

## QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR MEDIA AND ENTERTAINMENT INDUSTRY

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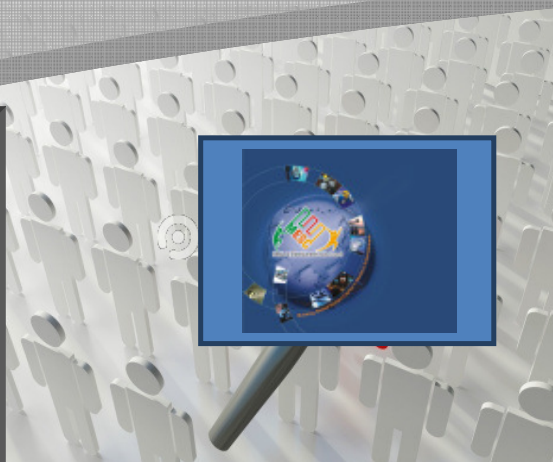
### What are Occupational Standards(OS)?

- 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 Manager

**SECTOR:** MEDIA AND ENTERTAINMENT

**SUB-SECTOR:** Television, Radio

**OCCUPATION:** Broadcast Operations/ Technology

**REFERENCE ID:** MES/ Q 0802

**ALIGNED TO:** NCO-2004/NIL

**Broadcast Operations Manager in the Media & Entertainment Industry is also known as Manager – Operations and Technology**

**Brief Job Description:** Individuals at this job are responsible for managing the broadcast operations team

**Personal Attributes:** This job requires the individual to manage, schedule and train the broadcast operations team. The individual is responsible to assign tasks and oversee activities of members within the team. The individual is responsible to plan and oversee execution of all technical aspects of shoots and other broadcast operations. The individual is the point of contact for all technical issues faced by content/production departments and is responsible to diagnose and manage the resolution of issues.

Job Details	Qualifications Pack Code	MES/ Q 0802		
	Job Role	Broadcast Operations Manager This job role is applicable in both national and international scenarios		
	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

Job Role	Broadcast Operations Manager
Role Description	Manage the activities of the broadcast operations team
NSQF level	7
Minimum Educational Qualifications	Bachelor of Engineering (B.E.)/Bachelor of Technology (B.Tech) – electronics and communication
Maximum Educational Qualifications	Masters of Engineering (M.E.)/ Masters of Technology (M.Tech)
Training (Suggested but not mandatory)	Broadcast engineering technology, Electrical and Telecommunications
Experience	4-6 years
Applicable National Occupational Standards (NOS)	<b>Compulsory:</b> <ol style="list-style-type: none"> <li><a href="#">MES / N 0802 (Oversee broadcast operations staff and activities)</a></li> <li><a href="#">MES / N 0803 (Manage broadcast facility, equipment and systems)</a></li> <li><a href="#">MES / N 0808 (Maintain workplace health and safety)</a></li> </ol> <b>Optional:</b> N.A.
Performance Criteria	As described in the relevant OS units

Definitions

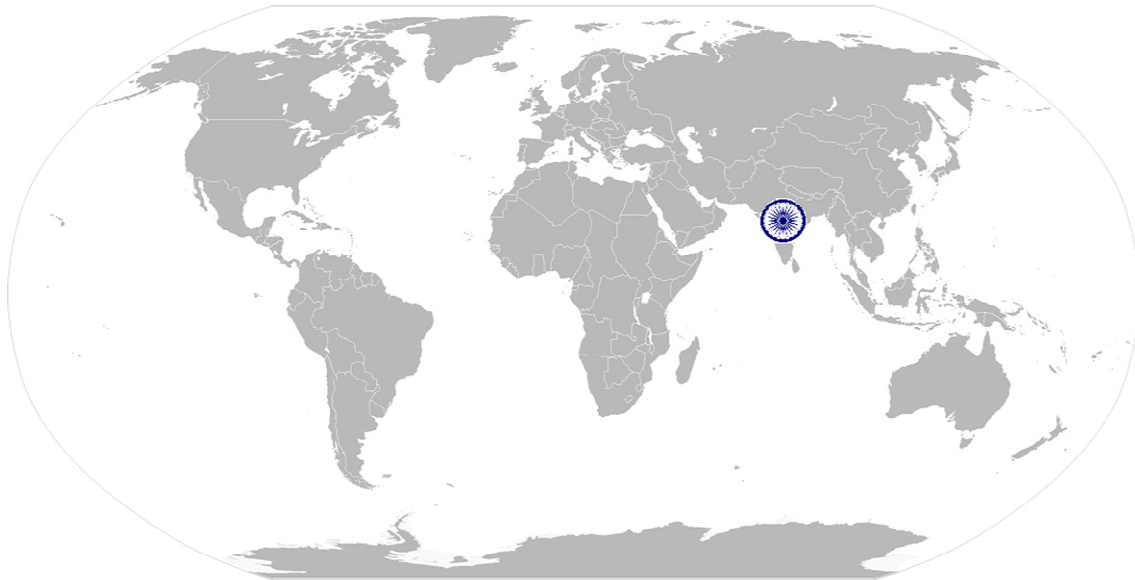
Keywords /Terms	Description
Archive	A repository where content produced is stored for further use
Ingest	Process of importing data into a digital storage system for future use
Leased Lines	A fiber connection used to connect, transfer and transmit data
Master Control Room	Central room from where broadcasting 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.

