QUALIFICATIONS PACK – NATIONAL OCCUPATIONAL STANDARDS FOR IT-BPM INDUSTRY

IT - ITeS SSC NASSCOM

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT & ENTREPRENEURSHIP

N·S·D·C National Skill Development Corporation
Transforming the skill landscape

Contents

What are National Occupational Standards (NOS)?

➢ NOS describe what individuals need to do, know and understand in order to carry out a particular job role or function

➢ NOS 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-Web Developer

SECTOR: IT-ITeS

SUB-SECTOR: IT Services

OCCUPATION: Application Development

REFERENCE ID: SSC/Q0503

ALIGNED TO: NCO-2015/ 2513.0101

Web Developer in the IT-ITeS Industry is also known as a Web Designer.

Brief Job Description: Individuals at this job are responsible for designing and maintaining web-based applications that include static and dynamic content. This includes the design, layout and coding of a website. They may work standalone or along with application/functional developers as part of the overall solution that includes a web based component.

Personal Attributes: This job may require the individual to work independently or in teams. The individual should be result oriented. The individual should also be able to demonstrate skills for communication, creative and logical thinking.

Qualifications Pack Code	**SSC/Q0503**
Job Role	**Web Developer** **This job role is applicable in both national and international scenarios**

Credits (NSQF)	TBD	**Version number**	1.0
Sector	IT-ITeS	**Drafted on**	30/04/2013
Sub-sector	IT Services	**Last reviewed on**	31/01/2015
Occupation	Application Development	**Next review date**	31/03/2016
NSQC Clearance on	19/05/2015		

Job Details

Job Role	Web Developer (Web Designer)
Role Description	Individuals at this job are responsible for designing and maintaining web-based applications that include static and dynamic content. This includes the design, layout and coding of a website.
NSQF level **Minimum Educational Qualifications** **Maximum Educational Qualifications**	5 Graduate degree/ diploma in web design/ media design or any other related field Masters Degree in Media Design
Training (Suggested but not mandatory)	Relevant animation and graphics courses/ certifications/ trainings
Minimum Job Entry Age	18 years
Experience	0-2 years of work experience/internship in web designing/ development
Applicable National Occupational Standards (NOS)	**Compulsory:** 1. SSC/N0501 (Contribute to the design of software products and applications) 2. SSC/N0503 (Develop media content and graphic designs for software products and applications) 3. SSC/N9001 (Manage your work to meet requirements) 4. SSC/N9002 (Work effectively with colleagues) 5. SSC/N9003 (Maintain a healthy, safe and secure working environment) 6. SSC/N9004 (Provide data/information in standard formats) 7. SSC/N9005 (Develop your knowledge, skills and competence) **Optional:** Not Applicable
Performance Criteria	As described in the relevant NOS units

Glossary of Key Terms

| Keywords /Terms	Description
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 OS unit, which can be denoted with either an '**O**' or 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.

Definitions

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.
Helpdesk	Helpdesk is an entity to which the customers will report their IT problems. IT Service Helpdesk Attendant is responsible for managing the helpdesk.

Acronyms

Keywords /Terms	Description
IT-ITeS	Information Technology - Information Technology enabled Services
BPM	Business Process Management
BPO	Business Process Outsourcing
KPO	Knowledge Process Outsourcing
LPO	Legal Process Outsourcing
IPO	Information Process Outsourcing
BCA	Bachelor of Computer Applications
B.Sc.	Bachelor of Science
OS	Occupational Standard(s)
NOS	National Occupational Standard(s)
QP	Qualifications Pack
UGC	University Grants Commission
MHRD	Ministry of Human Resource Development
MoLE	Ministry of Labour and Employment
NVEQF	National Vocational Education Qualifications Framework
NVQF	National Vocational Qualifications Framework
NSQF	National Skill Qualification Framework

National Occupational Standard
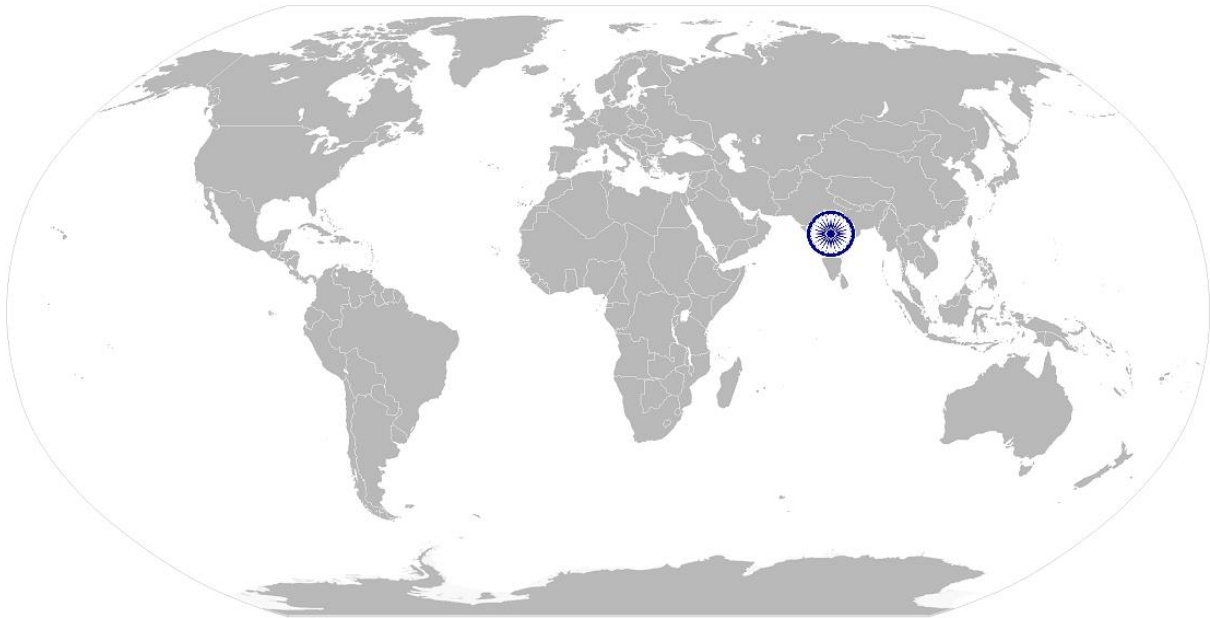
Overview

This unit is about contributing to the design of software products and applications where both the business impact and technical complexity are low.

SSC/N0501   Contribute to the design of software products and applications

Unit Code	SSC/N0501
Unit Title (Task)	Contribute to the design of software products and applications
Description	This unit is about contributing to the design of software products and applications where both the business impact and technical complexity are low.
Scope	This unit/task covers the following: **Appropriate people**: • line manager • peers • subject matter experts **Software Requirements Specification** includes: • functional requirements • non-functional requirements **High Level Design** includes: • technical solution selected and its rationale • assumptions • constraints • dependencies • interfaces **Requirements** where: • business impact is low • technical complexity is low
Performance Criteria (PC) w.r.t. the Scope	
	To be competent, you must be able to: PC1. check your understanding of the Business Requirements Specification (BRS)/User Requirements Specification (URS) with **appropriate people** PC2. check your understanding of the **Software Requirements Specification** (SRS) with **appropriate people** PC3. check your understanding of **High Level Design** (HLD) with **appropriate people** PC4. design basic programming structures to implement functionality in line with **requirements** defined in BRS/URS, SRS and HLD PC5. review your designs with **appropriate people** PC6. analyze inputs from **appropriate people** to identify, resolve and record design defects and inform future designs PC7. document your designs using standard templates and tools PC8. comply with your organization's policies, procedures and guidelines when contributing to the design of software products and applications

Applicable NOS Unit

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SSC/N0501   **Contribute to the design of software products and applications**

| Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. your organization's policies, procedures and guidelines for designing software products and applications and your role and responsibilities in relation to this KA2. your organization's knowledge base and how to access and update this KA3. the scope of work to be carried out and the importance of keeping within these boundaries KA4. who you may need to involve to provide feedback to your designs KA5. the importance of collating feedback on your designs KA6. how to analyze and use feedback to improve your designs KA7. who you may need to involve to provide feedback on your designs KA8. standard templates and tools available and how to use these to document your designs KA9. the approval process for designs of software products and applications
B. Technical Knowledge	You need to know and understand: KB1. how to interpret and follow different design specifications, including: • Business Requirements Specification (BRS) • User Requirements Specification (URS) • Software Requirements Specification (SRS) • High Level Design (HLD) KB2. how to design basic program structures KB3. how to design software products KB4. how to design software applications KB5. different sources of information for help to design software products and specifications KB6. the range of equipment used to design software products and applications KB7. common design defects and how to resolve these KB8. current practice in the infrastructure design of software products and applications KB9. the range of activities involved in designing different software products and applications KB10. how to test new products and applications are fit for purpose KB11. implications new products and applications may have on business processes and business infrastructure
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	You need to know and understand how to: SA1. communicate with colleagues in writing

