## Contents

What are Occupational Standards(OS)?

➢ 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

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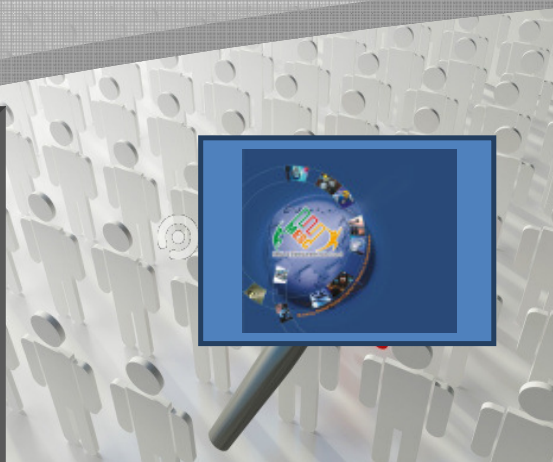
Introduction

Qualifications Pack- Broadcast Operations Director

SECTOR: MEDIA AND ENTERTAINMENT

SUB-SECTOR: Television, Radio

OCCUPATION: Broadcast Operations/ Technology

REFERENCE ID: MES/ Q 0801

ALIGNED TO: NCO-2004/NIL

Broadcast Operations Director in the Media & Entertainment Industry is also known as the Broadcast Operations Head

Brief Job Description: Individuals at this job are responsible to lead and manage the broadcast operations/ technology function

Personal Attributes: This job requires the individual to align activities of the broadcast operations function with the business strategy. The individual must keep updated on the latest technology, equipment and systems for broadcasting. The individual is responsible to commission new equipment upgrades/purchases and manage existing broadcast equipment, facilities and systems. The individual is responsible to lead and monitor efforts of the broadcast operations team, define standard processes to be followed and serve as the final point of escalation for technical issues faced by other content/ production departments within the organisation

<table>
<tr><td rowspan="6">Job Details</td><td>**Qualifications Pack Code**</td><td colspan="3">**MES/ Q 0801**</td></tr>
<tr><td>**Job Role**</td><td colspan="3">**Broadcast Operations Director**
This job role is applicable in both national and international scenarios</td></tr>
<tr><td>**Credits(NSQF)**</td><td>**TBD**</td><td>**Version number**</td><td>**1.0**</td></tr>
<tr><td>**Sector**</td><td>**Media and Entertainment**</td><td>**Drafted on**</td><td>**18/09/13**</td></tr>
<tr><td>**Sub-sector**</td><td>**Television, Radio**</td><td>**Last reviewed on**</td><td>**25/03/15**</td></tr>
<tr><td>**Occupation**</td><td>**Broadcast Operations / Technology**</td><td>**Next review date**</td><td>**24/03/17**</td></tr>
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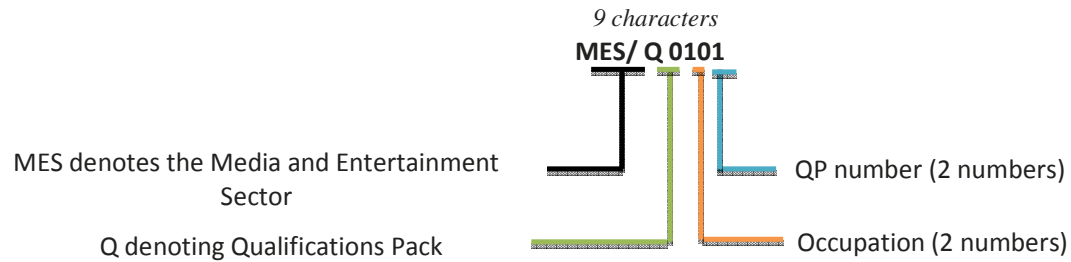| Job Role	Broadcast Operations Director
Role Description	Lead and manage the broadcast operations/ technology function
NSQF level **Minimum Educational Qualifications** **Maximum Educational Qualifications**	9 Bachelor of Engineering (B.E.)/Bachelor of Technology (B.Tech) – electronics and communication Masters of Engineering (M.E.)/ Masters of Technology (M.Tech)
Training (Suggested but not mandatory)	Broadcast engineering technology, Electrical and Telecommunications
Experience	6+ years of experience
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. MES / N 0801 (Plan and lead efforts of the broadcast operations team) 2. MES / N 0803 (Manage broadcast facility, equipment and systems) 3. MES / N 0808 (Maintain workplace health and safety) **Optional:** N.A.
Performance Criteria	As described in the relevant OS units