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

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# National Occupational Standard



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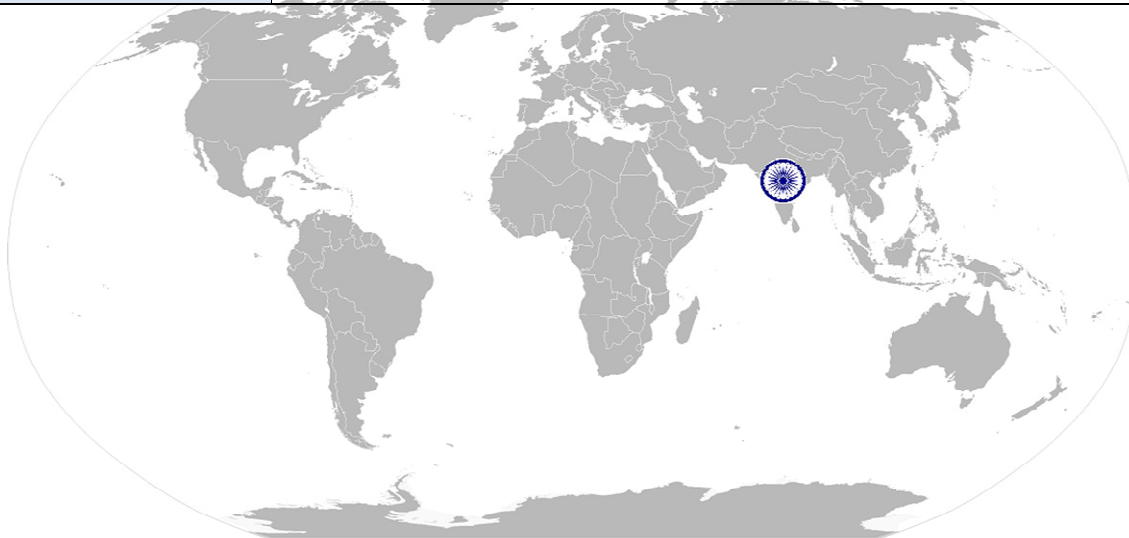
## Overview

This unit is about planning, managing and overseeing all the activities performed by the broadcast operations staff

<b>Unit Code</b>	MES/ N 0802
<b>Unit Title (Task)</b>	Oversee broadcast operations staff and activities
<b>Description</b>	This OS unit is about planning, managing and overseeing all the activities performed by the broadcast operations staff
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Planning and managing team activities and supporting head of broadcast operations</li> <li>Gathering information on operational issues and diagnosing and managing the resolution of issues</li> <li>Team scheduling (rosters, overtime etc.), training and management</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Planning and managing team activities and supporting head of broadcast operations</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Pre-plan and manage the technical aspects for each shoot, ensuring that the engineers are aware of the schedules and requirements and effectively carry out their tasks and activities</p> <p>PC2. Support the head of broadcasting in procuring uplinking rights, managing broadcasting deals, accreditations etc.</p>
<b>Gathering information on operational issues and diagnosing and managing the resolution of issues</b>	<p>PC3. Serve as a point of contact for all broadcasting issues, ensuring their resolution through the engineering team</p>
<b>Team scheduling (rosters, overtime etc.), training and management</b>	<p>PC4. Schedule the rosters of the engineering team and allocate them on specific projects/tasks</p> <p>PC5. Create standard operating procedures and technical training manuals for broadcast engineers</p> <p>PC6. Define key result areas and metrics for broadcast engineers to enable them to benchmark their performance</p>
<b>Knowledge and Understanding (K)</b>	
<b>A. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. The broadcast equipment being used by the organization and by its competition</p> <p>KA2. Broadcasting operations and technology</p> <p>KA3. The current content gathering and production processes and techniques being followed in the organization</p> <p>KA4. The production facilities available with the organization such as master control room, studios, server rooms, production control room etc. and activities carried out within them</p> <p>KA5. The roles, responsibilities and activities of all the key departments within the organization using broadcast equipment</p>