	Reading Skills	
	You need to know and understand how to:	
	SA2. read instructions, guidelines, procedures, rules and service level agreements	
	Oral Communication (Listening and Speaking skills)	
	You need to know and understand how to:	
	SA3. listen effectively and orally communicate information	
B. Professional Skills	**Decision Making**	
	You need to know and understand how to:	
	SB1. make a decision on a suitable course of action	
	Plan and Organize	
	You need to know and understand how to:	
	SB2. plan and organize your work to achieve targets and deadlines	
	Customer Centricity	
	You need to know and understand how to:	
	SB3. check that your own work meets customer requirements	
	SB4. meet and exceed customer expectations	
	Problem Solving	
	You need to know and understand how to:	
	SB5. apply problem-solving approaches in different situations	
	Analytical Thinking	
	You need to know and understand how to:	
	SB6. configure data and disseminate relevant information to others	
	SB7. analyze data and activities	
	Critical Thinking	
	You need to know and understand how to:	
	SB8. apply balanced judgments to different situations	
	Attention to Detail	
	You need to know and understand how to:	
	SB9. check your work is complete and free from errors	
	SB10. get your work checked by peers	
	Team Working	
	You need to know and understand how to:	
	SB11. work effectively in a team environment	
C. Technical Skills	You need to know and understand how to:	
	SC1. use information technology effectively to input and/or extract data accurately	
	SC2. agree objectives and work requirements	
	SC3. keep up to date with changes, procedures and practices in your role	

SSC/N0501   **Contribute to the design of software products and applications**
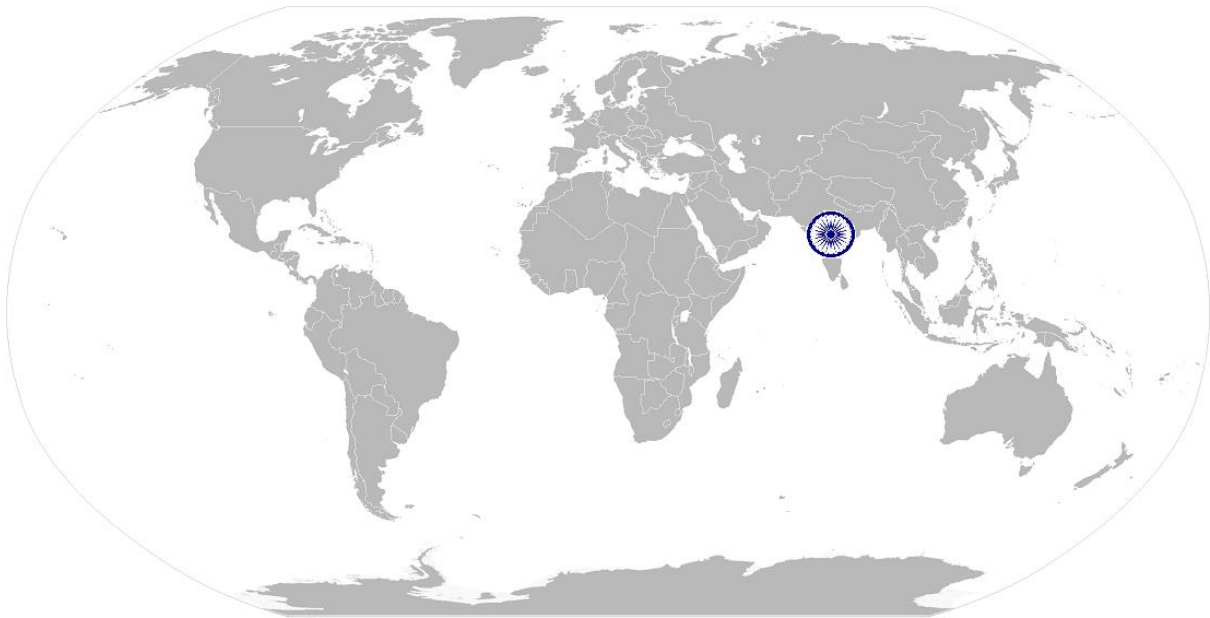
NOS Version Control

NOS Code		SSC/N0501	
Credits (NSQF)	TBD	**Version number**	1.0
Industry	IT-ITeS	**Drafted on**	30/04/2013
Industry Sub-sector	IT Services	**Last reviewed on**	31/01/2015
		Next review date	31/03/2016
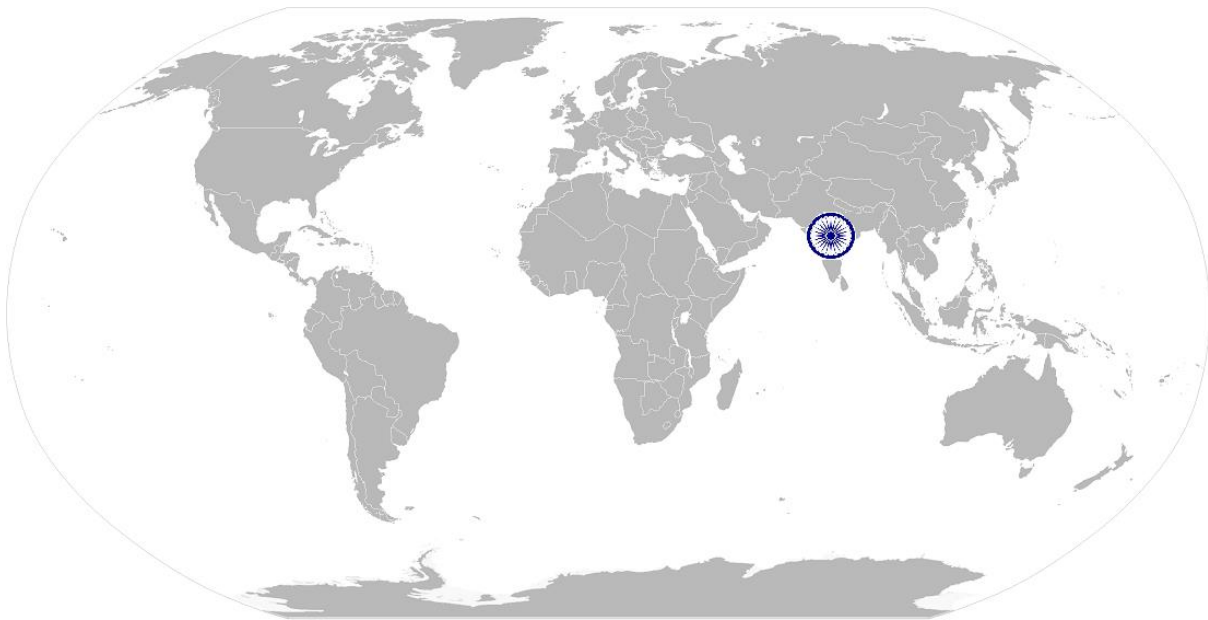
National Occupational Standard

This unit is about developing media content and producing graphic designs to enhance to usability of software products and applications where their business impact and technical complexity is low.

SSC/N0503   Develop media content and graphic designs for software products and applications

<table>
<tr><td rowspan="7" style="vertical-align:top">Applicable NOS Unit</td><td>Unit Code</td><td>SSC/N0503</td></tr>
<tr><td>Unit Title
(Task)</td><td>Develop media content and graphic designs for software products and applications</td></tr>
<tr><td>Description</td><td>This unit is about developing media content and producing graphic designs to enhance to usability of software products and applications where their business impact and technical complexity is low.</td></tr>
<tr><td>Scope</td><td>This unit/task covers the following:

Appropriate people:
- line manager
- peers
- subject matter experts

Software Requirements Specification includes:
- functional requirements
- non-functional requirements

High Level Design includes:
- technical solution selected and its rationale
- assumptions
- constraints
- dependencies
- interfaces

Low Level Design includes:
- programming structures
- media design standards
- graphic design standards
- checklists

Requirements where:
- business impact is low
- technical complexity is low</td></tr>
<tr><td colspan="2" style="background:#1F3864;color:white">Performance Criteria (PC) w.r.t. the Scope</td></tr>
<tr><td></td><td>To be competent, you must be able to:

PC1.   check your understanding of the Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low Level Design (LLD) with appropriate people

PC2.   access reusable components, media and graphical packages and tools from your organization's knowledge base

