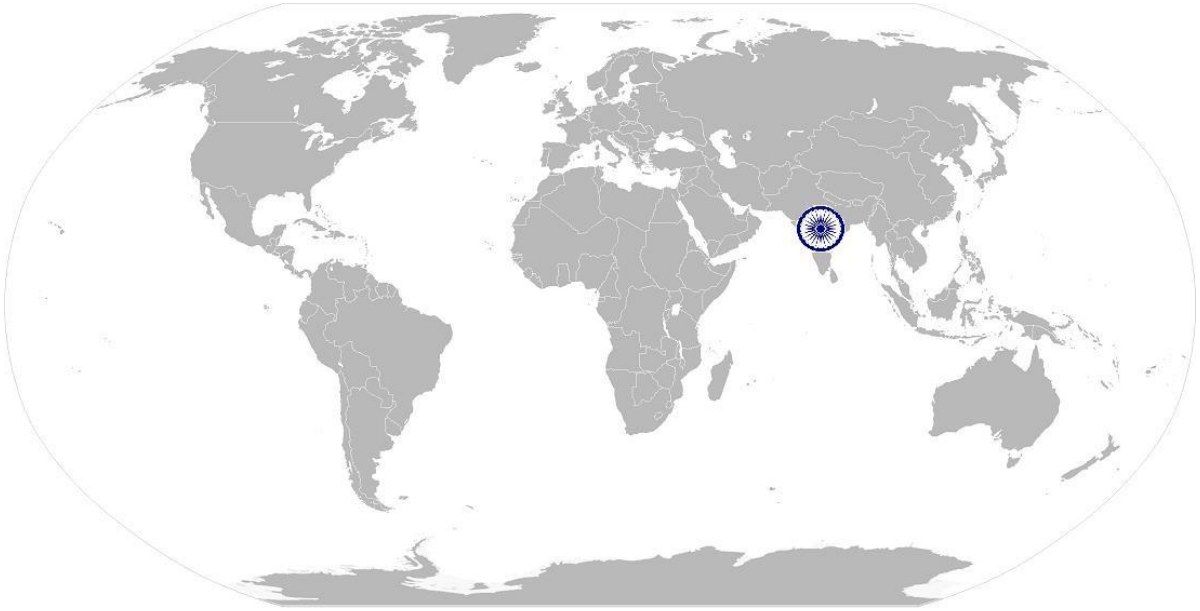
National Occupational Standard

Unit Code	MES/ N 0701
Unit Title (Task)	**Understand Animation Requirements**
Description	This OS unit is about understanding the project brief, product requirements and methodology/technique(s) to be used for production
Scope	This unit/task covers the following: • Understanding the production specifics from the Director and Art Director • Understanding the type of end-product that needs to be produced • Film, television series, mobile/tablet/ handheld episodes, advertisement, education content/ edutainment, work-products for the internet, promotional material/corporate presentations, game art (player animation, environment animation, background etc.), simulation 3D, augmented reality, industry specific content such as scientific animation, legal, architecture, medical, research wings of armed forces etc. • Specifics for delivery with respect to the web/mobile platform • Selecting the animation technique(s) to be used

Performance Criteria(PC) w.r.t. the Scope	
Element	**Performance Criteria**
Understanding the production specifics from the Director and Art Director	To be competent, the user/individual on the job must be able to: PC1. Understand, clarify and agree on the project brief from the Director, Art Director and Supervisors. This could include the following: Objective, concept/style of animation, script, storyboard and animatic, do's and don'ts for animation, target audience, project pipeline/ asset management/ scheduling and activities, project timelines and constraints, production brief/ key milestones for delivery, creative brief/desired look of the end-product – using similar projects for reference, quality standards to be maintained, technical details like aspect ratio, output format, list of deliverables and their respective output format
Understanding the type of end-product that needs to be produced	PC2. Understand various parameters of the end-product that would influence production requirements (e.g. duration, style, number of characters, subject and storyline, culture and period the story is based in, effects required, format, music etc.) PC3. Understand the treatment of the output that needs to be produced and the volume of the final output PC4. Understand the shot sequence (high-level) and continuity/consistency required
Selecting the animation technique(s) to be used	PC5. Select an appropriate animation technique based on the output required. This could include: • 2D animation: cell animation e.g. early episodes of tom and jerry (series), cut out animation e.g. charlie and lola (series), limited

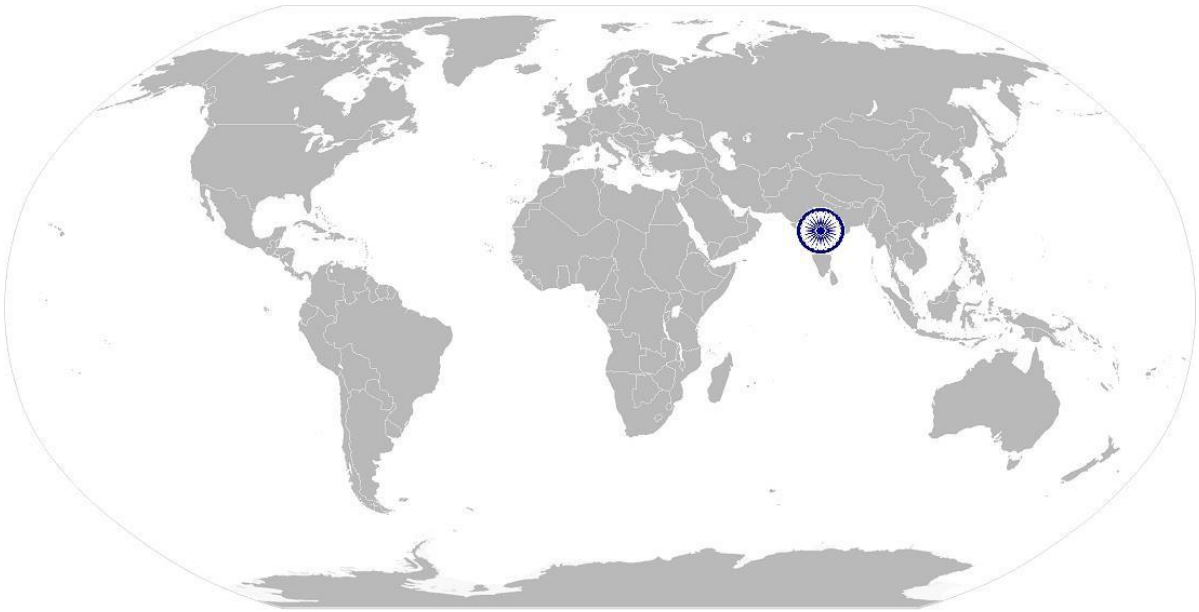
	animation e.g. south park, empire square (series) • 3D Animation: realistic 3D animation e.g. beowulf, avatar, gollum (movies), semi-realistic e.g. little krishna, brave (movies), toon animation e.g. kung-fu panda (movie), simulation of traditional & stop motion techniques e.g. vineta cucini and amaron battery (advertisements, flushed away (movie), stop-motion animation, VFX, stereo conversion
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. The objective/purpose that the end-product intends to achieve KA2. The needs and expectations of the Producer/project sponsor KA3. The expectations of the Director, Art Director and Supervisor with respect to the process and techniques to be used KA4. Limitations on the time and resources and issues that might arise during production KA5. The animation process and technical pipeline to be followed for animation KA6. The format of the end-product and the medium on which it would be exhibited
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. The fundamentals and principles of animation KB2. The principles of animation, Posing and character emotion KB3. The basic rules of animation including squash and stretch, anticipation, staging, straight action, pose-to-pose, follow-through, overlapping action, ease in ease out, exaggeration, timing, appeal and secondary action KB4. Life drawing including human anatomy, emotions, actions and expressions KB5. Production concepts and their applicability to each project KB6. The various techniques available for animating objects KB7. How to observe, act and emote KB8. The technical aspects of the job undertaken by other members of the production team (before and after the work of an animator) KB9. Applicability of various techniques to post production of each project KB10. Intellectual property rights to ensure that the end-product, elements, artwork etc. created is unique and does not infringe upon the rights of other products
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: SA1. Document the project brief that can serve as a reference document for circulation to the production team (Supervisor) SA2. Document decisions on the technique to be used and reasons thereof (Supervisor) SA3. Document other areas (e.g. requirements of the target audience, market, end-product, reference links, videos etc.) that may be relevant for the

	production team SA4. Document notes on the project brief, techniques and other useful information for personal use (team)
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA5. Read and understand the script and determine animation requirements (including specifics of the characters, country, culture etc.) SA6. Read about emerging techniques in animation and update skills accordingly SA7. Read and understand the comments given by the supervisor, director or customer SA8. Research the various types of end-products that have been produced and are available in the public domain
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA9. Understand, clarify and agree on the project brief and parameters of the end product with the Producer and Director SA10. Discuss and agree on the technique to be used with the Director and Art Director SA11. Communicate the project brief effectively to team members, other animators and members from various departments involved in the animation process (Supervisor) SA12. Clarify needs and communicate with clients (knowledge of English is preferred)