<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"><li>KB1. Programming and broadcast workflows, equipment and technologies</li><li>KB2. The fundamentals of personnel management</li><li>KB3. The fundamentals of project management</li><li>KB4. Applicable problem-solving techniques and methods</li><li>KB5. Broadcast equipment details, specifications, vendor contacts, upgrades available etc.</li><li>KB6. The standard specifications for signals and audio/video output</li><li>KB7. How to carry out an independent assessment of signal quality and output of broadcast systems using relative grading, meters, waveform monitoring, test signals etc.</li><li>KB8. The techniques for discovering issues such as comparison of meter readings with standard operating specifications, comparison of current performance with past performance etc.</li><li>KB9. How to come up with the most relevant and realistic solutions to troubleshoot and resolve engineering issues</li><li>KB10. Relevant industry standards being followed in the broadcasting industry by domestic and international peers/competition</li><li>KB11. Legal and regulatory requirements for the broadcasting industry</li><li>KB12. Applicable health and safety guidelines</li></ul>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"><li>SA1. Prepare team rosters and plan overtime</li><li>SA2. Collate information and prepare periodic reports on technical, maintenance and operational routine/emergency activities</li><li>SA3. Prepare standard operating procedures and training manuals for engineering staff to follow</li><li>SA4. Prepare all required documentation and status reports</li></ul>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"><li>SA5. Research current technologies and trends</li><li>SA6. Research manufacturers ideal/standard specifications with regard to equipment to benchmark current performance against</li><li>SA7. Read and review all technical, maintenance and operational logs</li></ul>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"><li>SA8. Liaise with the content gathering and production teams across the organization to gather their broadcasting requirements</li><li>SA9. Serve as a point of contact for all equipment issues</li><li>SA10. Communicate technical information to audiences in a non-technical and easy to comprehend manner</li><li>SA11. Communicate solutions to engineering staff and assign tasks and responsibilities to have them executed</li></ul>

B. Professional Skills	Plan and Organise
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Prepare rosters for the engineering staff and assign tasks and activities</p> <p>SB2. Plan out specific activities (in relation to resolving engineering issues) to help/guide staff members</p>
	<b>Problem Solving</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. Interpret the correct nature of issues and evaluate realistic solutions to resolve operational issues</p> <p>SB4. Devise innovative and effective engineering solutions to resolve issues</p>
	<b>Analytical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB5. Use observation skills and own judgment to proactively identify operational issues</p> <p>SB6. Diagnose symptoms of the issues that occur, and institute measures to ensure early identification and resolution in the future</p>