Keywords /Terms	Description
Archive	A repository where content produced is stored for further use
Ingest	Process of importing data into a digital storage system for future use
Leased Lines	A fiber connection used to connect, transfer and transmit data
Master Control Room	Central room from where broadcasting takes place
Meta tagging	Keywords describing content that can be used to search/find information from a website/server
Play-out systems	Equipment that transmits channels from the broadcaster's head end to subscribers
Satellite	Communications equipment used to receive/transmit audio and video signals
Server	A centralised computer that provides access to resources over a network
Signal	Radio waves carrying audio/video content to be dispersed to an audience
Switcher	A device used to combine or select audio/video signals for playout
Uplinking	A transmission path through which audio/video signals are sent for broadcasting
Waveform monitoring	An equipment used to measure the level and voltage of video signals
Target Audience	Set of individuals with similar characteristics that are prospective customers of the advertisers' product/service
Target Market	The geographic area over which the advertising campaign is focused
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.

Definitions

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Qualifications Pack(QP)	Qualifications Pack comprises the set of OS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Unit Code	Unit Code is a unique identifier for an Occupational Standard, which is denoted by an 'N'.
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do.
Description	Description gives a short summary of the unit content. This would be helpful to anyone searching on a database to verify that this is the 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 needs 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
NSQF	National Skill Qualifications Framework
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
TCP	Transmission Control
IP	Internet protocol
DSNG	Digital satellite news gathering
DG	Diesel generator
OB	Outside Broadcast

Acronyms

Annexure

Nomenclature for QP and NOS

Qualifications Pack

9 characters

MES/ Q 0101

MES denotes the Media and Entertainment Sector

Q denoting Qualifications Pack

QP number (2 numbers)

Occupation (2 numbers)

Occupational Standard

An example of NOS with 'N'

9 characters

MES / N 0101

MES denotes the Media and Entertainment Sector

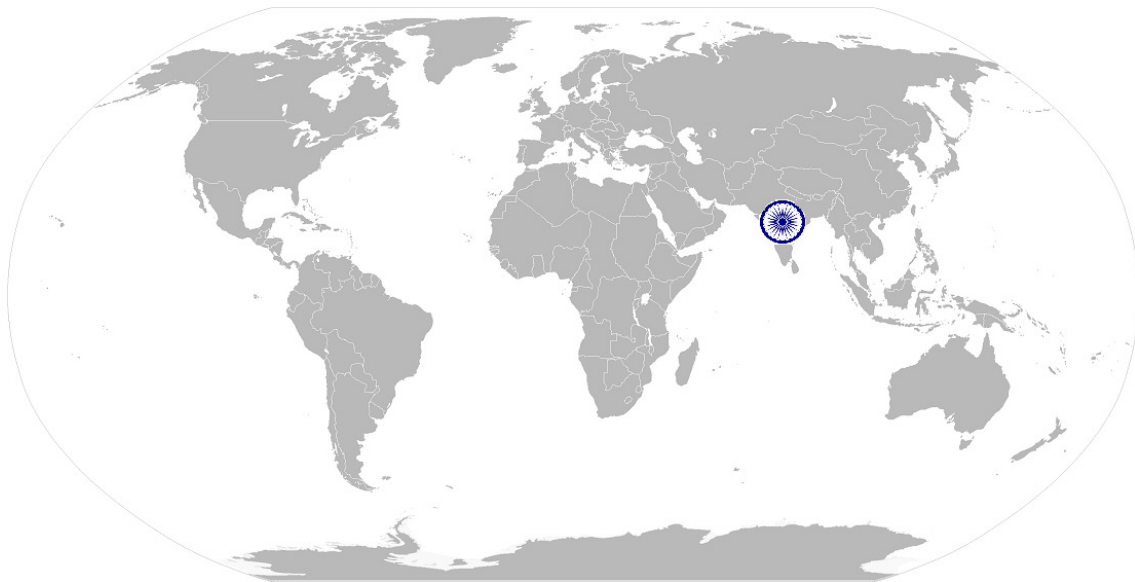N denoting National Occupational Standard

OS number (2 numbers)

Occupation (2 numbers)

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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	Broadcast Operations/ Technology	08
Next two numbers	Broadcast Operations Director	01