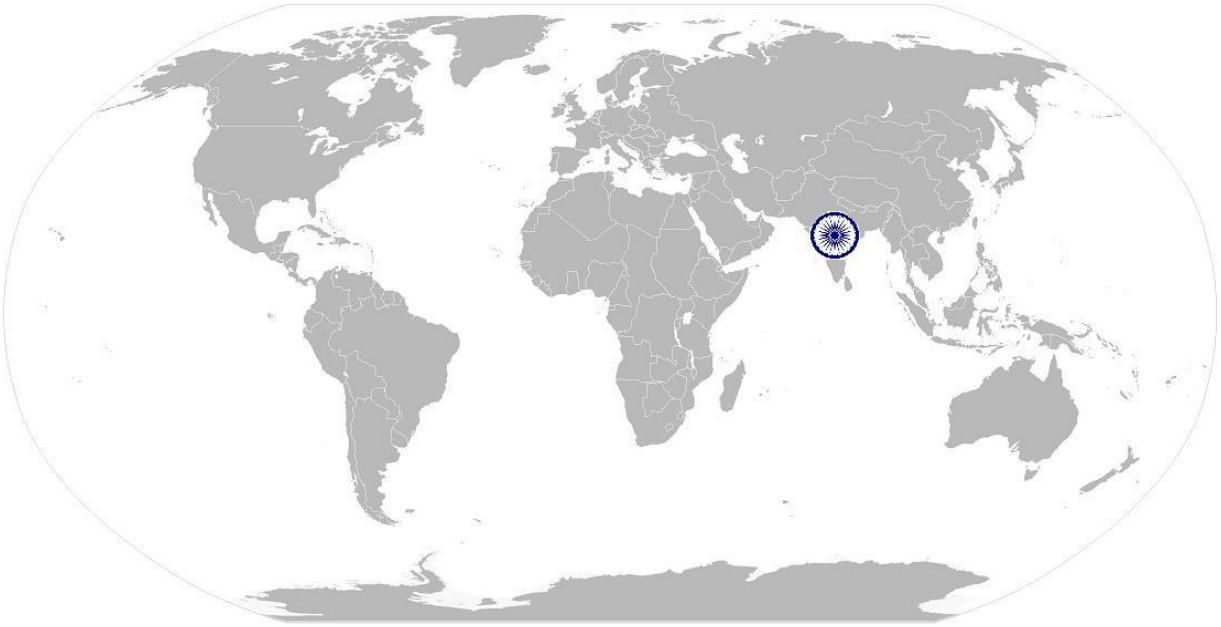


NOS Version Control

NOS Code	MES/ N 0701		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15



National Occupational Standard



Overview

This unit is about detailing the creative and design aspects of production

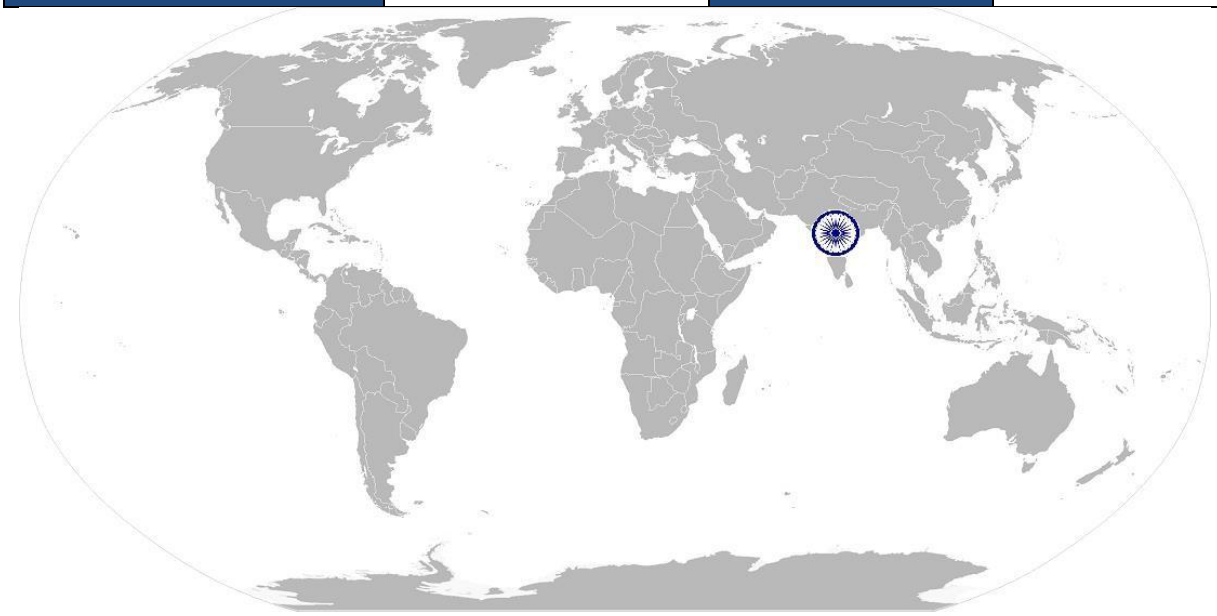
National Occupational Standard

Unit Code	MES/ N 0702
Unit Title (Task)	Conceptualize Creative Ideas for Production
Description	This OS unit is about detailing the creative and design aspects of production
Scope	This unit/task covers the following: • Gather visual references that could serve as aids during the animation process, including previously executed animation work-products, animations products available in the public domain, artwork, general human, animal and creature behavioral video references • Conceptualize creative ideas for animation using the concept art-work prepared by the designers, including the character's look, colors, dressing, attitude and behavior, character expressions, emotions, poses, character movements (e.g. walk, run, jump etc.) and timing (acting and body mechanics), environment, properties and costume designs, color and lighting concepts and shadow placement
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Gather visual references that could serve as aids during the animation process	To be competent, the user/individual on the job must be able to: PC1. Research and find character references that would aid and inspire designs
Conceptualize creative ideas for animation	PC2. Generate creative concepts and ideas for production using visualization and using references from the concept art-work prepared by the designers, drawing from imagination, acting and performing PC3. Present ideas to the Director, Art Director and Supervisors PC4. Agree on the style of the work-product that would most appeal to the target audience in sync with the schedule and show requirement
Knowledge and Understanding (K)	
B. Organizational Context (Knowledge of the company / organization and its processes)	The individual on the job needs to know and understand: KA1. The guidelines provided by the Director, Animation Supervisor and the Producer with respect to characters and look and feel of the end-product KA2. The elements/concept artwork (prepared by the Character Designers and the Background/Layout designers) and the colour/lighting/shadow keys (prepared by the art director, colour key artists) KA3. The resources that are going to be used for production
B. Technical Knowledge	The individual on the job needs to know and understand: KB1. The trends in animation and reference work-products produced before that