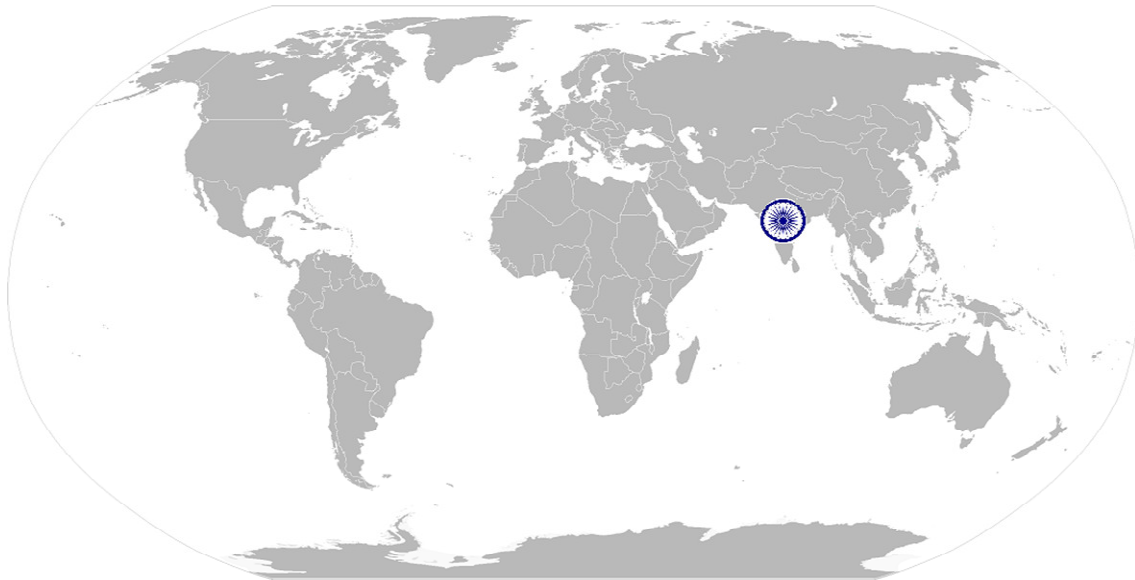


MES/ N 0802

Oversee broadcast operations staff and activities

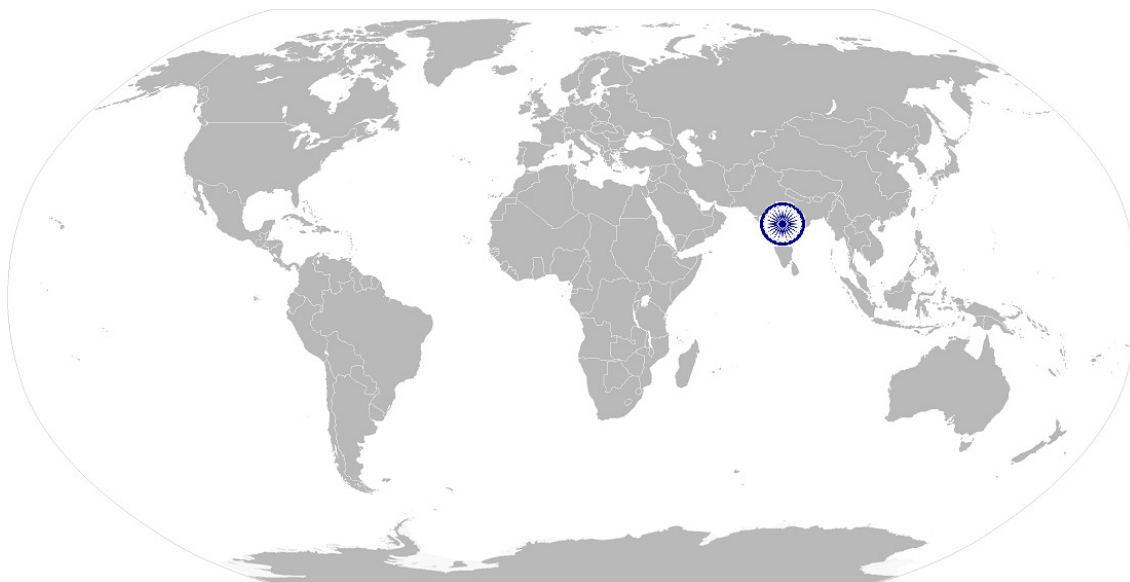
## NOS Version Control

NOS Code	MES / N 0802		
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



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# National Occupational Standard