![MESC logo] Media & Entertainment Skills Council

NOS
National Occupational Standards

N·S·D·C
National Skill Development Corporation

MES/ N 0801   **Plan and lead efforts of the broadcast operations team**

National Occupational Standard

Overview

This unit is about planning, leading and monitoring the activities and efforts broadcast operations team

National Occupational Standard

Unit Code	MES/ N 0801
Unit Title (Task)	Plan and lead efforts of the broadcast operations team
Description	This OS unit is about planning, leading and monitoring the activities and efforts broadcast operations team
Scope	This unit/task covers the following: • Leading broadcast operations and defining the scope, objectives, drivers and goals of the function • Designing the construct for systems, equipment and technology to optimize signal flow and quality • Preparing the implementation plan for the execution of these designs and obtain key approvals • Review activities of the broadcast operations team

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**
Leading broadcast operations and defining the scope, objectives, drivers and goals	To be competent, the user/individual on the job must be able to: PC1. Articulate the technology/broadcast operations scope, objectives, goals, drivers and deliverables from the overall business strategy and prepare and monitor the broadcast operations budget PC2. Design and maintain of all aspects (systems, equipment, technology and engineering activities) of the signal flow from the source (in-house studios/ outside broadcasts) till transmission/ uplinking PC3. Cover the digital medium for distribution
Designing the construct for systems, equipment and technology to optimize signal flow and quality	PC4. Develop the design/construct of broadcast equipment, technology, systems redundancy etc. in a way that optimizes signal flow, costs, and quality of the broadcast. (this could be an ongoing activity keeping peculiarities of several types of broadcast in mind) This would also cover the plan/activities that would need to be conducted by the engineering team to achieve the objectives/goals of the plan PC5. Finalise standard operating procedures and standard work activities (where applicable) for the broadcast operations team for the team to follow to optimize performance PC6. Serve as the final point of escalation for broadcast issues
Preparing the implementation plan for the execution of the designs and obtain key approvals	PC7. Lead efforts of the broadcast operations team in all activities including support, repairs, engineering, broadcasting, project management during events etc. PC8. Define milestones/tasks, responsibility for execution and response/ resolution timelines PC9. Preparing and monitoring the overall budget for equipment upgrades/purchases/maintenance PC10. Comply with legal requirements with respect to broadcasting, business governance and technology processes

NOS
National Occupational Standards

N·S·D·C
National Skill Development Corporation

MES/ N 0801

Plan and lead efforts of the broadcast operations team

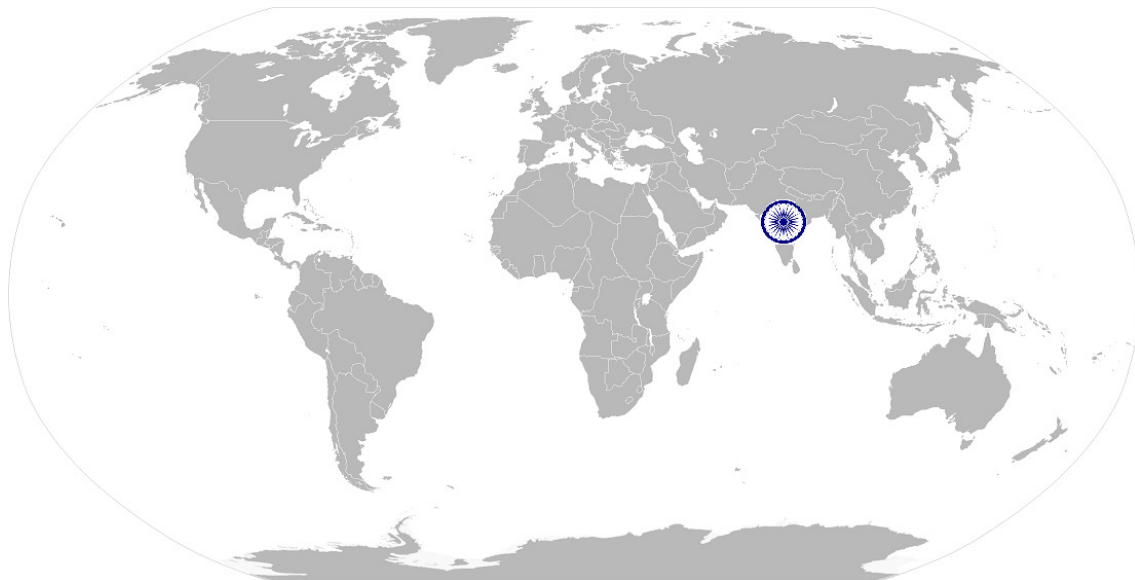| Review activities of the broadcast operations team	PC11. Carry out regular reviews of the team's deliveries and expectations with the business
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. The vision, strategy and business goals of the organisation KA2. The content gathering and production activities being undertaken by the organization KA3. The role and responsibilities of key people within the organization KA4. The broadcast equipment and applications being used by the organization, and its use in broadcasting activities
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. Fundamentals of project management including working knowledge of project management tools such as Gantt charts, Microsoft project, Microsoft excel etc. KB2. Fundamentals of broadcasting and broadcast technologies KB3. Fundamentals of budgeting and budget management KB4. Fundamentals of Information technology KB5. Broadcast technologies and equipment across content gathering, media management, production and post-production KB6. The database of spots and music KB7. The technical equipment and infrastructure used in broadcasting such as personal computers, cables, switchers, converters, routers, systems, servers, WAN, LAN, MPLS lease lines, recovery systems and networks KB8. The power equipment such as generators, system back-ups, UPS equipment, LT/HT Panel, cooling systems AMF panels, isolation transformers and surge suppressors KB9. The types of audio cables and various connectors KB10. Architecture of the automation software KB11. Types of compression such as PCM, WAVE, MPEG,MPEG,-2 and MPEG 3 KB12. Methods and techniques of content production KB13. Methods and techniques of video/audio content distribution KB14. How to diagnose and resolve operational issues using tools root cause analysis, process improvement techniques etc. KB15. Fundamentals of Electricity KB16. Applicable legal and regulatory norms pertaining to broadcasting KB17. Applicable health and safety guidelines
Skills (S) (Optional)	
A. Core Skills/ Generic Skills	**Writing Skills**
	The user/individual on the job needs to know and understand how to: SA1. Define the scope, objectives, goals, drivers and deliverables for the technical departments SA2. Develop the overall budget for the broadcast operations team which would cover the cost of routine maintenance (annual maintenance contracts) and new equipment purchases/upgrades SA3. Develop the design/construct of system, equipment and technology to