PC3.   convert requirements into media content and graphic designs, leveraging reusable components where available</td></tr>
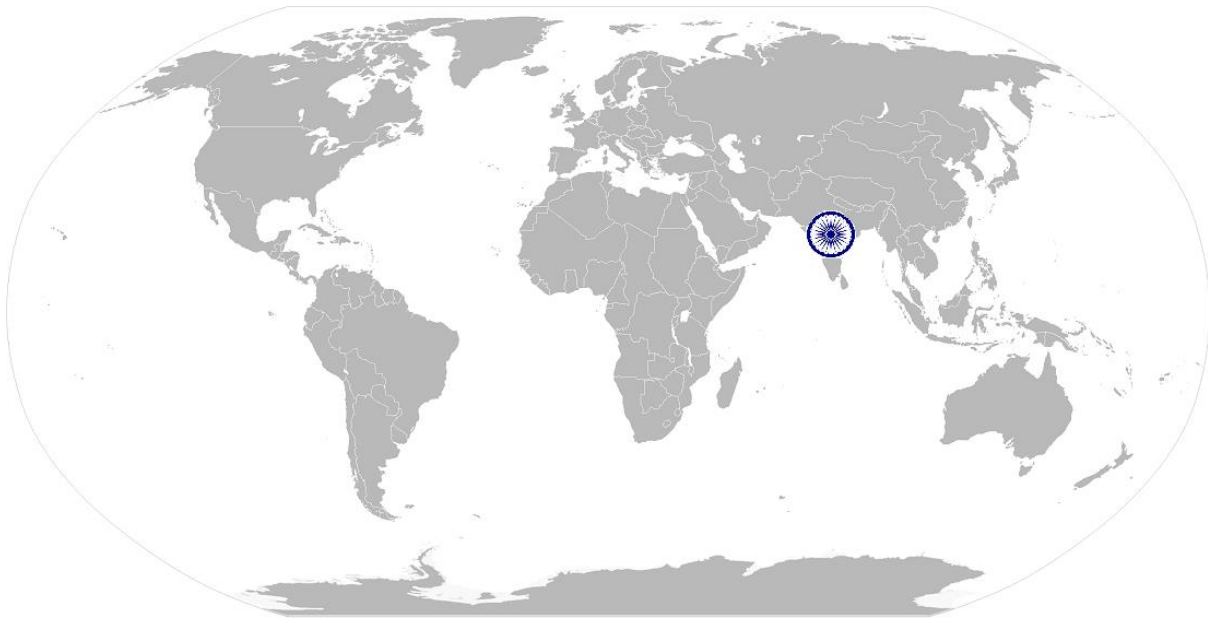</table>

	PC4. review media content and graphic designs with **appropriate people** and analyze their feedback
	PC5. record any defects and corrective actions taken to inform future work
	PC6. rework media content and graphic designs, incorporating feedback
	PC7. submit media content timely and graphic designs for approval by **appropriate people**
	PC8. update your organization's knowledge base with your experiences of the media content and graphic designs developed
	PC9. comply with your organization's policies, procedures and guidelines when developing media content and graphic designs for software products and applications
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand:
	KA1. your organization's policies, procedures and guidelines for developing media content and graphic designs for software products and applications, and your role and responsibilities in relation to this
	KA2. the scope of work to be carried out and the importance of keeping within these boundaries
	KA3. your organization's knowledge base and how to access and update this
	KA4. standard templates and tools available and how to use these to document your media content and graphic designs
	KA5. the importance of collating feedback on your media content and graphic designs
	KA6. how to analyze and use feedback to improve your media content and graphic designs
	KA7. who you may need to involve to provide feedback on your media content and graphic designs
	KA8. how recording corrective actions for problems and defects can improve future designs
	KA9. who needs to approve media content and graphic designs
	KA10. different sources of information for help to develop media content and graphic designs

B. Technical Knowledge	You need to know and understand:
	 KB1. how to interpret and follow different design specifications, including:
	  • Business Requirements Specification (BRS)
	  • User Requirements Specification (URS)
	  • Software Requirements Specification (SRS)
	  • High Level Design (HLD)

National Occupational Standards

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SSC/N0503   Develop media content and graphic designs for software products and applications

	KB2. the process for converting design specifications into media content and graphic designs
	KB3. current practice in developing media content and graphic designs
	KB4. how to develop media content and graphic designs
	KB5. how to determine whether components are suitable for re-use
	KB6. the different types of problems that may occur and how these may be resolved
	KB7. how to test media content and graphic designs are fit for purpose
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	You need to know and understand how to: SA1. communicate with colleagues in writing
	Reading Skills
	You need to know and understand how to: SA2. read instructions, guidelines, procedures, rules and service level agreements
	Oral Communication (Listening and Speaking skills)
	You need to know and understand how to: SA3. listen effectively and orally communicate information
B. Professional Skills	**Decision Making**
	You need to know and understand how to: SB1. make a decision on a suitable course of action
	Plan and Organize
	You need to know and understand how to: SB2. plan and organize your work to achieve targets and deadlines
	Customer Centricity
	You need to know and understand how to: SB3. check that your own work meets customer requirements SB4. meet and exceed customer expectations
	Problem Solving
	You need to know and understand how to: SB5. apply problem-solving approaches in different situations
	Analytical Thinking
	You need to know and understand how to: SB6. configure data and disseminate relevant information to others SB7. analyze data and activities
	Critical Thinking
	You need to know and understand how to: SB8. apply balanced judgments to different situations

SSC/N0503   Develop media content and graphic designs for software products and applications

	Attention to Detail	
	You need to know and understand how to:	
	SB9. check your work is complete and free from errors	
	SB10. get your work checked by peers	
	Team Working	
	You need to know and understand how to:	
	SB11. work effectively in a team environment	
C. Technical Skills	You need to know and understand how to:	
	SC1. use information technology effectively to input and/or extract data accurately	
	SC2. agree objectives and work requirements	
	SC3. keep up to date with changes, procedures and practices in your role	

NOS
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SSC/N0503 **Develop media content and graphic designs for software products and applications**

NOS Version Control

NOS Code	SSC/N0503		
Credits (NSQF)	TBD	**Version number**	1.0
Industry	IT-ITeS	**Drafted on**	30/04/2013
Industry Sub-sector	IT Services	**Last reviewed on**	31/01/2015
		Next review date	31/03/2016
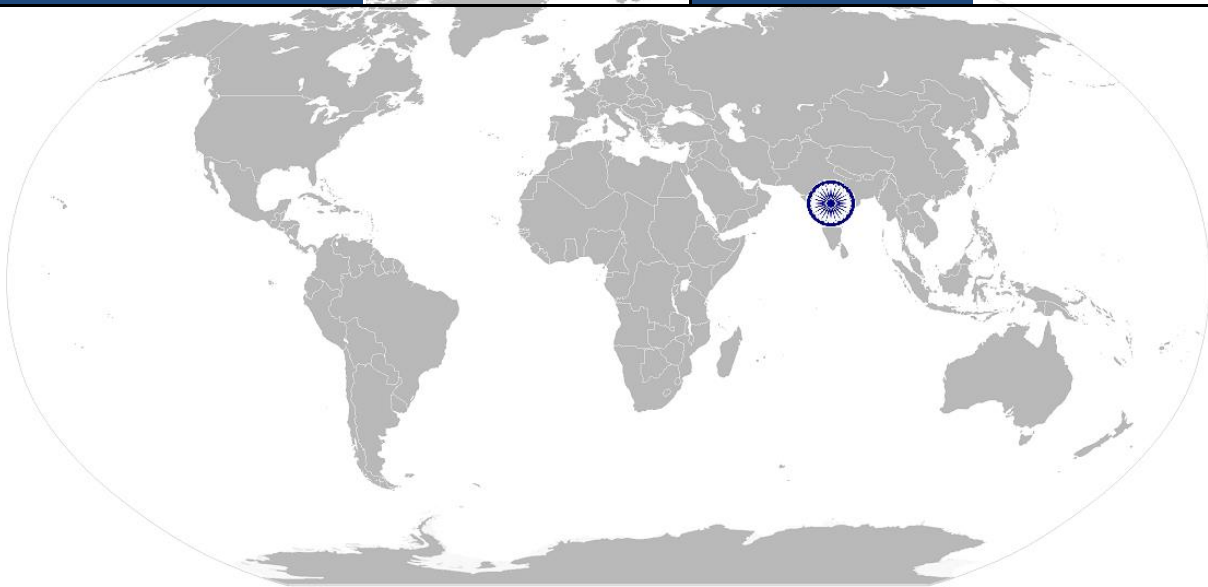
National Occupational Standard
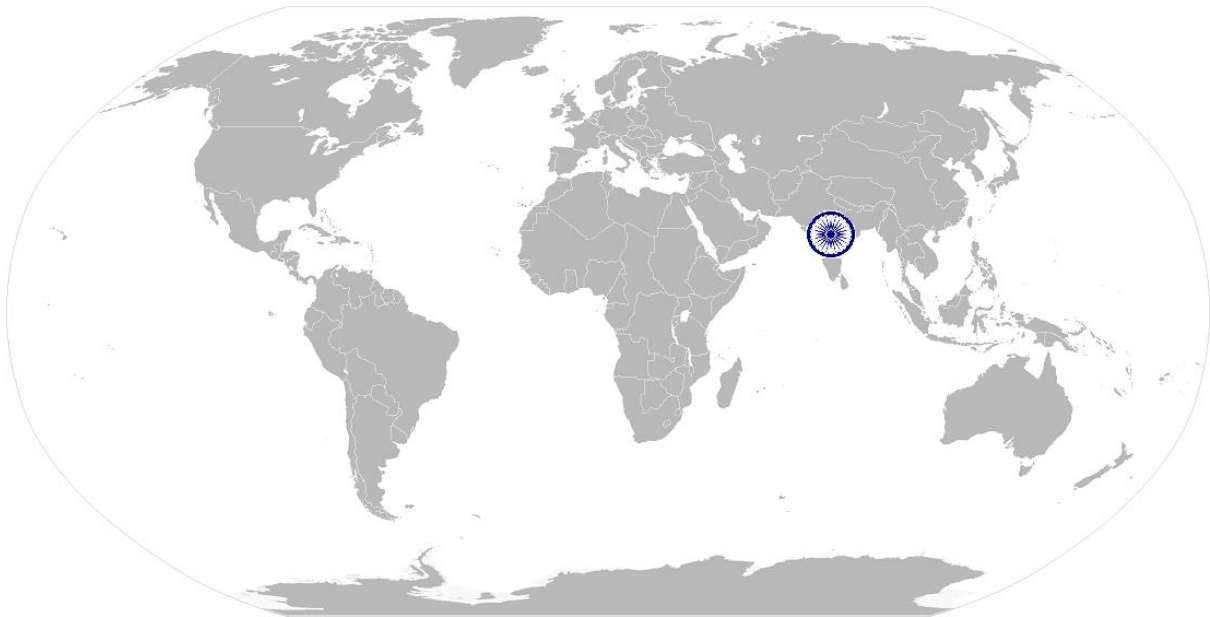
This unit is about planning and organizing your work in order to complete it to the required standards on time