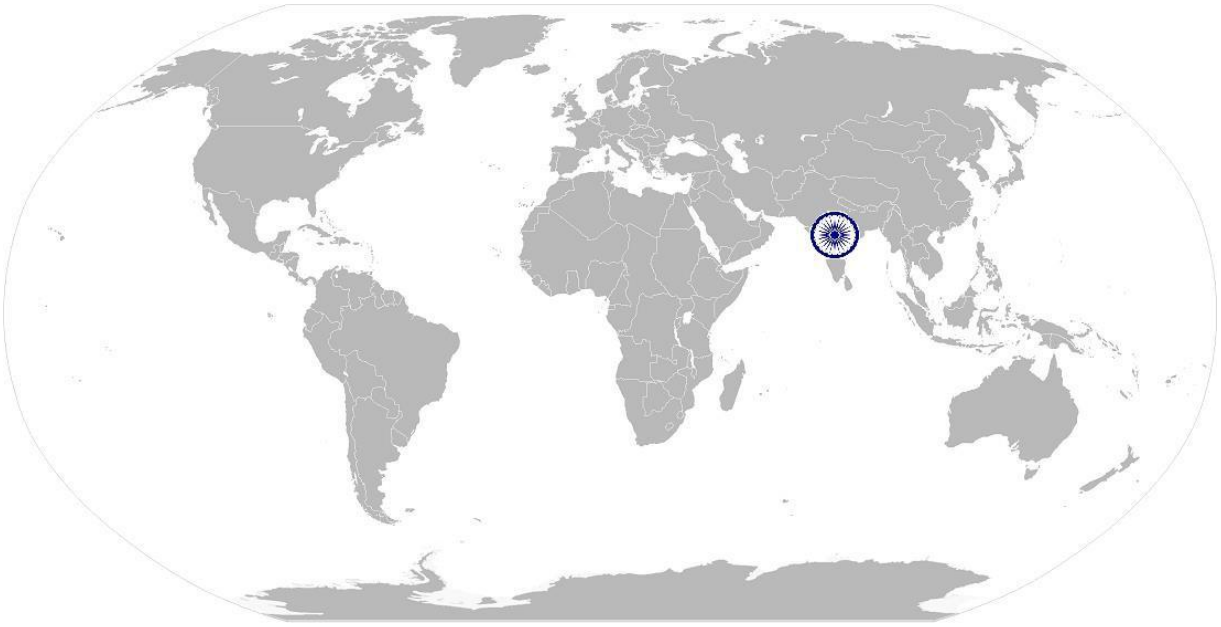
	closely relate to the style and technique that needs to be produced KB2. How to observe and study human behavior and expressions to help visualize concepts KB3. How to enact and emote KB4. How to create hook up poses and animation KB5. How to use camera angles to emphasize performance KB6. New media technology including what is good for the web, mobile, tablets KB7. How to evaluate the strengths and weaknesses of the hardware, software being used in the production pipeline
Skills (S)	
B. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Document links, animation videos, artwork etc. that can be used as references during the production process SA2. Document character profiles and background descriptions, to help present to Directors and supervisors, and guide the production process
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA3. Interpret the storyboard/animatic correctly and understand the mood of the sequence/shot SA4. Research visual and written content to find appropriate references to be used during animation SA5. Keep apprised of the trends and work-products that are being produced in the market.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA6. Suggest creative ideas to the Director and Animation supervisor SA7. Communicate clearly and collaborate effectively with colleagues from various departments

NOS Version Control

NOS Code	MES/ N 0702		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15



National Occupational Standard



Overview

This unit is about selecting the most appropriate software tool(s) for production and planning the workflow for animation

National Occupational Standard

Unit Code	MES/ N 0703
Unit Title (Task)	Plan Tools and Workflow
Description	This OS unit is about selecting the most appropriate software tool(s) for production and planning the workflow for animation
Scope	This unit/task covers the following: • Understand the software tool(s) to be used for production, including: • 2D animation: toon boom harmony, adobe flash, hand-drawing • 3D animation: Autodesk maya, XSI, motion builder, 3D studio max, blender • Custom and in-house tools • Understand and follow the work plan including production schedule, workflow, timelines, department wise output targets and technical specifications for the show

Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Understand the software tool(s) to be used for production	To be competent, the user/individual on the job must be able to: PC1. Stay apprised of the various types of software tools available for production in the market PC2. Research and Suggest the best tool for the production
Understand and follow the work plan	PC3. Evaluate timelines for production in accordance to the production schedule (supervisor) PC4. Read, follow and update the production workflow/schedule, deliverables and timelines with the Director, Art Director and Supervisors

Knowledge and Understanding (K)	
C. Organizational Context (Knowledge of the company / organization and its processes)	KA1. The production process followed by the organization KA2. The production team and their individual roles and capabilities KA3. The standards for quality set by the organization KA4. The production process and creative brief
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The software tools and equipment available in-house and/or through third party providers KB2. The nuances of various tools and how to suggest the best tool suitable for the production KB3. Traditional drawing tools and techniques

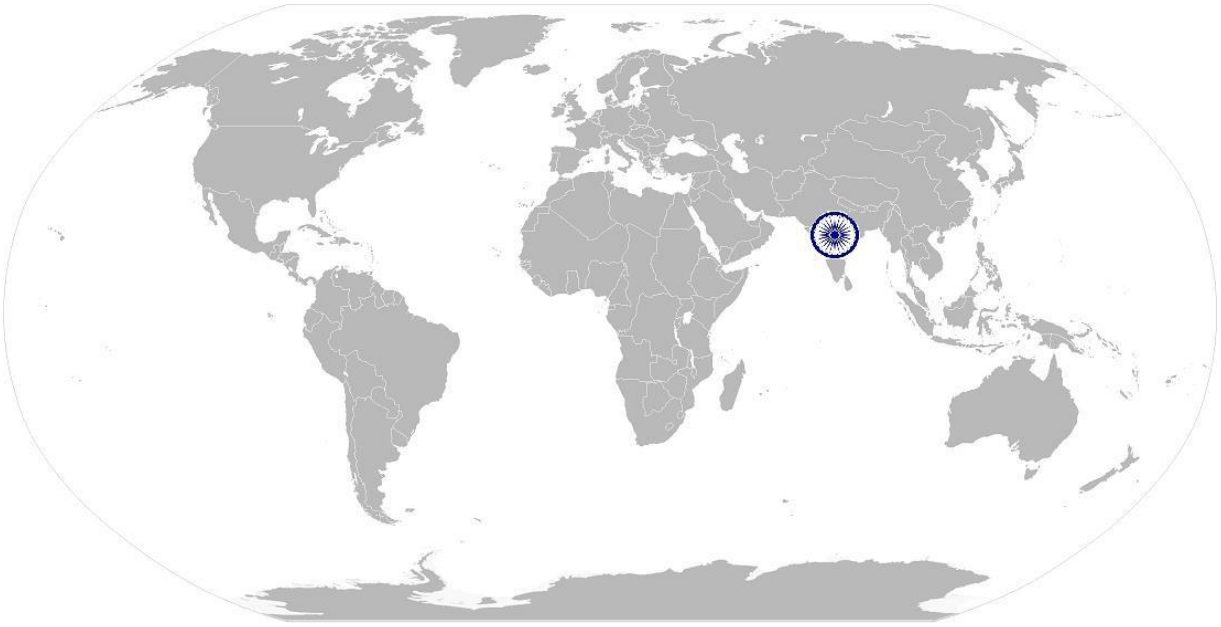
	KB4. How to plan a shot-break-up KB5. How to prepare a production schedule, including a break-up of activities that would need to be performed and deliverables that would need to be produced (supervisor) KB6. How to estimate the expected effort, expected time for production and delivery keeping in mind the delivery dates, quality standards and project schedule (supervisor) KB7. The principles of project management like Project planning, scheduling, effort estimation, resource requirements (right from people to machines, space and communication tools) KB8. Risk and Mitigation planning KB9. Rework and review management (efficiency and effectiveness) KB10. Techniques to identify trends in rework and propose/implement corrective action KB11. CPM and PERT techniques KB12. Configuration Management KB13. The technical aspects of the job undertaken by other members of the production team (before and after the work of an animator) KB14. How to prepare a detailed work plan and demarcate roles and responsibilities to members of the production team (supervisor)
Skills (S)	
C. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Prepare the work-plan (production plan and schedule) in an appropriate format that can be used as a reference point for planning workflow and assigning responsibilities(supervisor) SA2. Track the workflow on a regular basis and document deviations from timelines (supervisor) SA3. Create and present project status reports SA4. Write in English (added advantage)
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA5. Keep apprised of the various software tools that are being used to produce animation SA6. Read and understand the software manuals and help tools, where required SA7. Read and understand the production and creative brief prepared by the Director and Art Director SA8. Read and understand notes, instructions and inputs from clients SA9. Read in English (added advantage)
	Oral Communication (Listening and Speaking skills)

	The user/individual on the job needs to know and understand how to: SA10. Clarify the production and creative brief from the Director, Art Director and Supervisors SA11. Understand the production specifications and quality standards to be maintained SA12. Discuss and agree upon the software tools to be used for production SA13. Discuss and agree upon the production schedule and work plan SA14. Communicate effectively with team members to demarcate workflow and responsibilities SA15. Seek clarifications on the work plan from Supervisors
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand how to: SB1 Assess the effort, duration and cost involved for each work activity SB2 Plan the production workflow, timelines and deliverables SB3 Agree on the roles and responsibilities of the team members SB4 Foresee the risks, issues and challenges that might arise during the production environment and plan accordingly

NOS Version Control

NOS Code	MES/ N 0703		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15

National Occupational Standard



Overview

This unit is about producing a set of 2D animated images, based on the storyboard, which would create an illusion of movement once played back in a sequential manner

National Occupational Standard

Unit Code	MES/ N 0704
Unit Title (Task)	Produce 2D Animation
Description	This OS unit is about producing a set of 2D animated images, based on the storyboard that would create an illusion of movement once played back in a sequential manner.
Scope	This unit/task covers the following: • Preparation of a prototype 2D work product/pre-visualization for review • Preparation of 2D animation end-products including films, television series, advertisements, education content, work-products for the internet, promotional material/corporate presentations, game art, augmented reality and industry specific content such as scientific animation, legal and architecture • Application of 2D animation techniques including cell animation or classic hand drawn animation, cut out animation and limited animation • Usage of 2D animation tools such as Toon Boom Harmony, Flash, Open source software