		optimize the flow and quality of the signal flow and the costs involved
	Reading Skills	
		The user/individual on the job needs to know and understand how to: SA4. Read and approve the standard operating procedures prepared by the broadcast operations manager SA5. Read performance reports prepared by broadcast operations managers to gauge team performance SA6. Keep updated on latest technology trends operating in the industry and their potential impact on the organisation's activities SA7. Keep apprised to improve technical and functional knowledge
	Oral Communication (Listening and Speaking skills)	
		The user/individual on the job needs to know and understand how to: SA1. Define the scope, objectives, goals, drivers and deliverables of broadcast operations activities in discussion with the management SA2. Present the broadcast operations plan to the management and solicit their approval SA3. Assign roles and responsibilities and provide clear instructions to the broadcast operations team SA4. Conduct review meetings with the team to monitor performance against goals, plans and specific milestones SA5. Coordinate with functional heads to increase awareness and understanding of other functions in the organization SA6. Engage with business to receive feedback on the broadcast operations team
B. Professional Skills	**Decision making**	
		The user/individual on the job needs to know and understand how to: SB1. Decide the broadcast operations plan, and assign responsibilities and timelines for execution of key milestones
	Problem Solving	
		The user/individual on the job needs to know and understand how to: SB2. Review performance of broadcast operations against planned activities and take corrective measures, if required, to align actual performance to plan SB3. Resolve complex issues that have been escalated by content/production teams
	Analytical Thinking	
		The user/individual on the job needs to know and understand how to: SB4. Review the activities of the broadcast operations team and suggest ways to improve performance