SSC/N9001   **Manage your work to meet requirements**

Unit Code	SSC/N9001
Unit Title (Task)	**Manage your work to meet requirements**
Description	This unit is about planning and organizing your work in order to complete it to the required standards on time.
Scope	This unit/task covers the following: **Work requirements**: - activities (what you are required to do) - deliverables (the outputs of your work) - quantity (the volume of work you are expected to complete) - standards (what is acceptable performance, including compliance with Service Level Agreements) - timing (when your work needs to be completed) **Appropriate people**: - line manager - the person requesting the work - members of the team/department - members from other teams/departments **Resources**: - equipment - materials - information

Performance Criteria (PC) w.r.t. the Scope	
	To be competent on the job, you must be able to: PC1. establish and agree your **work requirements** with **appropriate people** PC2. keep your immediate work area clean and tidy PC3. utilize your time effectively PC4. use **resources** correctly and efficiently PC5. treat confidential information correctly PC6. work in line with your organization's policies and procedures PC7. work within the limits of your job role PC8. obtain guidance from **appropriate people**, where necessary PC9. ensure your work meets the agreed **requirements**

| **Knowledge and Understanding (K)**	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. your organization's policies, procedures and priorities for your area of work and your role and responsibilities in carrying out your work KA2. limits of your responsibilities and when to involve others KA3. your specific work requirements and who these must be agreed with KA4. the importance of having a tidy work area and how to do this KA5. how to prioritize your workload according to urgency and importance and the benefits of this

Applicable NOS Unit

|	
	KA6. your organization's policies and procedures for dealing with confidential information and the importance of complying with these
	KA7. the purpose of keeping others updated with the progress of your work
	KA8. who to obtain guidance from and the typical circumstances when this may be required
	KA9. the purpose and value of being flexible and adapting work plans to reflect change
B. Technical Knowledge	You need to know and understand:
	KB1. the importance of completing work accurately and how to do this
	KB2. appropriate timescales for completing your work and the implications of not meeting these for you and the organization
	KB3. resources needed for your work and how to obtain and use these
Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	You need to know and understand how to:
	SA1. complete accurate work with attention to detail
	Reading Skills
	You need to know and understand how to:
	SA2. read instructions, guidelines, procedures, rules and service level agreements
	Oral Communication (Listening and Speaking skills)
	You need to know and understand how to:
	SA3. ask for clarification and advice from line managers
	SA4. communicate orally with colleagues
B. Professional Skills	**Decision Making**
	You need to know and understand how to:
	SB1. make a decision on a suitable course of action
	Plan and Organize
	You need to know and understand how to:
	SB2. plan and organize your work to achieve targets and deadlines
	SB3. agree objectives and work requirements
	Customer Centricity
	You need to know and understand how to:
	SB4. deliver consistent and reliable service to customers
	SB5. check that your own work meets customer requirements
	Problem Solving
	You need to know and understand how to:
	SB6. refer anomalies to the line manager
	SB7. seek clarification on problems from others
	Analytical Thinking

SSC/N9001   **Manage your work to meet requirements**

	You need to know and understand how to:
	SB8. provide relevant information to others
	SB9. analyze needs, requirements and dependencies in order to meet your work requirements
	Critical Thinking
	You need to know and understand how to:
	SB10. apply judgments to different situations
	Attention to Detail
	You need to know and understand how to:
	SB11. check your work is complete and free from errors
	SB12. get your work checked by peers
	Team Working
	You need to know and understand how to:
	SB13. work effectively in a team environment
C. Technical Skills	You need to know and understand how to:
	SC1. use information technology effectively, to input and/or extract data accurately
	SC2. identify and refer anomalies in data
	SC3. store and retrieve information
	SC4. keep up to date with changes, procedures and practices in your role
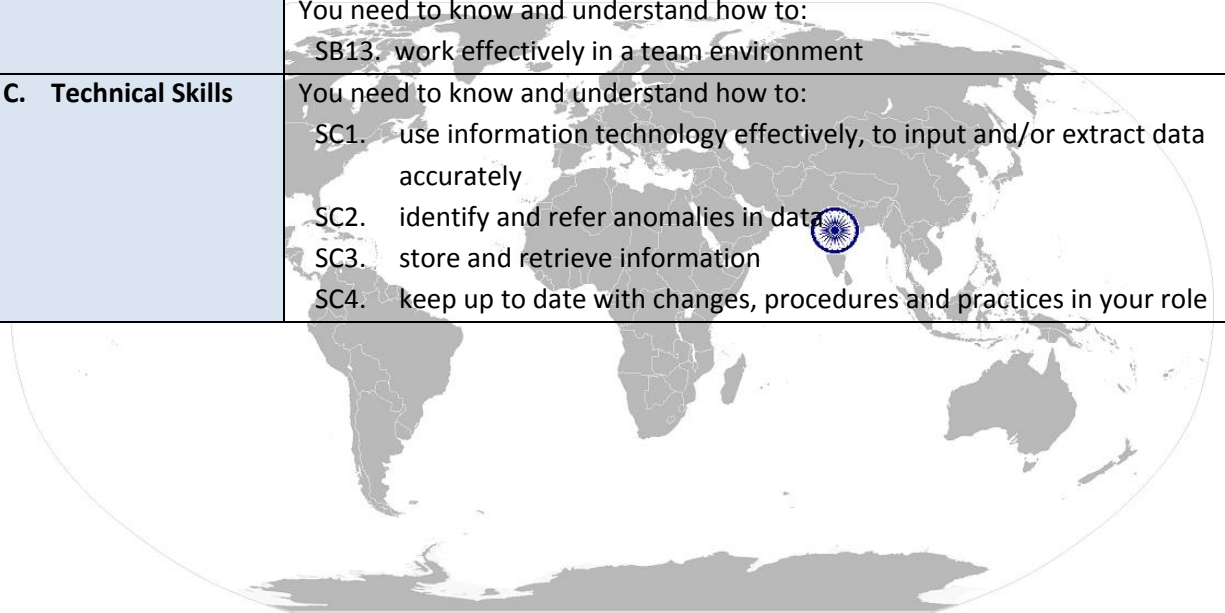
NOS Code		SSC/N9001	
Credits (NSQF)	TBD	**Version number**	1.0
Industry	IT-ITeS	**Drafted on**	30/04/2013
Industry Sub-sector	IT Services	**Last reviewed on**	31/01/2015
		Next review date	31/03/2016
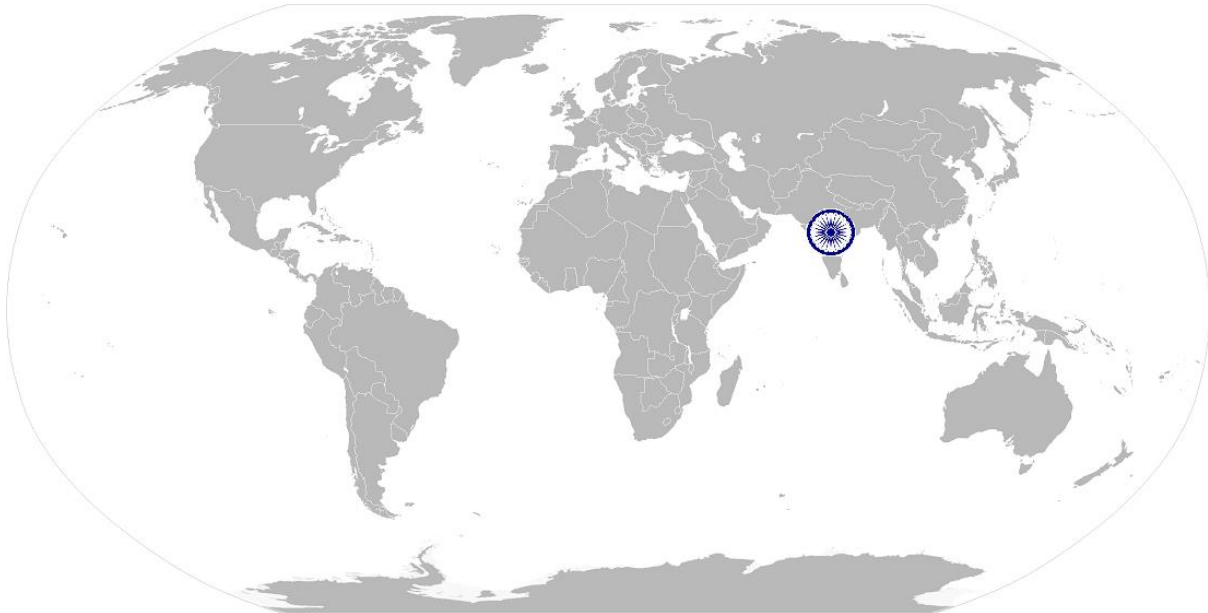
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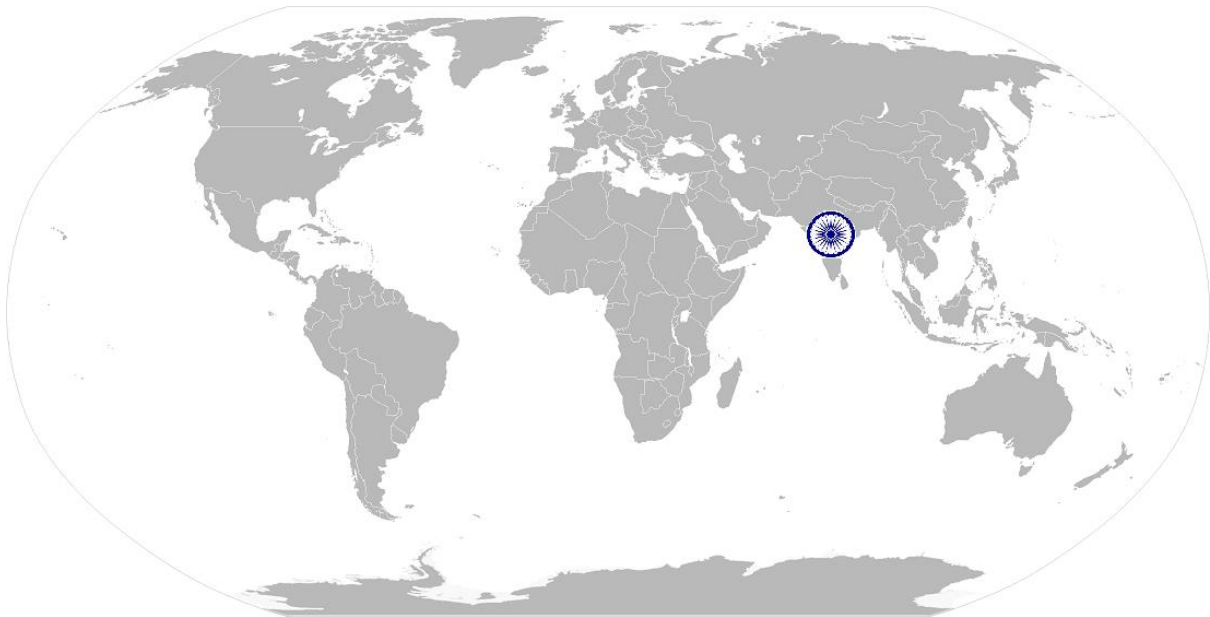
<u>**Overview**</u>