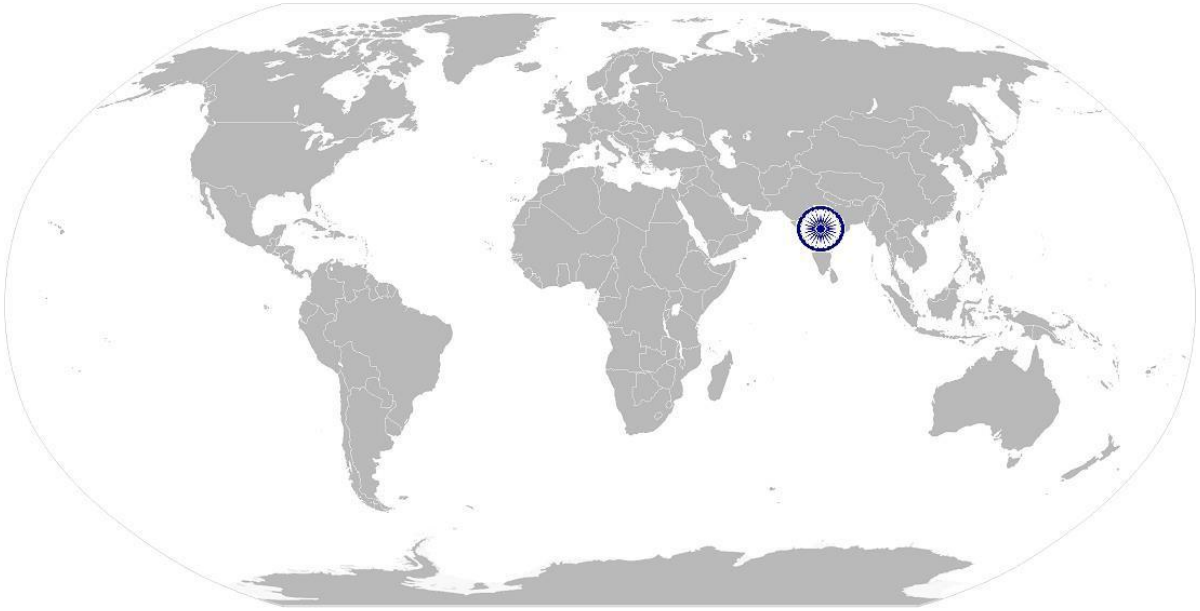
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Preparation of a prototype 2D work product/previsualization for review	To be competent, the user/individual on the job must be able to: PC1. Follow the storyboard for composition i.e. positioning of the character with respect to the background and camera to create the desired animation PC2. Draw/source key frame drawings to establish a reference point for strong poses
Preparation of 2D animation end products	PC3. Incorporate audio/music assets PC4. Create shadows for animation using pre-defined lighting keys PC5. Bring assets together to produce sequences and scenes/shots as per requirements and ensuring continuity PC6. Ensure that the hook-up/transition from one scene to another is done properly PC7. How to work with layers and get a good perspective view PC8. Work effectively within the team and with other departments, namely, assets, lighting and effects PC9. Critically review animation produced, keeping in mind the creative and design specifications and producer brief PC10. Refine the output based on deviations observed and/or modifications required within requisite timelines

	PC11. Ensure that the work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered within the requisite timelines PC12. How to achieve the required output target PC13. Organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use PC14. Train junior animators to improve their quality ability to deliver within given timelines
Application of 2D animation techniques	PC15. Apply principles of design, 2D animation and film-making to create sequences and scenes/shots PC16. Apply varied techniques and styles based on the requirement
Usage of 2D animation tools	PC17. Use graphics and animation software to produce in-between poses for animation
Knowledge and Understanding (K)	
D. Organizational Context (Knowledge of the company / organization and its processes)	KA1. The objective/purpose that the end-product intends to achieve KA2. Responsibilities and scope of work for various departments KA3. The expectations of the Client, Director, Animation Supervisor and the Producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product KA4. Limitations on the effort, schedule, resources and issues that might arise during production KA5. The production requirements and quality that needs to be reflected in the final output KA6. The timelines within which the product needs to be delivered
B. Technical Knowledge	The user/individual on the job needs to know and understand KB1. The fundamentals and principles of Animation and film-making KB2. Life drawing including human anatomy, emotions, actions and expressions KB3. How to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic KB4. Principles of movement and timing KB5. How to work with graphics and animation software including Adobe Flash, Harmony and understand their specifics KB6. Design standards and specifications that needs to be complied with to produce the final output KB7. The interaction between various characters in a given scene and bring out that dynamic in the animation KB8. Applicable health and safety guidelines
Skills (S)	
D. Core Skills/ Generic Skills	**Writing Skills** The user/ individual on the job needs to know and understand how to: SA1. Report output, efforts and schedule taken to complete the allotted task

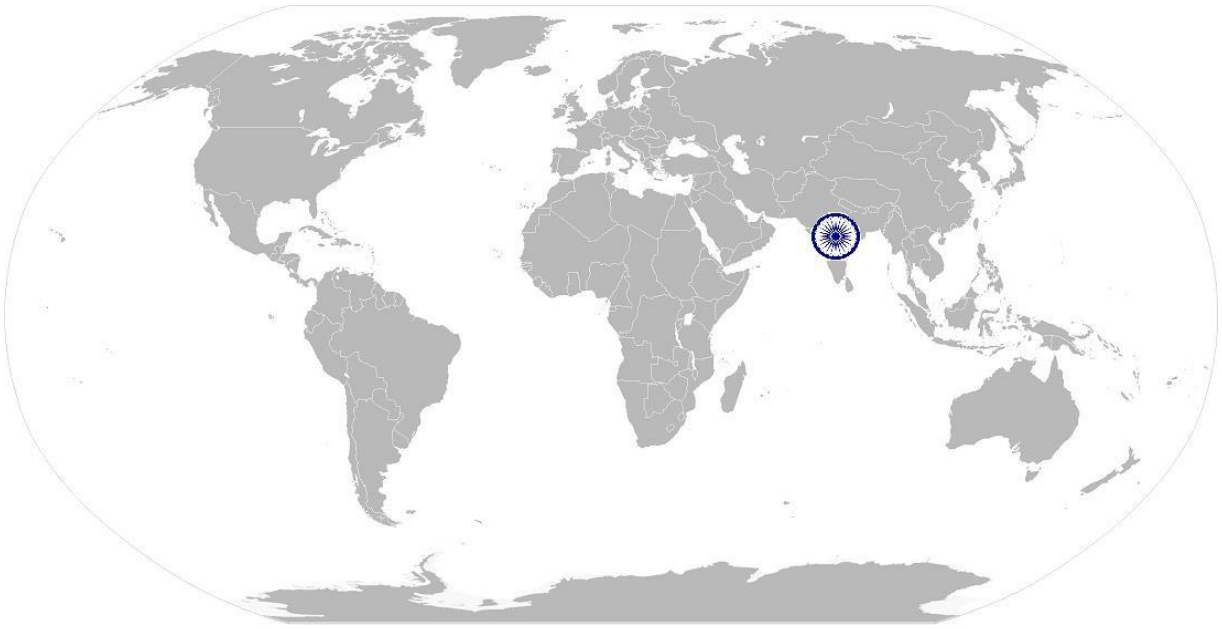
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Read and understand the script and character descriptions SA3. Read the work plan and production schedule to ensure that progress is in line
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Suggest creative ideas to the Director and Animation supervisor SA5. Communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots SA6. Understand the modifications required from the Director, Animation supervisor and Producer SA7. Discuss the challenges faced during production and discuss ways to address SA8. such challenges in future projects
B. Professional Skills	**Decision Making**
	The user/individual on the job needs to know and understand how to: SB1 Make decisions in order to be able to work collectively and independently, where required
	Plan and Organize
	The user/individual on the job needs to know and understand: SB2 Understand shot break up and plan effort and time required for each element of the shot SB3 How to plan and prioritise individual timelines and deliver on schedule. SB4 Work effectively as a member of the team and help realise overall timelines SB5 Prioritise work-products and tasks based on requirements
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB6 Address comments and make changes SB7 Seek assistance and guidance from the Director, Art Director and Supervisors, where required
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB1 Improve work-products and performance based on feedback received and through self-appraisal SB2 Understand the perspective of Client, Director, Art Director and Supervisors and apply it to the animation being produced