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## Overview

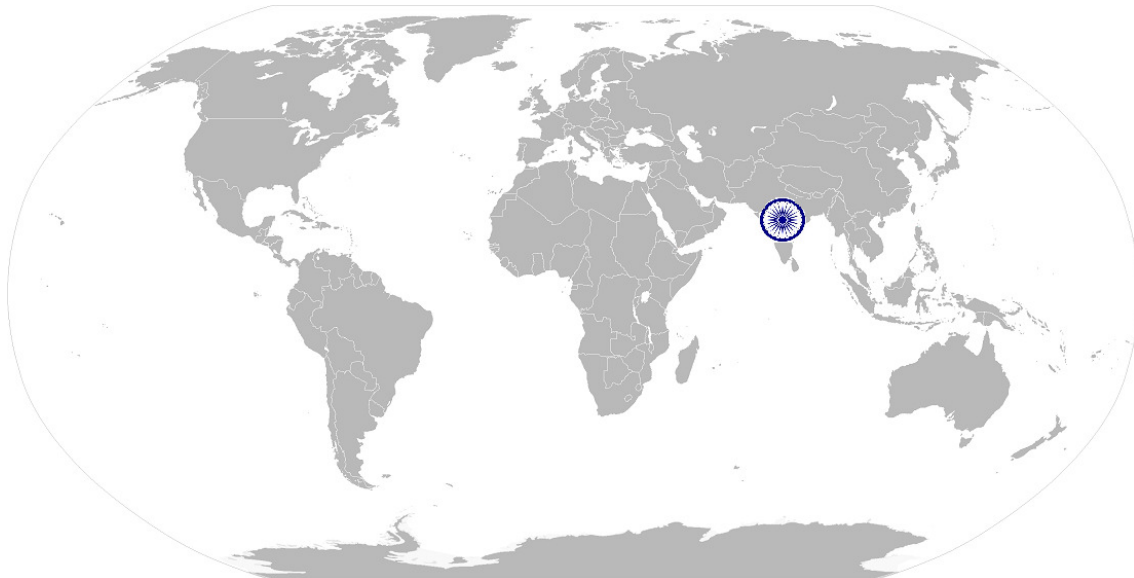
**This unit is about managing broadcast facilities, equipment and systems to optimize operational efficiency**

<b>Unit Code</b>	<b>MES/ N 0803</b>
<b>Unit Title (Task)</b>	<b>Manage broadcast facility, equipment and systems</b>
<b>Description</b>	This OS unit is about managing broadcast facilities, equipment and systems to optimize operational efficiency
<b>Scope</b>	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Optimise utilization of facilities and equipment</li> <li>Planning upgrades/ purchases of equipment</li> </ul>
<b>Performance Criteria (PC) w.r.t. the Scope</b>	
<b>Element</b>	<b>Performance Criteria</b>
<b>Optimise utilization of facilities and equipment</b>	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Monitor output and performance to manage and optimise the utilisation of current equipment and facilities</p> <ol style="list-style-type: none"> <li>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.</li> <li>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.)</li> </ol>
<b>Planning upgrades/ purchases of equipment</b>	<p>PC2. Manage relationships with the key vendors of broadcasting equipment and maintenance contracts</p> <p>PC3. Recommend equipment and software vendors for purchases/upgrades sanctioned by the management</p> <p>PC4. Suggest improvements/additions in equipment and technology that are cost effective and are based on best practices being deployed by the industry</p>
<b>Knowledge and Understanding (K)</b>	
<b>B. Organizational Context</b> (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. The vision and business goals of the organisation</p> <p>KA2. The management of the channel/station and heads of various departments</p> <p>KA3. The roles and responsibilities of various departments within the organization and their interface with technology</p> <p>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.</p> <p>KA5. The vendors of broadcasting equipment and maintenance contracts</p>

<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <ul style="list-style-type: none"> <li>KB1. Fundamentals of program management</li> <li>KB2. Fundamentals of broadcasting and broadcast technologies</li> <li>KB3. Fundamentals of budgeting and budget management</li> <li>KB4. Fundamentals of Information Technology</li> <li>KB5. Broadcast technologies, encryption systems and equipment across content gathering, media management, production and post-production</li> <li>KB6. How to read and interpret system specifications and drawings</li> <li>KB7. How to design the layout for equipment and technologies that would maximise output and efficiency</li> <li>KB8. How to gauge the need, advantages and disadvantages for new technologies and equipment</li> <li>KB9. The vendors for different types of broadcast equipment</li> <li>KB10. How to do a cost-benefit analysis for procuring new equipment</li> <li>KB11. How to ensure compatibility of the equipment upgrades/replacements with the existing systems and technologies</li> <li>KB12. Legal and regulatory requirements of broadcasting</li> <li>KB13. Applicable health and safety guidelines</li> </ul>
<b>Skills (S) (Optional)</b>	
<b>C. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA1. Prepare layouts for the placement of equipment and technologies</li> <li>SA2. Develop budgets for routine maintenance of broadcast equipment, servers</li> <li>SA3. Develop cost benefit analysis for equipment upgrades/purchases</li> </ul>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA4. Keep updated on the latest technology trends and equipment being used in the industry and the likely impact on the organisations processes</li> <li>SA5. Read manufacturers manuals to understand the features of new equipment and technology</li> <li>SA6. Read and interpret system specifications and drawings</li> </ul>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SA7. Interface with several departments across the organization including content gathering, production etc. on equipment needs, readiness and support, complex issues etc.</li> <li>SA8. Liaise with equipment vendors to gather information on new products, technologies, upgrades etc.</li> <li>SA9. Liaise with the finance team to perform a cost-benefit analysis for purchase of new technology</li> <li>SA10. Present a case to the management for technology upgrades/replacements and obtain their approval</li> </ul>
<b>D. Professional Skills</b>	<p><b>Decision making</b></p> <p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> <li>SB1. Decide on equipment upgrades/ purchases to improve operational efficiency</li> </ul>