This unit is about working effectively with colleagues, either in your own work group or in other work groups within your organization.

SSC/N9002   **Work effectively with colleagues**

Applicable NOS Unit

Unit Code	SSC/N9002
Unit Title (Task)	**Work effectively with colleagues**
Description	This unit is about working effectively with colleagues, either in your own work group or in other work groups within your organization.
Scope	This unit/task covers the following: **Colleagues**: • line manager • members of your own work group • people in other work groups in your organization **Communicate**: • face-to-face • by telephone • in writing

Performance Criteria (PC) w.r.t. the Scope	
	To be competent, you must be able to: PC1. communicate with **colleagues** clearly, concisely and accurately PC2. work with **colleagues** to integrate your work effectively with them PC3. pass on essential information to **colleagues** in line with organizational requirements PC4. work in ways that show respect for **colleagues** PC5. carry out commitments you have made to **colleagues** PC6. let **colleagues** know in good time if you cannot carry out your commitments, explaining the reasons PC7. identify any problems you have working with **colleagues** and take the initiative to solve these problems PC8. follow the organization's policies and procedures for working with **colleagues**

| **Knowledge and Understanding (K)**	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. your organization's policies and procedures for working with colleagues and your role and responsibilities in relation to this KA2. the importance of effective communication and establishing good working relationships with colleagues KA3. different methods of communication and the circumstances in which it is appropriate to use these KA4. benefits of developing productive working relationships with colleagues KA5. the importance of creating an environment of trust and mutual respect in an environment where you have no authority over those you are working with KA6. where you do not meet your commitments, the implications this will have on individuals and the organization
B. Technical	You need to know and understand:

SSC/N9002   **Work effectively with colleagues**

Knowledge	KB1. different types of information that colleagues might need and the importance of providing this information when it is required
	KB2. the importance of understanding problems from your colleague's perspective and how to provide support, where necessary, to resolve these

Skills (S)		
A. Core Skills/ Generic Skills	**Writing Skills**	
	You need to know and understand how to:	
	SA1. complete accurate, well written work with attention to detail	
	SA2. communicate effectively with colleagues in writing	
	Reading Skills	
	You need to know and understand how to:	
	SA3. read instructions, guidelines, procedures, rules and service level agreements	
	Oral Communication (Listening and Speaking skills)	
	You need to know and understand how to:	
	SA4. listen effectively and orally communicate information accurately	
	SA5. ask for clarification and advice from line managers	
B. Professional Skills	**Decision Making**	
	You need to know and understand how to:	
	SB1. make a decision on a suitable course of action	
	Plan and Organize	
	You need to know and understand how to:	
	SB2. plan and organize your work to achieve targets and deadlines	
	Customer Centricity	
	You need to know and understand how to:	
	SB3. check that your own work meets customer requirements	
	SB4. deliver consistent and reliable service to customers	
	Problem Solving	
	You need to know and understand how to:	
	SB5. apply problem solving approaches in different situations	
	Critical Thinking	
	You need to know and understand how to:	
	SB6. apply balanced judgments to different situations	
	Attention to Detail	
	You need to know and understand how to:	
	SB7. check your work is complete and free from errors	
	SB8. get your work checked by peers	
	Team Working	
	You need to know and understand how to:	
	SB9. work effectively in a team environment	