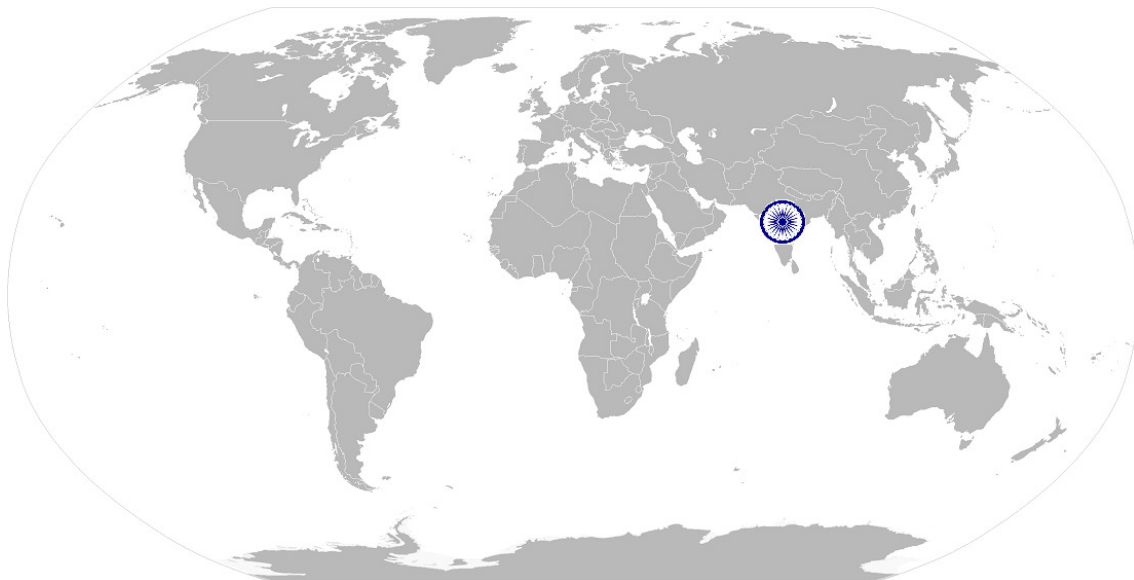## NOS Version Control

NOS Code	MES / N 0801		
Credits(NSQF)	TBD	**Version number**	1.0
Sector	Media and Entertainment	**Drafted on**	18/09/13
Sub-sector	Television, Radio	**Last reviewed on**	25/03/15
Occupation	Broadcast Operations / Technology	**Next review date**	24/03/17

National Occupational Standard


Overview

This unit is about managing broadcast facilities, equipment and systems to optimize operational efficiency

Unit Code	MES/ N 0803
Unit Title (Task)	**Manage broadcast facility, equipment and systems**
Description	This OS unit is about managing broadcast facilities, equipment and systems to optimize operational efficiency
Scope	This unit/task covers the following: • Optimise utilization of facilities and equipment • Planning upgrades/ purchases of equipment

Performance Criteria (PC) w.r.t. the Scope	
Element	**Performance Criteria**

Optimise utilization of facilities and equipment	To be competent, the user/individual on the job must be able to:
	PC1. Monitor output and performance to manage and optimise the utilisation of current equipment and facilities
	    a. Broadcast facilities would include permanent facilities such as studios, production floor, control room(s), edit suites and temporary facilities such as outside broadcast vans (OB vans)/ hired studios, event venues etc.
	    b. Broadcast equipment would include broadcast equipment (like broadcast cameras, switchers, measurement systems, compression devices, networking, editing systems etc.), Technology (including Storage (SAN server /tapes / digital archives), compression (MPEG, DVB etc.), System networking, playout technologies, automation, networking etc.) and Rf equipment (including transmission, uplinking and downlinking equipment including satellites, antennas, decoders, lease lines, towers, flyways, digital modulators etc.)

Planning upgrades/ purchases of equipment	PC2. Manage relationships with the key vendors of broadcasting equipment and maintenance contracts PC3. Recommend equipment and software vendors for purchases/upgrades sanctioned by the management PC4. Suggest improvements/additions in equipment and technology that are cost effective and are based on best practices being deployed by the industry

Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	The user/individual on the job needs to know and understand: KA1. The vision and business goals of the organisation KA2. The management of the channel/station and heads of various departments KA3. The roles and responsibilities of various departments within the organization and their interface with technology KA4. The technologies and equipment being used in the organization - OB vans, transmission equipment, audio/video mixers, audio switchers, video switchers, monitors, feeds, servers, transmission control systems, satellites, editing systems etc. KA5. The vendors of broadcasting equipment and maintenance contracts