NOS Version Control

NOS Code	MES/ N 0704		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15



National Occupational Standard



Overview

This unit is about animating 3D models using relevant techniques, based on the storyboard

National Occupational Standard

Unit Code	MES/ N 0705
Unit Title (Task)	**Produce 3D Animation**
Description	This OS unit is about animating 3D models using relevant techniques, based on the storyboard
Scope	This unit/task covers the following: • Preparation of 3D animation end-products including films, television series, advertisements, education content, work-products for the internet, promotional material/corporate presentations, game art, augmented reality, and industry specific content such as scientific animation, legal, architecture • Application of 3D animation techniques • Usage of 3D animation tools such as autodesk maya, XSI, 3d studio max, blender, motion capture tools like marker tracking cameras and inertial suits

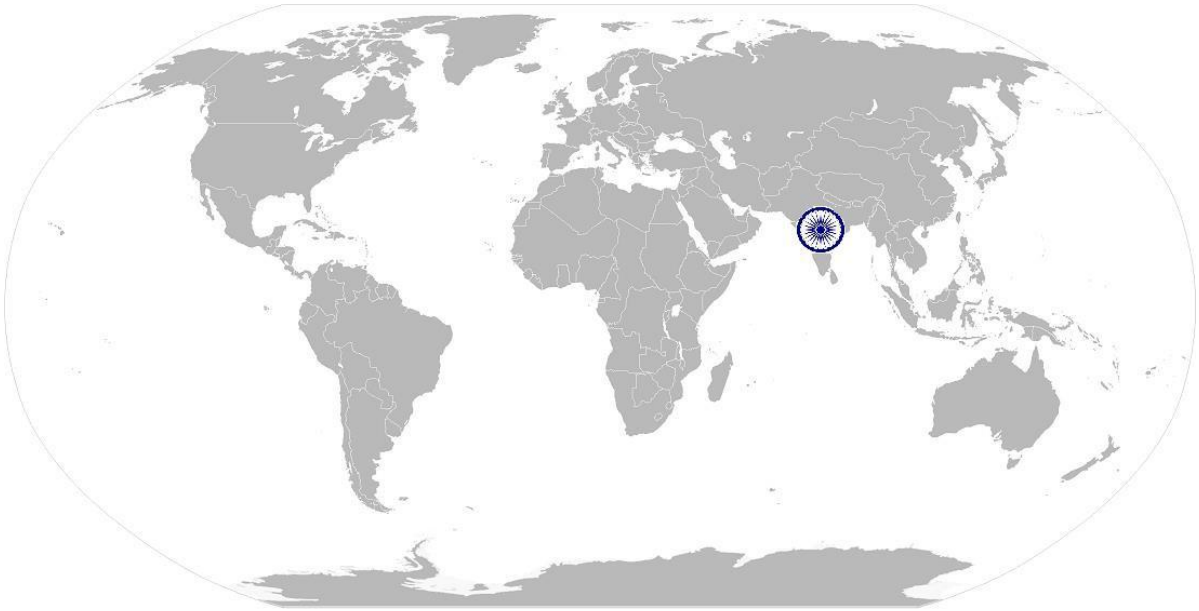
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Preparation of 3D animation end products	To be competent, the user/individual on the job must be able to: PC1. Apply principles of design, 3D animation and film-making to create sequences and scenes/shots PC2. Follow the storyboard for composition i.e. positioning of the character model with respect to the background and camera to create the desired animation PC3. Animate expressions and lip movements to match dialogues and sound PC4. Communicate requirements to camera and lighting for motion capture, where required PC5. Work with motion capture data received from the motion/ performance capture studio (clean up the data and map animation data to 3D models) PC6. Prepare a prototype work product/pre-visualisation for review PC7. Refine the product until the required creative effect is achieved PC8. Organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use PC9. Work effectively within the team and with other departments, namely, design, modeling/rigging, texturing, editing, rendering and compositing PC10. Critically review animation produced, keeping in mind the creative and design specifications and producer brief PC11. Refine the output based on deviations observed and/or modifications required within requisite timelines
Application of 3D	PC12. Apply 3D animation techniques including realistic 3D animation (motion

animation techniques		capture + key frame animation) e.g. in movies such as beowulf, avatar and gollum, semi-realistic e.g. in movies such as little krishna and brave, toon animation e.g. kung-fu panda, simulation of traditional & stop motion techniques e.g. advertisements such as vineta cucini, amaron battery etc.
Usage of 3D animation tools	PC13.	Produce 3D movements and performance required using 3D animation software within the agreed timelines
Knowledge and Understanding (K)		
E. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand:	
	KA1.	The objective/purpose that the end-product intends to achieve
	KA2.	The profile of the target audience for the end-product
	KA3.	Responsibilities and scope of work expected from the animator
	KA4.	The expectations of the Client, Director, Animation Supervisor and the Producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product
	KA5.	Limitations on the effort, duration, schedule and resources and issues that might arise during production
	KA6.	The production requirements and quality that needs to be reflected in the final output
	KA7.	The timelines within which the product needs to be delivered
	KA8.	The typical processes involved 3D Animation Production i.e. staging, blocking, 1st. level animation, lip-sync and facials, final animation, specialised animation (cloth and hair simulation), secondary animation (accessories), lighting & rendering, sfx and compositing
	KA9.	Applicable health and safety guidelines
B. Technical Knowledge	The user/individual on the job needs to know and understand:	
	KB1.	Basic/advanced scripting
	KB2.	The fundamentals and principles of 3D Animation, 3D Environments and filmmaking
	KB3.	Art and visual treatment
	KB4.	Fundamentals of Motion capture and performance capture technologies
	KB5.	Principles of movement and timing
	KB6.	Principles of human/ animal/ character anatomy and how they can be applied to animation
	KB7.	How to observe and study human/ animal/ character behavior and expressions to help visualise concepts
	KB8.	How to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic
	KB9.	Properties of the surfaces that are being used in the animation
	KB10.	How to work with graphics and animation software including Autodesk Maya, Softimage, XSI, 3D studio max and Blender
	KB11.	Design standards and specifications that needs to be complied with to produce the final output
	KB12.	3D output and delivery formats

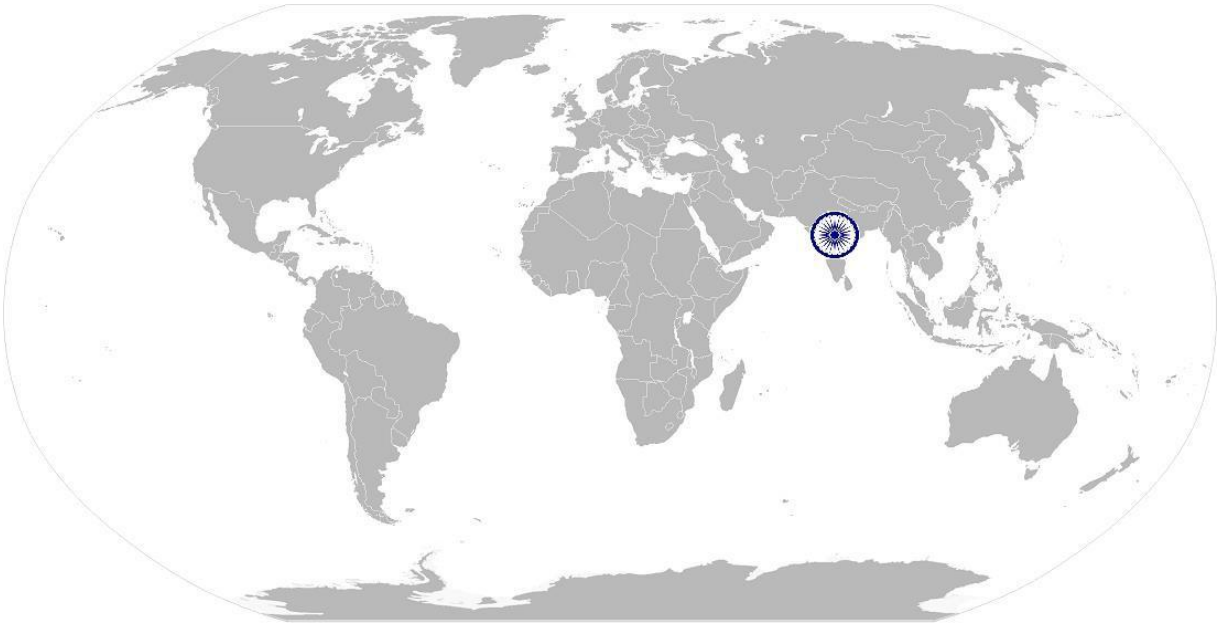
	KB13. Basics of modeling and rigging (added advantage) KB14. Applicable health and safety guidelines
Skills (S)	
E. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. Report output, efforts and schedule taken to complete the allotted task
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA2. Read and understand the script and character descriptions SA3. Read the work plan and production schedule to ensure that progress is in line SA4. Read and understand the short division, character identification and frames planned during motion / performance capture
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA5. Suggest creative ideas to the Director and Animation supervisor SA6. Communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots SA7. Understand the modifications required from the Director, Animation supervisor and Producer SA8. Discuss the challenges faced during production and discuss ways to address such challenges in future projects
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand: SB8 Understand shot break up and plan effort and time required for each element of the shot SB9 How to plan and prioritise individual timelines and deliver on schedule. SB10 Work effectively as a member of the team and help realise overall timelines SB11 Prioritise work-products and tasks based on requirements
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB12 Address comments and make changes SB13 Seek assistance and guidance from the Director, Art Director and Supervisors, where required
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB3 Improve work-products and performance based on feedback received and through self-appraisal SB4 Understand the perspective of Client, Director, Art Director and Supervisors and apply it to the animation being produced