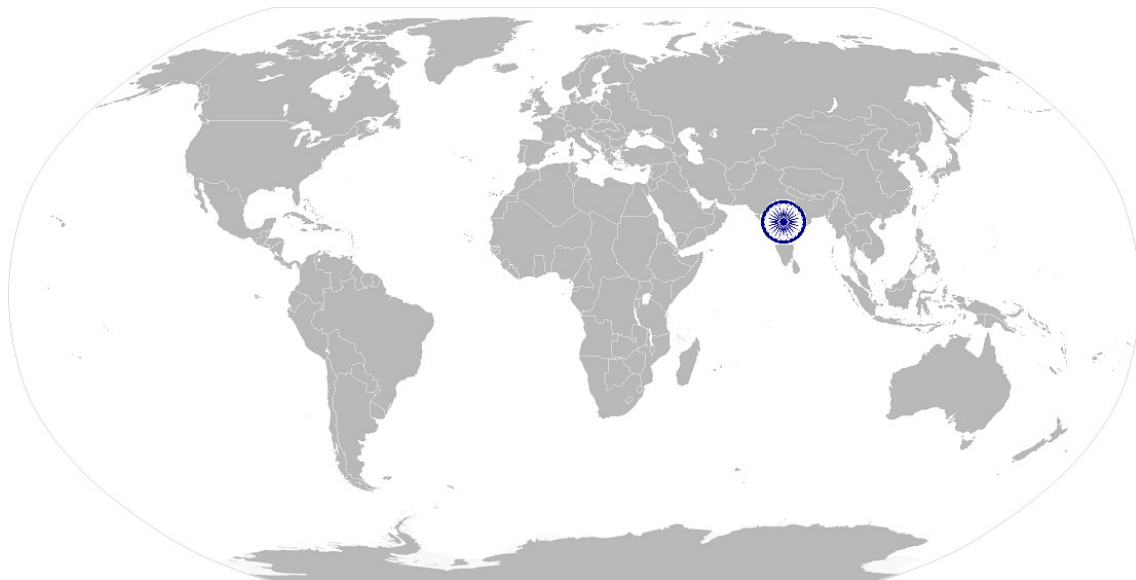
**Manage broadcast facility, equipment and systems**

	<b>Plan and Organise</b>
	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
	<b>Analytical Thinking</b>
	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



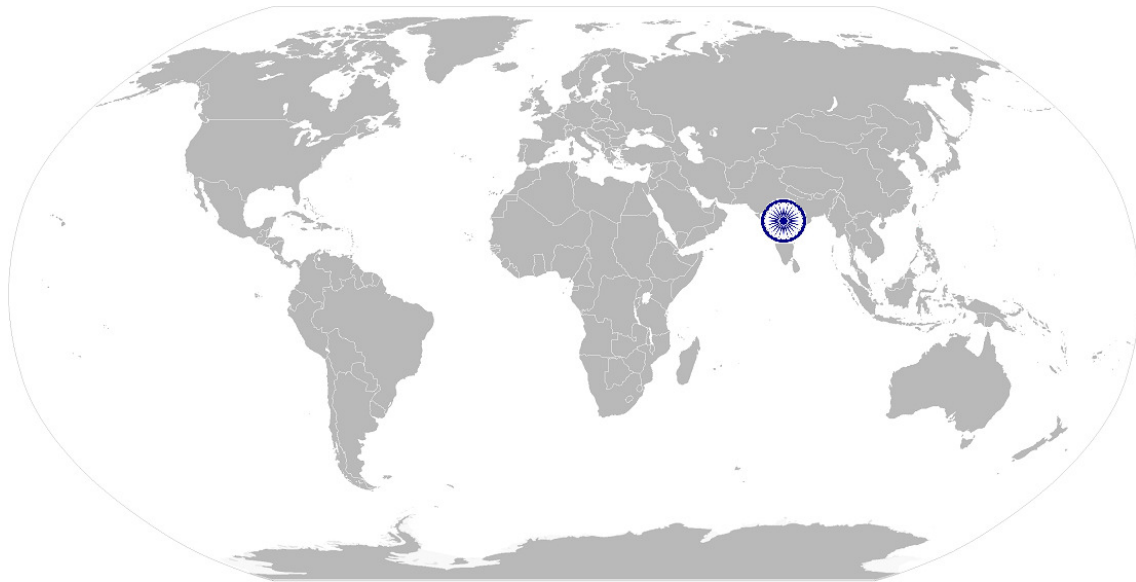
## NOS Version Control

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



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# National Occupational Standard