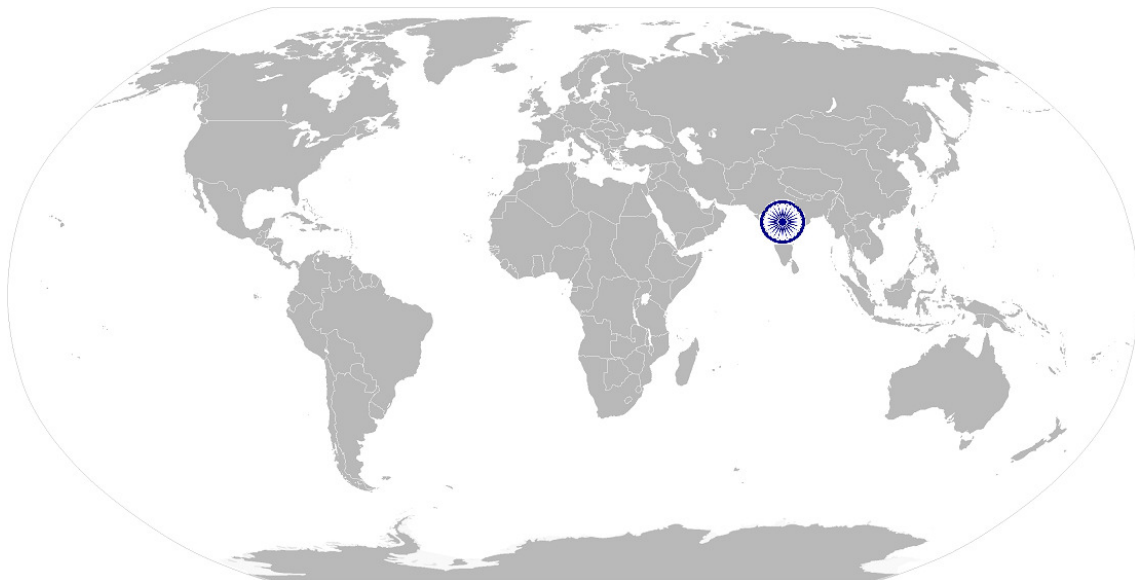| B. Technical Knowledge	The user/individual on the job needs to know and understand:
	KB1. Fundamentals of program management
	KB2. Fundamentals of broadcasting and broadcast technologies
	KB3. Fundamentals of budgeting and budget management
	KB4. Fundamentals of Information Technology
	KB5. Broadcast technologies, encryption systems and equipment across content gathering, media management, production and post-production
	KB6. How to read and interpret system specifications and drawings
	KB7. How to design the layout for equipment and technologies that would maximise output and efficiency
	KB8. How to gauge the need, advantages and disadvantages for new technologies and equipment
	KB9. The vendors for different types of broadcast equipment
	KB10. How to do a cost-benefit analysis for procuring new equipment
	KB11. How to ensure compatibility of the equipment upgrades/replacements with the existing systems and technologies
	KB12. Legal and regulatory requirements of broadcasting
	KB13. Applicable health and safety guidelines
Skills (S) (Optional)	
C. Core Skills/ Generic Skills	**Writing Skills**
	The user/individual on the job needs to know and understand how to:
	SA1. Prepare layouts for the placement of equipment and technologies
	SA2. Develop budgets for routine maintenance of broadcast equipment, servers
	SA3. Develop cost benefit analysis for equipment upgrades/purchases
	Reading Skills
	The user/individual on the job needs to know and understand how to:
	SA4. Keep updated on the latest technology trends and equipment being used in the industry and the likely impact on the organisations processes
	SA5. Read manufacturers manuals to understand the features of new equipment and technology
	SA6. Read and interpret system specifications and drawings
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to:
	SA7. Interface with several departments across the organization including content gathering, production etc. on equipment needs, readiness and support, complex issues etc.
	SA8. Liaise with equipment vendors to gather information on new products, technologies, upgrades etc.
	SA9. Liaise with the finance team to perform a cost-benefit analysis for purchase of new technology
	SA10. Present a case to the management for technology upgrades/replacements and obtain their approval
D. Professional Skills	**Decision making**
	The user/individual on the job needs to know and understand how to:
	SB1. Decide on equipment upgrades/ purchases to improve operational efficiency