**SSC/N9002**   **Work effectively with colleagues**

	SB10. work effectively with colleagues and other teams
	SB11. treat other cultures with respect
C. Technical Skills	You need to know and understand how to:
	SC1. identify and refer anomalies
	SC2. help reach agreements with colleagues
	SC3. keep up to date with changes, procedures and practices in your role
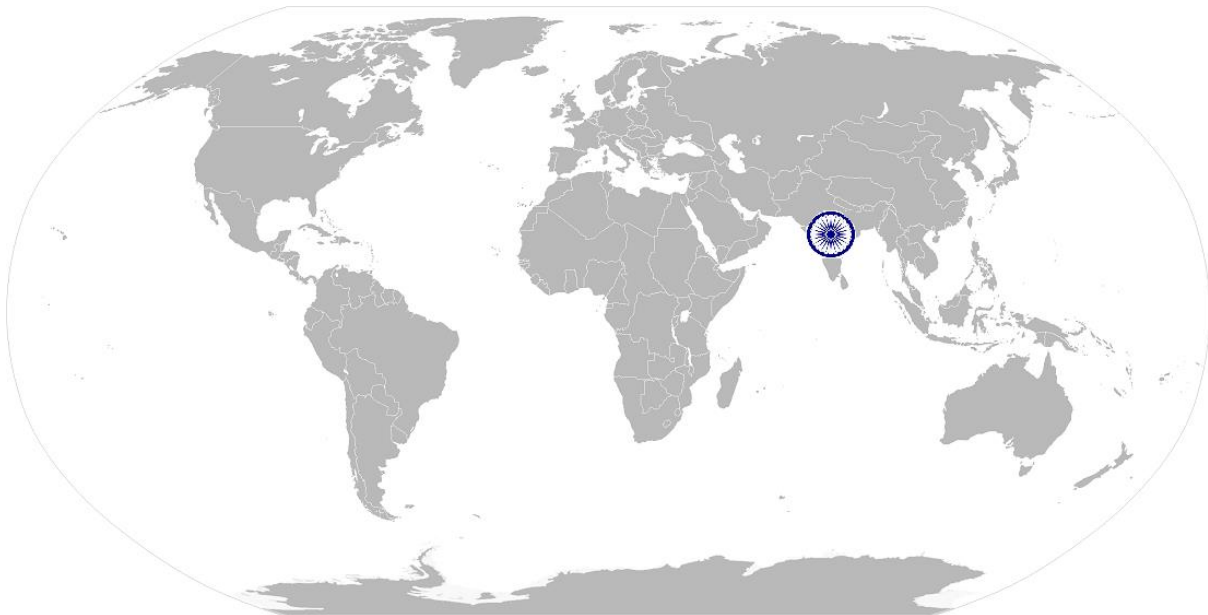
NOS Code		SSC/N9002	
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	30/04/2013
Industry Sub-sector	IT Services	Last reviewed on	31/01/2015
		Next review date	31/03/2016
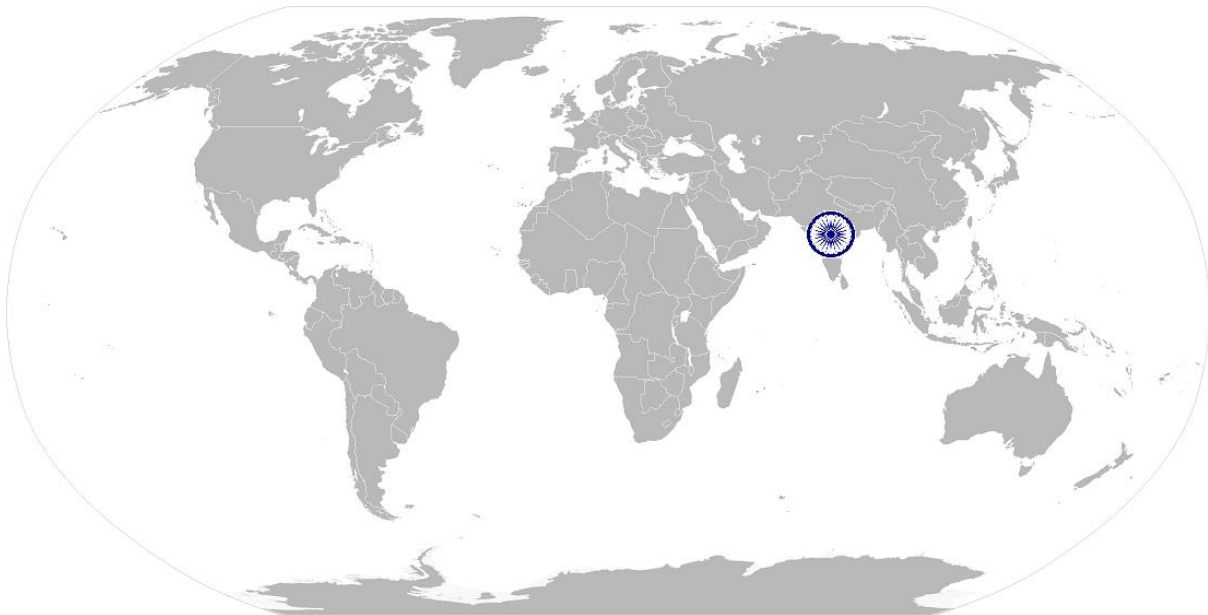
National Occupational Standard
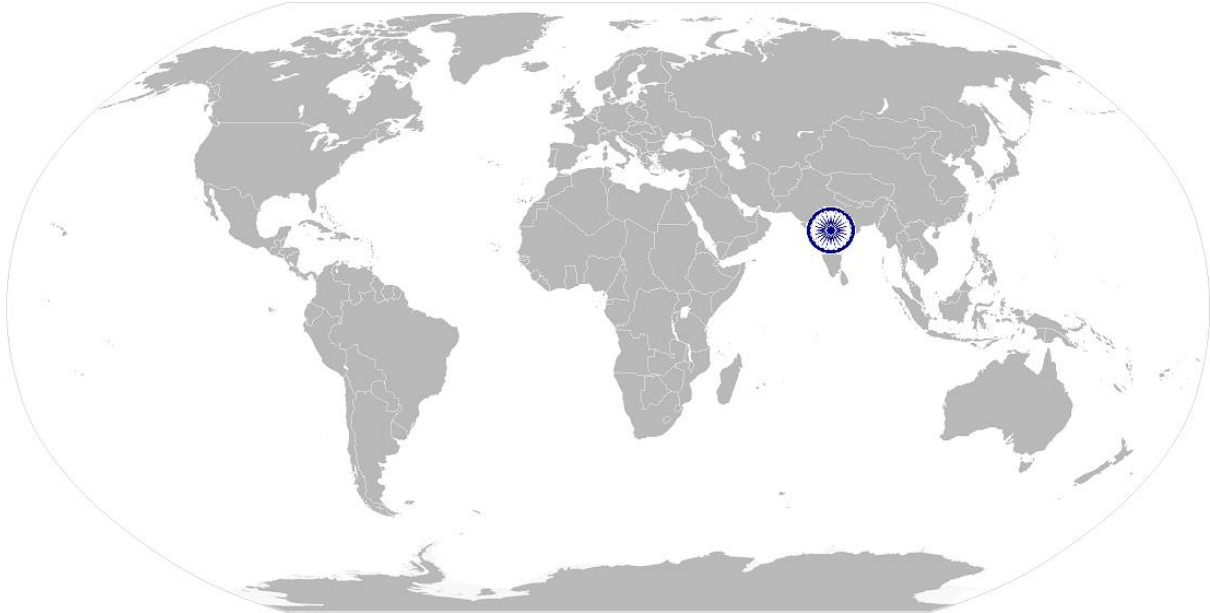
<u>**Overview**</u>

This unit is about monitoring the working environment and making sure it meets requirements for health, safety and security.

Unit Code	SSC/N9003
Unit Title (Task)	Maintain a healthy, safe and secure working environment
Description	This unit is about monitoring your working environment and making sure it meets requirements for health, safety and security.
Scope	This unit/task covers the following: **Emergency procedures**: • illness • accidents • fires • other reasons to evacuate the premises • breaches of security

Applicable NOS Unit (sidebar)

Performance Criteria (PC) w.r.t. the Scope	
	To be competent, you must be able to: PC1. comply with your organization's current health, safety and security policies and procedures PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person PC3. identify and correct any hazards that you can deal with safely, competently and within the limits of your authority PC4. report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected PC5. follow your organization's **emergency procedures** promptly, calmly, and efficiently PC6. identify and recommend opportunities for improving health, safety, and security to the designated person PC7. complete any health and safety records legibly and accurately

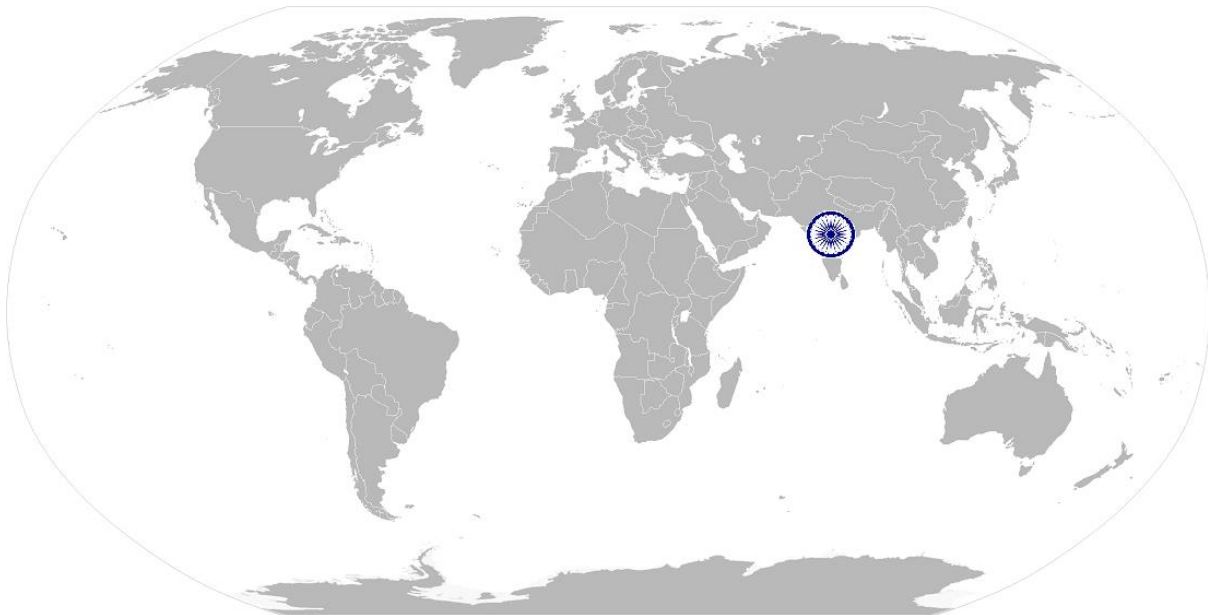| Knowledge and Understanding (K)	
A. **Organizational Context** (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. legislative requirements and organization's procedures for health, safety and security and your role and responsibilities in relation to this KA2. what is meant by a hazard, including the different types of health and safety hazards that can be found in the workplace KA3. how and when to report hazards KA4. limits of your responsibility for dealing with hazards KA5. your organization's **emergency procedures** for different emergency situations and the importance of following these KA6. the importance of maintaining high standards of health, safety and security KA7. implications that any non-compliance with health, safety and security may have on individuals and the organization