NO S Version Control

NOS Code	MES/ N 0705		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15



National Occupational Standard



Overview

This unit is about producing stop motion animation using relevant techniques, based on the storyboard

National Occupational Standard

Unit Code	MES/ N 0706
Unit Title (Task)	**Produce Stop Motion Animation**
Description	This OS unit is about producing stop motion animation using relevant techniques, based on the storyboard
Scope	This unit/task covers the following: • Preparation of a prototype work product/pre-visualisation for review • Preparation of stop motion animation end-products for film, television series, advertisement and education content

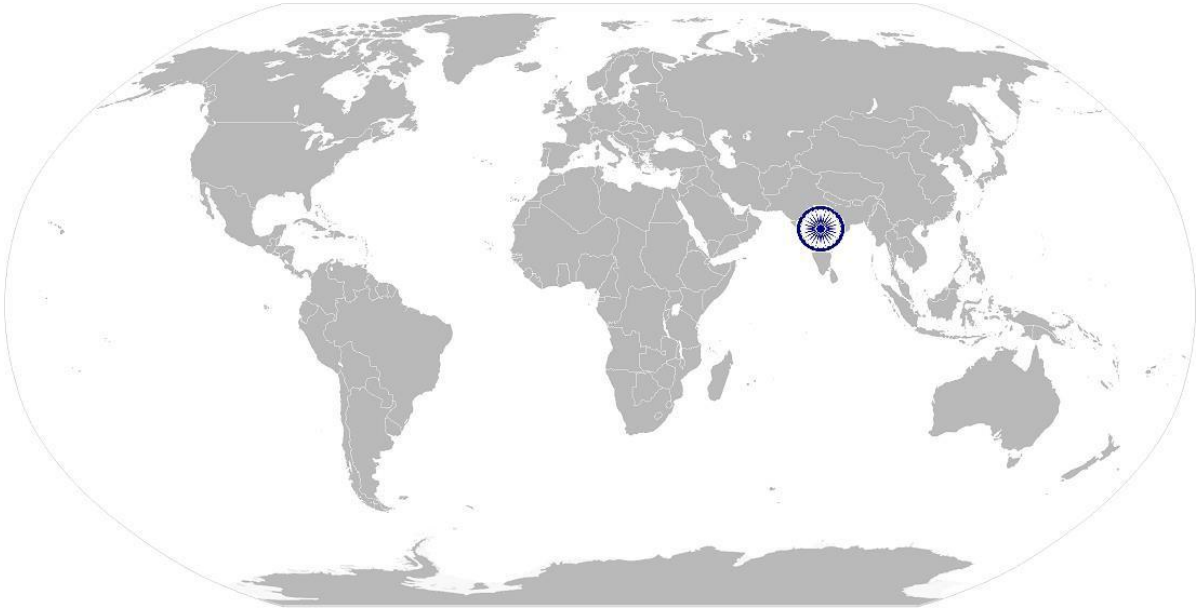
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Preparation of a prototype work product/previsualization for review.	To be competent, the user/individual on the job must be able to: PC1. Understand requirements including the way the characters will act/move in accordance to the storyboard PC2. Move characters and construct/compose a shot in accordance to the script and storyboard as a prototype
Preparation of stop motion animation end-products for film, television series, advertisement and education content	PC3. Animate stop motion characters (puppets or models) in accordance to the script and directors instructions PC4. Contribute creative ideas during the animation process PC5. Apply stop motion animation techniques including traditional frameby-frame capture, Claymation and cut-out using computer-generated tools

Knowledge and Understanding (K)	
F. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. The objective/purpose that the end-product intends to achieve KA2. The profile of the target audience for the end-product KA3. Responsibilities and scope of work for various departments KA4. The expectations of the Director, Animation Supervisor and the Producer with respect to the process, techniques to be used and guidelines with respect to characters and look and feel of the end-product KA5. Limitations on the time and resources and issues that might arise during production KA6. The production requirements and quality that needs to be reflected in the final output KA7. The timelines within which the product needs to be delivered
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The fundamentals and principles of Animation and film-making KB2. Stop motion animation techniques KB3. Principles of movement and timing KB4. How to develop/portray the character in accordance to the script

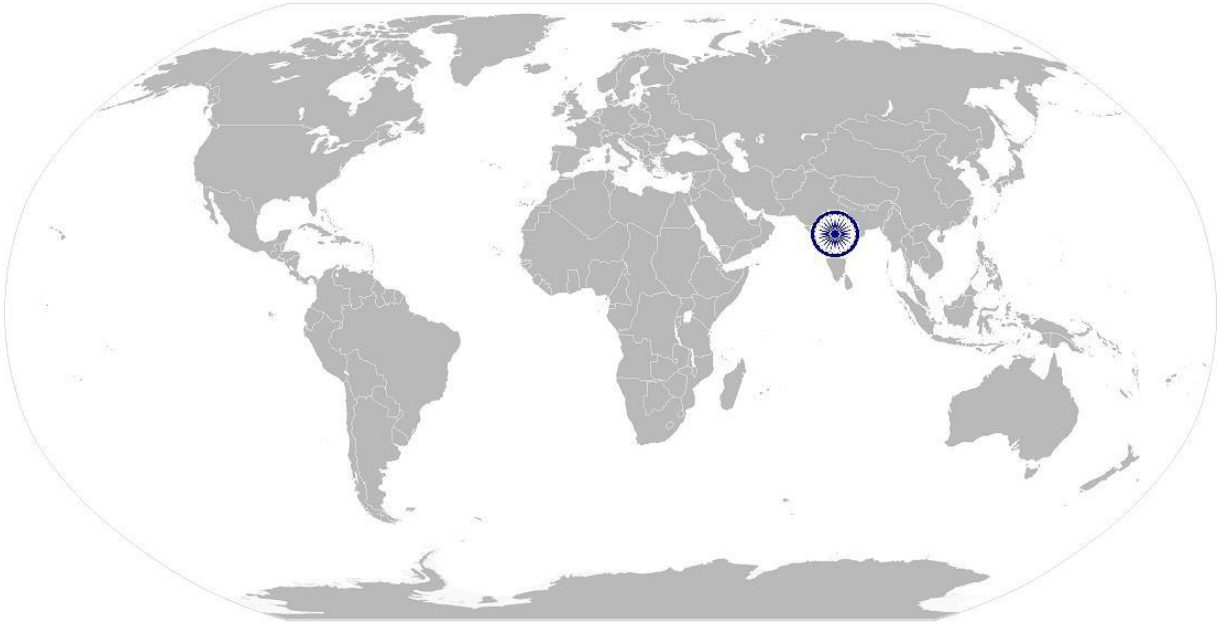
	KB5. Principles of human anatomy and how they can be applied to animation KB6. How to observe and study human behavior and expressions to help visualise concepts KB7. How to enact and emote; and thereby animate characters in accordance to the demands of the script and animatic KB8. Properties of the characters and materials that are being used in the animation KB9. How to work with graphics and animation software including Autodesk Maya, XSI, 3D studio max and Blender KB10. Design standards and specifications that needs to be complied with to produce the final output KB11. Applicable health and safety guidelines
Skills (S)	
C. Core Skills/ Generic Skills	**Reading Skills**
	The user/individual on the job needs to know and understand how to: SA9. Read and understand the script and character descriptions SA10. Read the work plan and production schedule to ensure that progress is in line
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA11. Suggest creative ideas to the Director and Animation supervisor SA12. Communicate clearly and collaborate effectively with colleagues who are working with the previous or next scenes/shots SA13. Understand the modifications required from the Director, Animation supervisor and Producer SA14. Discuss the challenges faced during production and discuss ways to address such challenges in future projects
B. Professional Skills	**Plan and Organize**
	The user/individual on the job needs to know and understand: SB1 How to plan individual timelines and deliver on schedule SB2 Work effectively as a member of the team and help realise overall timelines SB3 Prioritise work-products and tasks based on requirements
	Problem Solving
	The user/individual on the job needs to know and understand how to: SB4 Address comments and make changes SB5 Seek assistance and guidance from the Director, Art Director and Supervisors, where required
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB5 Improve work-products and performance based on feedback received and through self-appraisal