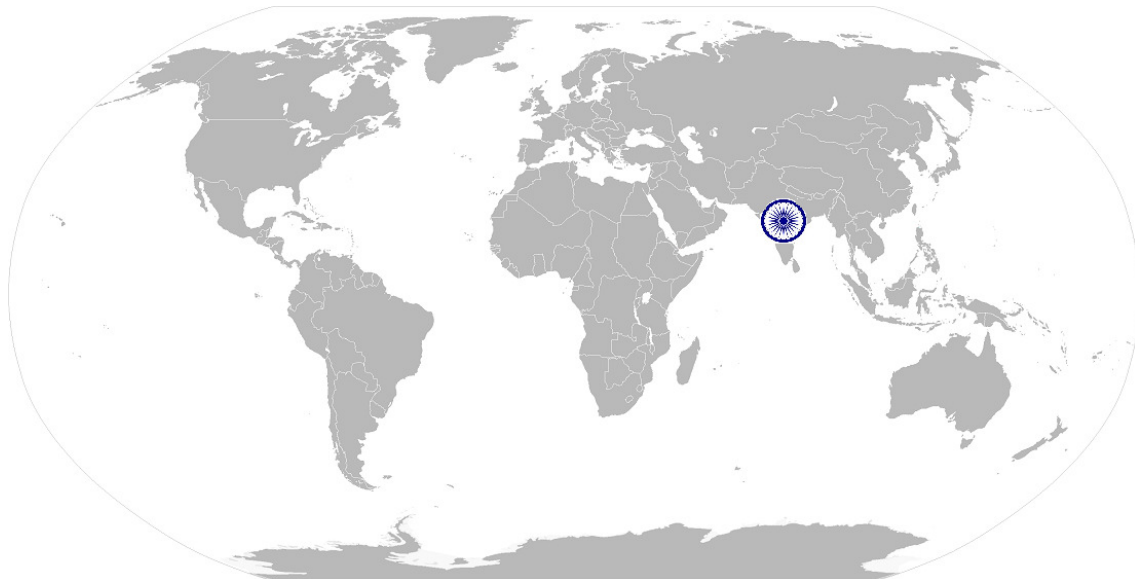|	
	Plan and Organise
	The user/individual on the job needs to know and understand how to:
	SB2. Plan the layout of equipment and technology that would optimize operational efficiency
	Analytical Thinking
	The user/individual on the job needs to know and understand how to:
	SB3. Devise techniques to improve the utilization of equipment and improve efficiency
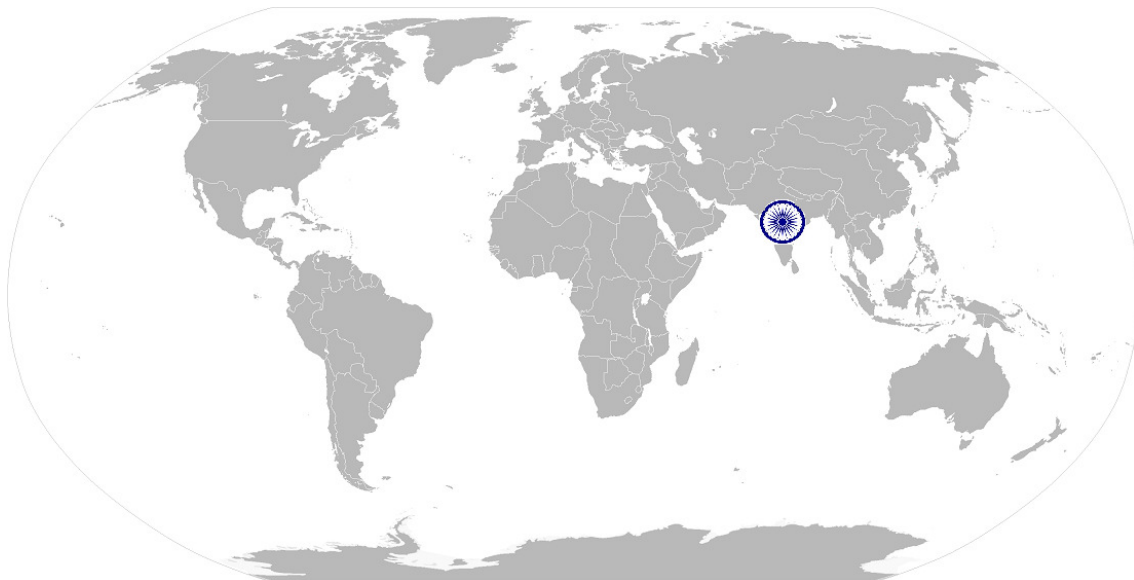
NOS Version Control

NOS Code	MES / N 0803		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	18/09/13
Sub-sector	Television, Radio	Last reviewed on	25/03/15
Occupation	Broadcast Operations / Technology	Next review date	24/03/17

National Occupational Standard

<u>Overview</u>

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

National Occupational Standard

Unit Code	MES/ N 0808
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)	
A. Organizational Context (Knowledge of the company / organization and	The user/individual on the job needs to know and understand: 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 KA4. The importance of maintaining high standards of health and safety at a