SSC/N9003   **Maintain a healthy, safe and secure working environment**

B. Technical Knowledge	You need to know and understand:
	KB1. different types of breaches in health, safety and security and how and when to report these
	KB2. evacuation procedures for workers and visitors
	KB3. how to summon medical assistance and the emergency services, where necessary
	KB4. how to use the health, safety and accident reporting procedures and the importance of these
	KB5. government agencies in the areas of safety, health and security and their norms and services

Skills (S)	
A. Core Skills/ Generic Skills	**Writing Skills**
	You need to know and understand how to:
	SA1. complete accurate, well written work with attention to detail
	Reading Skills
	You need to know and understand how to:
	SA2. read instructions, guidelines, procedures, rules and service level agreements
	Oral Communication (Listening and Speaking skills)
	You need to know and understand how to:
	SA3. listen effectively and orally communicate information accurately
B. Professional Skills	**Decision Making**
	You need to know and understand how to:
	SB1. make a decision on a suitable course of action
	Plan and Organize
	You need to know and understand how to:
	SB2. plan and organize your work to meet health, safety and security requirements
	Customer Centricity
	You need to know and understand how to:
	SB3. build and maintain positive and effective relationships with colleagues and customers
	Problem Solving
	You need to know and understand how to:
	SB4. apply problem solving approaches in different situations
	Analytical Thinking
	You need to know and understand how to:
	SB5. analyze data and activities
	Critical Thinking
	You need to know and understand how to:
	SB6. apply balanced judgments to different situations

**SSC/N9003**   **Maintain a healthy, safe and secure working environment**

	Attention to Detail
	You need to know and understand how to:
	SB7. check your work is complete and free from errors
	SB8. get your work checked by peers
	Team Working
	You need to know and understand how to:
	SB9. work effectively in a team environment
C. Technical Skills	You need to know and understand how to:
	SC1. identify and refer anomalies
	SC2. help reach agreements with colleagues
	SC3. keep up to date with changes, procedures and practices in your role

NOS Code		SSC/N9003	
Credits (NSQF)	TBD	**Version number**	1.0
Industry	IT-ITeS	**Drafted on**	30/04/2013
Industry Sub-sector	IT Services	**Last reviewed on**	31/01/2015
		Next review date	31/03/2016
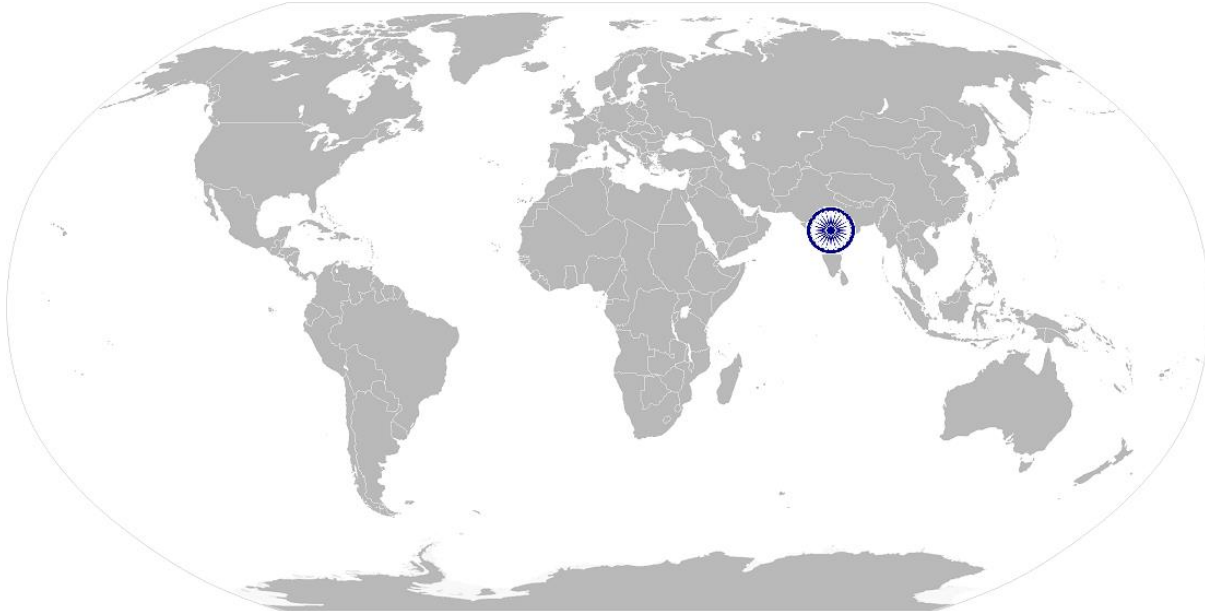
National Occupational Standard
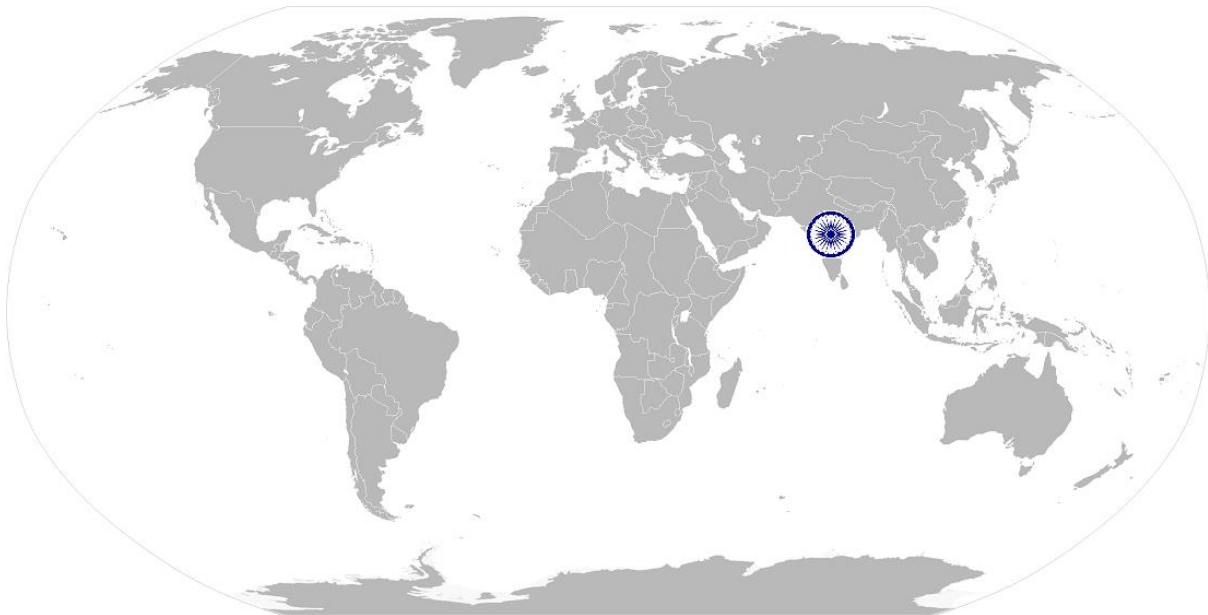
This unit is about providing specified data/information related to your work in templates or other standard formats

SSC/N9004   **Provide data/information in standard formats**

Unit Code	SSC/N9004
Unit Title (Task)	**Provide data/information in standard formats**
Description	This unit is about providing specified data/information related to your work in templates or other standard formats.
Scope	This unit/task covers the following: **Appropriate people**: • line manager • members of your own work group • people in other work groups in your organization • subject matter experts **Data/information**: • quantitative • qualitative **Sources**: • within your organization • outside your organization **Formats**: • paper-based • electronic

Applicable NOS Unit (sidebar)

Performance Criteria (PC) w.r.t. the Scope	
	To be competent, you must be able to: PC1. establish and agree with **appropriate people** the **data/information** you need to provide, the **formats** in which you need to provide it, and when you need to provide it PC2. obtain the **data/information** from reliable **sources** PC3. check that the **data/information** is accurate, complete and up-to-date PC4. obtain advice or guidance from **appropriate people** where there are problems with the **data/information** PC5. carry out rule-based analysis of the **data/information**, if required PC6. insert the **data/information** into the agreed **formats** PC7. check the accuracy of your work, involving colleagues where required PC8. report any unresolved anomalies in the **data/information** to **appropriate people** PC9. provide complete, accurate and up-to-date data/information to the **appropriate people** in the required **formats** on time
Knowledge and Understanding (K)	
A. Organizational Context	You need to know and understand:

![IT - ITeS SSC NASSCOM]

NOS
National Occupational Standards

GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

SSC/N9004   **Provide data/information in standard formats**

(Knowledge of the company/ organization and its processes)	KA1. your organization's procedures and guidelines for providing data/information in standard formats and your role and responsibilities in relation to this KA2. the knowledge management culture of your organization KA3. your organization's policies and procedures for recording and sharing information and the importance of complying with these KA4. the importance of validating data/information before use and how to do this KA5. procedures for updating data in appropriate formats and with proper validation KA6. the purpose of the CRM database KA7. how to use the CRM database to record and extract information KA8. the importance of having your data/information reviewed by others KA9. the scope of any data/information requirements including the level of detail required KA10. the importance of keeping within the scope of work and adhering to timescales
B. Technical Knowledge	You need to know and understand: KB1. data/information you may need to provide including the sources and how to do this KB2. templates and formats used for data/information including their purpose and how to use these KB3. different techniques used to obtain data/information and how to apply KB4. these KB5. how to carry out rule-based analysis on the data/information KB6. typical anomalies that may occur in data/information KB7. who to go to in the event of inaccurate data/information and how to report this