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## Overview

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

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	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> <li>Understanding the health, safety and security risks prevalent in the workplace</li> <li>Knowing the people responsible for health and safety and the resources available</li> <li>Identifying and reporting risks</li> <li>Complying with procedures in the event of an emergency</li> </ul>
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Understanding the risks prevalent in the workplace	<p>To be competent, the user/individual on the job must be able to:</p> <p>PC1. Understand and comply with the organisation's current health, safety and security policies and procedures</p> <p>PC2. Understand the safe working practices pertaining to own occupation</p> <p>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</p> <p>PC4. Participate in organization health and safety knowledge sessions and drills</p>
Knowing the people responsible for health and safety and the resources available	<p>PC5. Identify the people responsible for health and safety in the workplace, including those to contact in case of an emergency</p> <p>PC6. Identify security signals e.g. fire alarms and places such as staircases, fire warden stations, first aid and medical rooms</p>
Identifying and reporting risks	<p>PC7. Identify aspects of your workplace that could cause potential risk to own and others health and safety</p> <p>PC8. Ensure own personal health and safety, and that of others in the workplace through precautionary measures</p> <p>PC9. Identify and recommend opportunities for improving health, safety, and security to the designated person</p> <p>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</p>
Complying with procedures in the event of an emergency	<p>PC11. Follow organisation's emergency procedures for accidents, fires or any other natural calamity in case of a hazard</p> <p>PC12. Identify and correct risks like illness, accidents, fires or any other natural calamity safely and within the limits of individual's authority</p>
Knowledge and Understanding (K)	
<b>A. Organizational Context</b> (Knowledge of the company / organization and	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. Organisation's norms and policies relating to health and safety</p> <p>KA2. Government norms and policies regarding health and safety and related emergency procedures</p> <p>KA3. Limits of authority while dealing with risks/ hazards</p> <p>KA4. The importance of maintaining high standards of health and safety at a</p>

its processes)	workplace
<b>B. Technical Knowledge</b>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. The different types of health and safety hazards in a workplace</p> <p>KB2. Safe working practices for own job role</p> <p>KB3. Evacuation procedures and other arrangements for handling risks</p> <p>KB4. Names and contact numbers of people responsible for health and safety in a workplace</p> <p>KB5. How to summon medical assistance and the emergency services, where necessary</p> <p>KB6. Vendors' or manufacturers' instructions for maintaining health and safety while using equipments, systems and/or machines</p>
<b>Skills (S) (Optional)</b>	
<b>A. Core Skills/ Generic Skills</b>	<b>Writing Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA1. How to write and provide feedback regarding health and safety to the concerned people</p> <p>SA2. How to write and highlight potential risks or report a hazard to the concerned people</p>
	<b>Reading Skills</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA3. Read instructions, policies, procedures and norms relating to health and safety</p>
	<b>Oral Communication (Listening and Speaking skills)</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA4. Highlight potential risks and report hazards to the designated people</p> <p>SA5. Listen and communicate information with all anyone concerned or affected</p>
<b>B. Professional Skills</b>	<b>Decision making</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. Make decisions on a suitable course of action or plan</p>
	<b>Plan and Organize</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB2. Plan and organize people and resources to deal with risks/ hazards that lie within the scope of one's individual authority</p>
	<b>Problem Solving</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB3. Apply problem solving approaches in different situations</p>
	<b>Critical Thinking</b>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB4. Understand hazards that fall within the scope of individual authority and report all hazards that may supersede one's authority</p> <p>SB5. Apply balanced judgements in different situations</p>