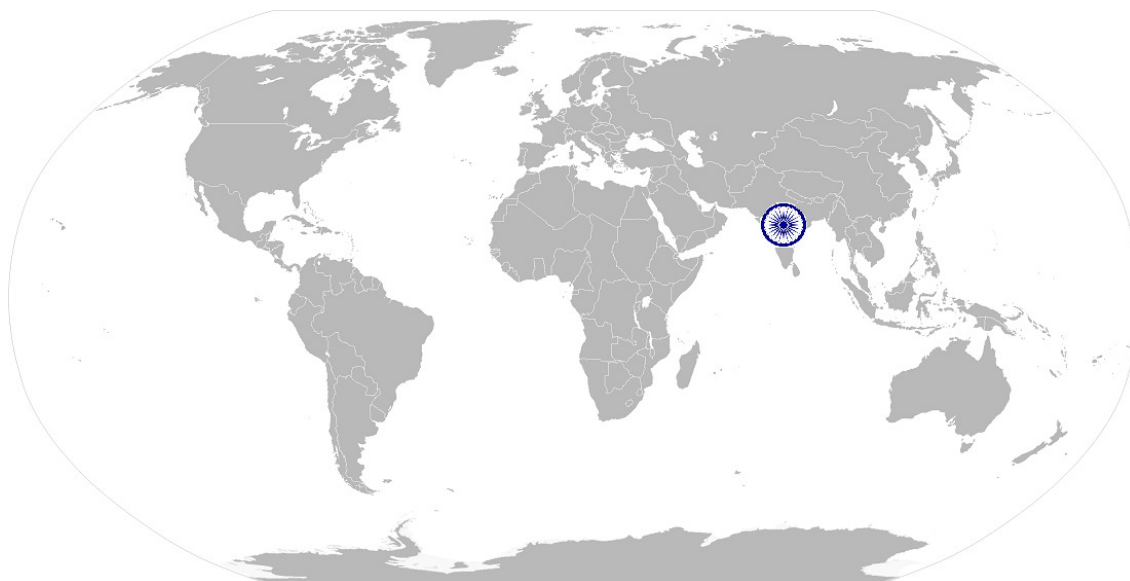| its processes)	workplace
B. Technical Knowledge	The user/individual on the job needs to know and understand: KB1. The different types of health and safety hazards in a workplace KB2. Safe working practices for own job role KB3. Evacuation procedures and other arrangements for handling risks KB4. Names 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) (Optional)	
A. 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 how to: SB2. 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: SB3. Apply problem solving approaches in different situations
	Critical Thinking
	The user/individual on the job needs to know and understand how to: SB4. Understand hazards that fall within the scope of individual authority and report all hazards that may supersede one's authority SB5. Apply balanced judgements in different situations

NOS Version Control

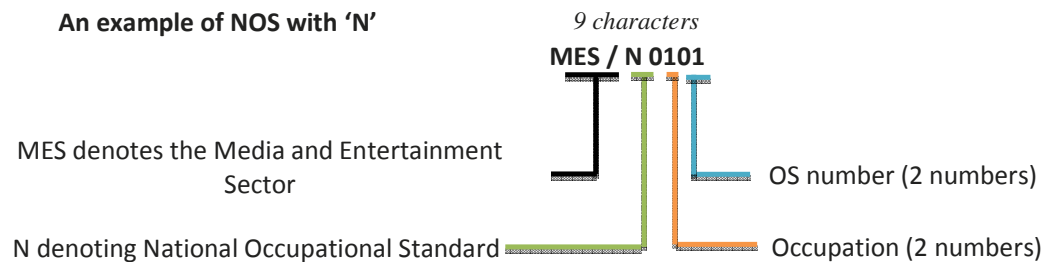| NOS Code	MES / N 0808		
Credits(NSQF)	TBD	Version number	1.0
Sector	Media and Entertainment	Drafted on	18/09/13
Sub-sector	Television	Last reviewed on	25/03/15
Occupation	Broadcast Operations / Technology	Next review date	24/03/17

Annexure

Nomenclature for QP and NOS

Qualifications Pack

9 characters
MES/ Q 0101

MES denotes the Media and Entertainment Sector

Q denoting Qualifications Pack

QP number (2 numbers)

Occupation (2 numbers)

Occupational Standard

An example of NOS with 'N'

9 characters
MES / N 0101

MES denotes the Media and Entertainment Sector

N denoting National Occupational Standard

OS number (2 numbers)

Occupation (2 numbers)

Back to top…

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

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…	…

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Next two numbers	Broadcast Operations Director	01