NO S Version Control

NOS Code	MES/ N 0706		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	16/07/13
Sub-sector	Animation, Gaming	Last reviewed on	30/07/13
Occupation	Animator	Next review date	29/07/15



National Occupational Standard



Overview

This unit is about contributing towards maintaining a healthy, safe and secure working environment

National Occupational Standard

Unit Code	MES/ N 0707
Unit Title (Task)	Maintain workplace health and safety
Description	This OS unit is about contributing towards maintaining a healthy, safe and secure working environment
Scope	This unit/task covers the following: • Understanding the health, safety and security risks prevalent in the workplace • Knowing the people responsible for health and safety and the resources available • Identifying and reporting risks • Complying with procedures in the event of an emergency

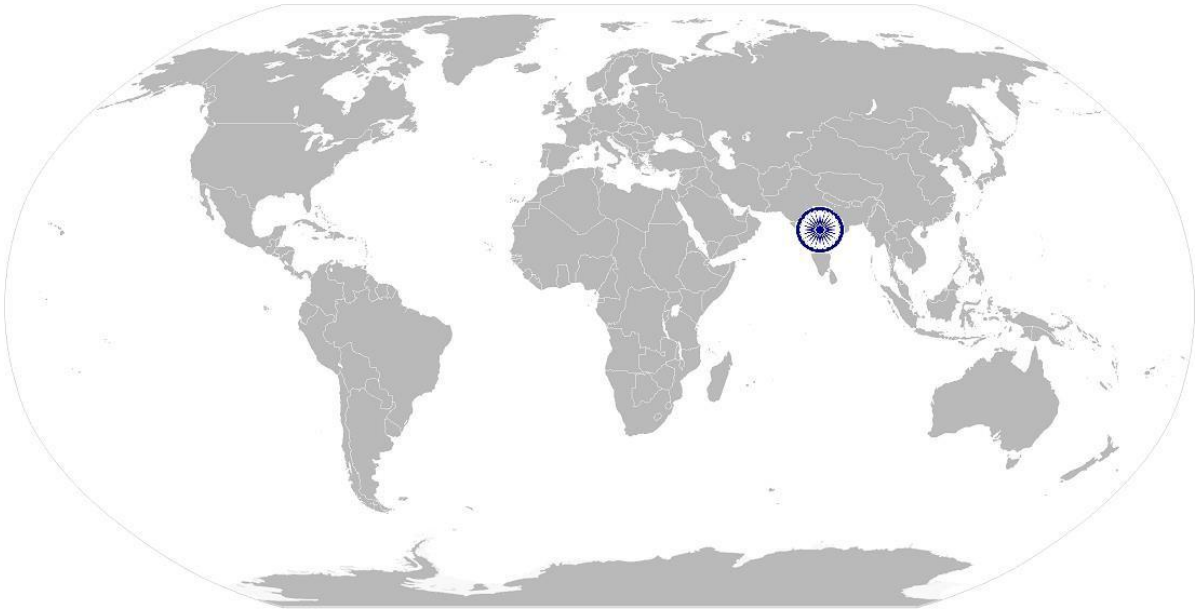
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Understanding the risks prevalent in the workplace	To be competent, the user/individual on the job must be able to: PC1. Understand and comply with the organisation's current health, safety and security policies and procedures PC2. Understand the safe working practices pertaining to own occupation PC3. Understand the government norms and policies relating to health and safety including emergency procedures for illness, accidents, fires or others which may involve evacuation of the premises PC4. Participate in organization health and safety knowledge sessions and drills
Knowing the people responsible for health and safety and the resources available	PC5. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency PC6. Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms
Identifying and reporting risks	PC7. Identify aspects of your workplace that could cause potential risk to own and others health and safety PC8. Ensure own personal health and safety, and that of others in the workplace though precautionary measures PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person PC10. 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
Complying with procedures in the event of an emergency	PC11. Follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard PC12. Identify and correct risks like illness, accidents, fires or any other natural

	calamity safely and within the limits of individual's authority
Knowledge and Understanding (K)	
G. Organizational Context (Knowledge of the company / organization and its processes)	KA1. Organisation's norms and policies relating to health and safety KA2. Government norms and policies regarding health and safety and related emergency procedures KA3. Limits of authority while dealing with risks/ hazards The importance of maintaining high standards of health and safety at a workplace
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The different types of health and safety hazards in a workplace KB2. Safe working practices for own job role KB3. Evacuation procedures and other arrangements for handling risks KB4. Names and contact numbers of people responsible for health and safety in a workplace KB5. How to summon medical assistance and the emergency services, where necessary KB6. Vendors' or manufacturers' instructions for maintaining health and safety while using equipments, systems and/or machines
Skills (S)	
F. Core Skills/ Generic Skills	**Writing Skills**
	The user/ individual on the job needs to know and understand how to: SA1. How to write and provide feedback regarding health and safety to the concerned people SA2. How to write and highlight potential risks or report a hazard to the concerned people
	Reading Skills
	The user/individual on the job needs to know and understand how to: SA3. Read instructions, policies, procedures and norms relating to health and safety.
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. Highlight potential risks and report hazards to the designated people SA5. Listen and communicate information with all anyone concerned or affected.
B. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand how to: SB1. Make decisions on a suitable course of action or plan
	Plan and Organize
	The user/individual on the job needs to know and understand: SB6 Plan and organize people and resources to deal with risks/ hazards that lie within the scope of one's individual authority
	Problem Solving
	The user/individual on the job needs to know and understand how to:

	SB7 Apply problem solving approaches in different situations
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB6 Understand hazards that fall within the scope of individual authority and report all hazards that may supersede one's authority SB7 Apply balanced judgements in different situations

NOS Version Control

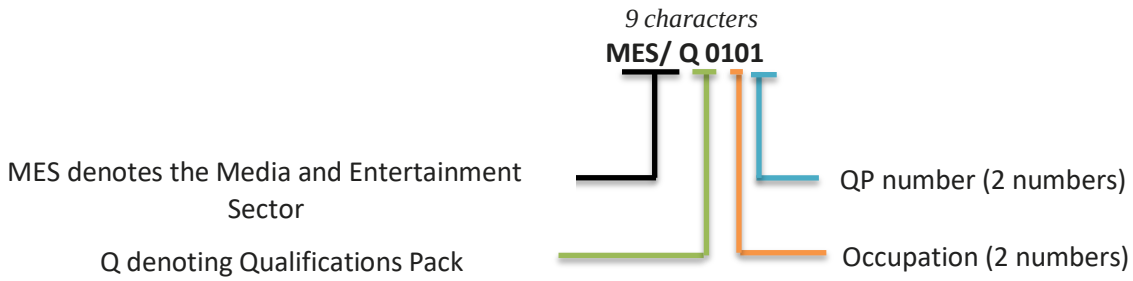
NOS Code	**MES / N 0 707**		
Credits(NSQF)	**TBD**	**Version number**	**1.0**
Sector	**Media and Entertainment**	**Drafted on**	**16/07/13**
Sub-sector	**Animation, Gaming**	**Last reviewed on**	**30/07/13**
Occupation	**Animator**	**Next review date**	**29/07/15**



Annexure

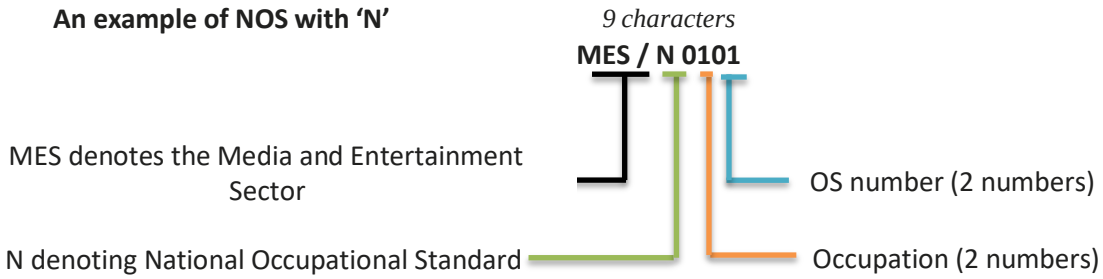
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



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The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
…	…

Sequence	Description	Example
Three letters	Media and Entertainment	MES
Slash	/	/
Next letter	Whether **Q**P or **N**OS	Q
Next two numbers	Animator	07
Next two numbers	QP number	01

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role: Animator
Qualification Pack: MES Q 0701
Sector Skill Council: Media and Entertainment Skills Council

	NOS	NOS NAME	Weightage
1	**MES/ N 0701**	**Understand Animation Requirements**	20%
2	**MES/ N 0702**	**Conceptualize creative ideas for Production**	15%
3	**MES/ N 0703**	**Plan Tools and Workflow**	15%
4	**MES/ N 0704**	**Produce 2D Animation**	**45%**
5	**MES/ N 0705**	**Produce 3D Animation**	
6	**MES/ N 0706**	**Produce Stop Motion Animation**	
7	**MES/N 0707**	**Maintain workplace Health & Safety**	5%
			100%

Guidelines for Assessment:
1. 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.
2. The assessment for the theory & Practical part will be based on knowledge bank of questions created by the AA and approved by SSC.
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
5. To pass the Qualification Pack, every trainee should score a minimum of 70% cumulatively (Theory and Practical).