MES/ N 0808

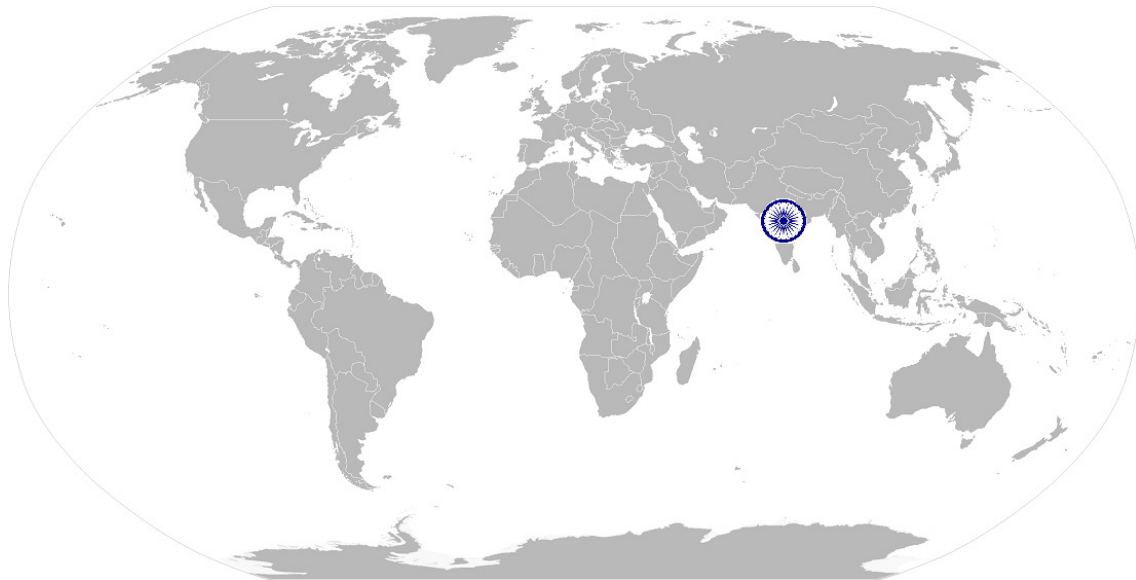
## **NOS Version Control**

NOS  
National Occupational Standards



Maintain workplace health and safety

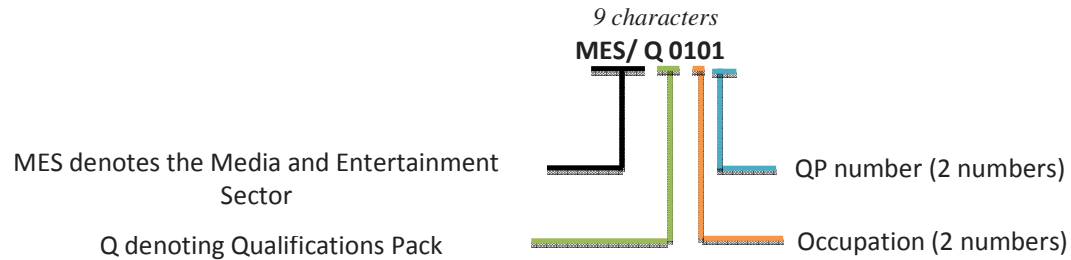
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Sector	Media and Entertainment	Drafted on	18/09/13
Sub-sector	Television	Last reviewed on	25/03/15
Occupation	Broadcast Operations / Technology	Next review date	24/03/17



## Annexure

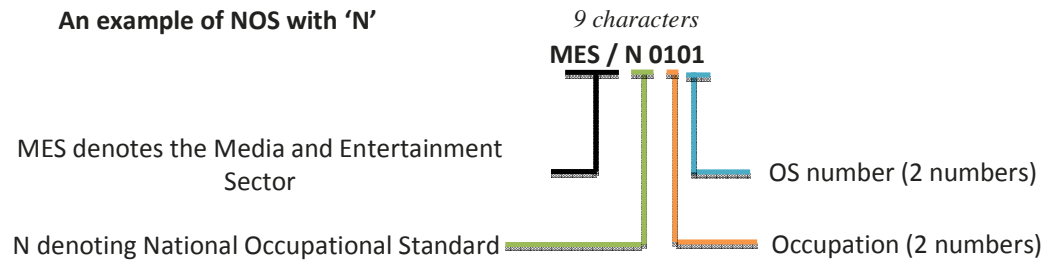
### Nomenclature for QP and NOS

#### Qualifications Pack



#### 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 QP or NOS	Q
Next two numbers	Broadcast Operations/ Technology	08
Next two numbers	Broadcast Operations Manager	02