Assessment outcomes	Assessment criteria for outcomes	Total Mark	Out Of	Marks Allocation: Theory	Marks Allocation: Skills Practical
MES/ N 0701 Understand Script Requirements	PC1. Understand, clarify and agree on the project brief from the Director, Art Director and Supervisors. This could include the following: Objective, concept/style of animation, script, storyboard and animatic, do's and don'ts for animation, target audience, project pipeline/ asset management/ scheduling and activities, project timelines and constraints, production brief/ key milestones for delivery, creative brief/desired look of the end-product – using similar projects for reference, quality standards to be maintained, technical details like aspect ratio, output format, list of deliverables and their respective output format	100	35	20	50
	PC2. Understand various parameters of the end-product that would influence production requirements (e.g. duration, style, number of characters, subject and storyline, culture and period the story is based in, effects required, format, music etc.)		25	10	
	PC3. Understand the treatment of the output that needs to be produced and the volume of the final output		20	10	
	PC4. Understand the shot sequence (high level) and continuity/consistency Required		10	5	
	PC5. Select an appropriate animation technique based on the output required. This could include: 2D animation: cell animation e.g. early episodes of tom and jerry (series), cut out animation e.g. charlie and lola (series), limited animation e.g. south park, empire square (series) 3D Animation: realistic 3D animation e.g. beowulf, avatar, gollum (movies), semi realistic e.g. little krishna, brave (movies), toon animation e.g. kung-fu panda (movie), simulation of traditional & stop motion techniques e.g. vineta cucini and amaron battery (advertisements, flushed away (movie), stop-motion animation, VFX, stereo conversion		10	5	
			100	50	50

Assessment outcomes	Assessment criteria for outcomes			Marks Allocation	
		Total Mark	Out Of	Theory	Skills Practical
MES/ N 0702 Conceptualize and Create Visuals	PC1. Research and find character references that would aid and inspire designs		40	20	50
	PC2. Generate creative concepts and ideas for production using visualization and using references from the concept art-work prepared by the designers, drawing from imagination, acting and performing		25	15	
	PC3. Present ideas to the Director, Art Director and Supervisors		20	10	
	PC4. Agree on the style of the work-product that would most appeal to the target audience in sync with the schedule and show requirement"		15	5	
			100	50	50

Assessment outcomes	Assessment criteria for outcomes			Marks Allocation	
		Total Mark	Out Of	Theory	Skills Practical
MES/ N 0703 (Plan Tools and Workflow)	PC1. Stay apprised of the various types of software tools available for production in the market		30	15	50
	PC2. Research and Suggest the best tool for the production		30	15	
	PC3. Evaluate timelines for production in accordance to the production schedule (supervisor)		20	10	
	PC4. Read, follow and update the production workflow/schedule, deliverables and timelines with the Director, Art Director and Supervisors"		20	10	
			100	50	50

Assessment outcomes	Assessment criteria for outcomes	Total Marks	Out Of	Marks Allocation	
				Theory	Skills Practical
MES/ N 0704 (Produce 2D Animation)	P1. Follow the storyboard for composition i.e. positioning of the character with respect to the background and camera to create the desired animation		10	5	50
	P2. Draw/source key frame drawings to establish a reference point for strong poses		10	5	
	PC3. Incorporate audio/music assets		5	3	
	PC4. Create shadows for animation using predefined lighting keys		5	2	
	PC5. Bring assets together to produce sequences and scenes/shots as per requirements and ensuring continuity		5	3	
	PC6. Ensure that the hook-up/transition from one scene to another is done properly		5	2	
	PC7. How to work with layers and get a good perspective view		5	3	
	PC8. Work effectively within the team and with other departments, namely, assets, lighting and effects		5	2	
	PC9. Critically review animation produced, keeping in mind the creative and design specifications and producer brief		5	3	
	"PC10. Refine the output based on deviations observed and/or modifications required within requisite timelines		5	2	
	PC11. Ensure that the work-products meet quality standards (so that they can be approved with minimum iterations) and are delivered within the requisite"		5	2	
	PC12. How to achieve the required output targets		5	3	
	PC13. Organise, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use		5	2	
	PC14. Train junior animators to improve their quality ability to deliver within given timelines		5	2	
	PC15. Apply principles of design, 2D animation and film-making to create sequences and scenes/shots		10	5	
	PC16. Apply varied techniques and styles based on the requirement		5	3	
	PC17. Use graphics and animation software to produce in-between poses for Animation		5	3	
			100	50	50

Assessment outcomes	Assessment criteria for outcomes	Total Mark	Out Of	Marks Allocation	
				Theory	Skills Practical
MES/ N 0705 (Produce 3D Animation)	PC1. Apply principles of design, 3D animation and film-making to create sequences and scenes/shots		20	10	50
	PC2. Follow the storyboard for composition i.e. positioning of the character model with respect to the BG & camera to create the desired animation		10	5	
	PC3. Animate expressions and lip movements to match dialogues and sound		10	5	
	PC4. Communicate requirements to camera and lighting for motion capture, where required		5	2	
	PC5. Work with motion capture data received from the motion/ performance		5	3	
	capture studio (clean up the data and map animation data to 3D models)"		10	5	
	PC6. Prepare a prototype work product/previsualization for review		5	3	
	PC7. Refine the product until the required creative effect is achieved		5	2	
	PC8. Organize, store and manage work-products into file formats using standard file naming conventions and maintain assets for further use		5	3	
	PC9. Work effectively within the team and with other departments, namely, design, modelling/rigging, texturing, editing, rendering and compositing"		5	3	
	PC10. Critically review animation produced, keeping in mind the creative and design specifications and producer brief "		5	3	
	PC11. Refine the output based on deviations observed and/or modifications		5	3	
			100	50	50

Assessment outcomes	Assessment criteria for outcomes	Total Marks	Out Of	Marks Allocation	
				Theory	Skills Practical
MES/ N 0706 (Produce Stop Motion Animation)	PC1. Understand requirements including the way the characters will act/move in accordance to the storyboard		20	10	50
	PC2. Move characters and construct/compose a shot in accordance to the script and storyboard as a prototype		20	10	
	PC3. Animate stop motion characters (puppets or models) in accordance to the script and directors instructions		20	10	
	PC4. Contribute creative ideas during the animation process		20	10	
	PC5. Apply stop motion animation techniques including traditional frame bsy-frame capture, Claymation and cut-out using computer generated tools		20	10	
			100	50	50

Assessment outcomes	**Assessment criteria for outcomes**	**Total Mark**	**Out Of**	**Marks Allocation**	
				Theory	**Skills Practical**
MES/ N 0707 (Maintain workplace health and safety Description)	PC1. Understand and comply with the organization's current health, safety and security policies and procedures		10	5	
	PC2. Understand the safe working practices pertaining to own occupation		10	5	
	PC3. Understand the government norms and policies relating to health and safety including emergency procedures for illness, accidents, fires or others which may involve evacuation of the premises		5	3	
	PC4. Participate in organization health and safety knowledge sessions and drills		5	2	
	PC5. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency		10	5	
	PC6. Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms		10	5	
	PC7. Identify aspects of your workplace that could cause potential risk to own and others health and safety		10	5	
	PC8. Ensure own personal health and safety, and that of others in the workplace though precautionary measures		10	5	
	PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person		5	3	
	PC10. Report any hazards outside the individual's authority to the relevant person in line with organizational procedures and warn other people who may be affected		10	5	
	PC11. Follow organization's emergency procedures for accidents, fires or any other natural calamity in case of a hazard		10	5	
	PC12. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority		5	2	
			100	50	50