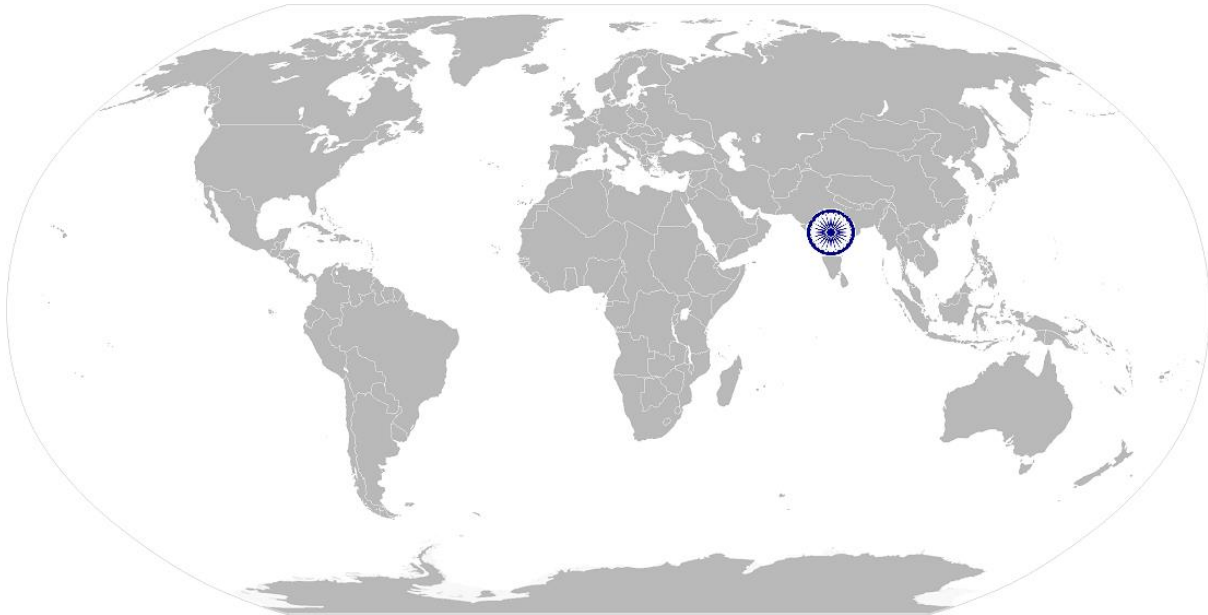| Skills (S)		
A. Core Skills/ Generic Skills	**Writing Skills**	
	You need to know and understand how to: SA1. complete accurate, well written work with attention to detail	
	Reading Skills	
	You need to know and understand how to: SA2. read instructions, guidelines, procedures, rules and service level agreements	
	Oral Communication (Listening and Speaking skills)	
	You need to know and understand how to: SA3. listen effectively and orally communicate information accurately	
B. Professional Skills	**Decision Making**	
	You need to know and understand how to: SB1. follow rule-based decision-making processes	

SSC/N9004   **Provide data/information in standard formats**

	SB2. make a decision on a suitable course of action
	Plan and Organize
	You need to know and understand how to:
	SB3. plan and organize your work to achieve targets and deadlines
	Customer Centricity
	You need to know and understand how to:
	SB4. check that your own work meets customer requirements
	SB5. meet and exceed customer expectations
	Problem Solving
	You need to know and understand how to:
	SB6. apply problem solving approaches in different situations
	Analytical Thinking
	You need to know and understand how to:
	SB7. configure data and disseminate relevant information to others
	Critical Thinking
	You need to know and understand how to:
	SB8. apply balanced judgments to different situations
	Attention to Detail
	You need to know and understand how to:
	SB9. check your work is complete and free from errors
	SB10. get your work checked by peers
	Team Working
	You need to know and understand how to:
	SB11. work effectively in a team environment
C. Technical Skills	You need to know and understand how to:
	SC1. use information technology effectively, to input and/or extract data accurately
	SC2. validate and update data
	SC3. identify and refer anomalies in data
	SC4. store and retrieve information
	SC5. share information using standard formats and templates
	SC6. keep up to date with changes, procedures and practices in your role

NOS Code		SSC/N9004	
Credits (NSQF)	TBD	**Version number**	1.0
Industry	IT-ITeS	**Drafted on**	30/04/2013
Industry Sub-sector	IT Services	**Last reviewed on**	31/01/2015
		Next review date	31/03/2016

Develop your knowledge, skills and competence

National Occupational Standard
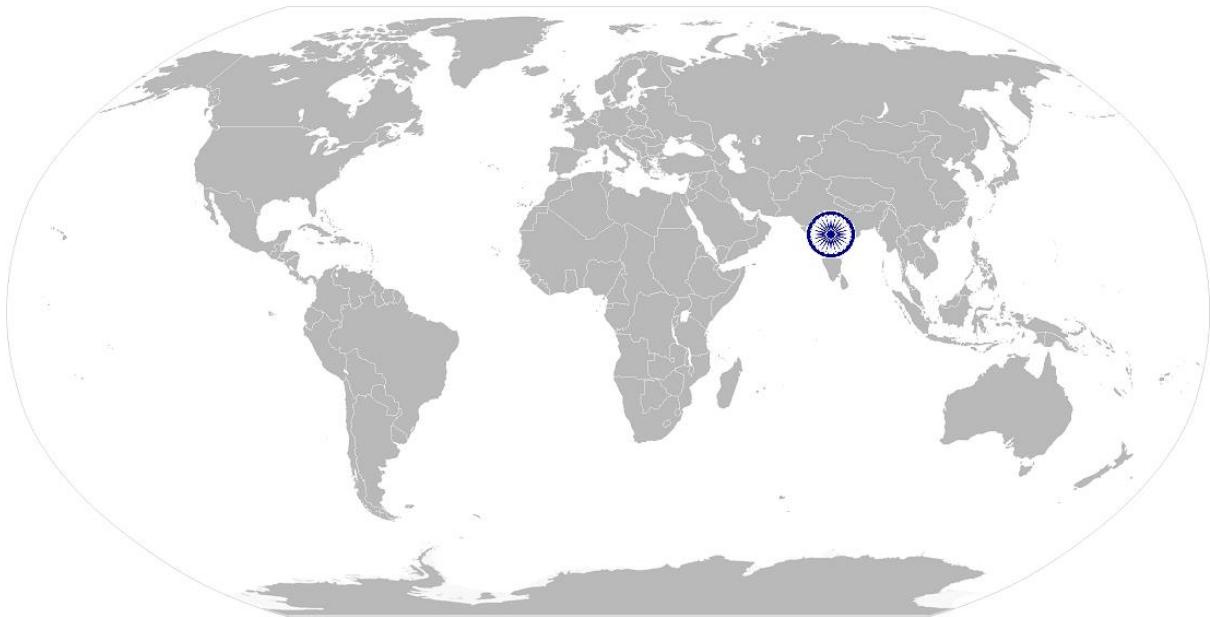
Overview

This unit is about taking action to ensure you have the knowledge and skills you need to perform competently in your current job role and to take on new responsibilities, where required.

SSC/N9005	**Develop your knowledge, skills and competence**

Applicable NOS Unit		
	Unit Code	SSC/N9005
	Unit Title (Task)	**Develop your knowledge, skills and competence**
	Description	This unit is about taking action to ensure you have the knowledge and skills you need to perform competently in your current job role and to take on new responsibilities, where required. *Competence* is defined as: the application of knowledge and skills to perform to the standards required.
	Scope	This unit/task covers the following: **Appropriate people** may be: - line manager - human resources specialists - learning and development specialists - peers **Job role**: - current responsibilities as defined in your job description - possible future responsibilities **Learning and development activities**: - formal education and training programs, leading to certification - non-formal activities (such as private study, learning from colleagues, project work), designed to meet learning and development objectives but without certification **Appropriate action** may be: - undertaking further learning and development activities - finding further opportunities to apply your knowledge and skills
	Performance Criteria (PC) w.r.t. the Scope	
		To be competent, you must be able to: PC1. obtain advice and guidance from **appropriate people** to develop your knowledge, skills and competence PC2. identify accurately the knowledge and skills you need for your **job role** PC3. identify accurately your current level of knowledge, skills and competence and any learning and development needs PC4. agree with **appropriate people** a plan of **learning and development activities** to address your learning needs PC5. undertake **learning and development activities** in line with your plan PC6. apply your new knowledge and skills in the workplace, under supervision PC7. obtain feedback from **appropriate people** on your knowledge and skills and how effectively you apply them

SSC/N9005   **Develop your knowledge, skills and competence**

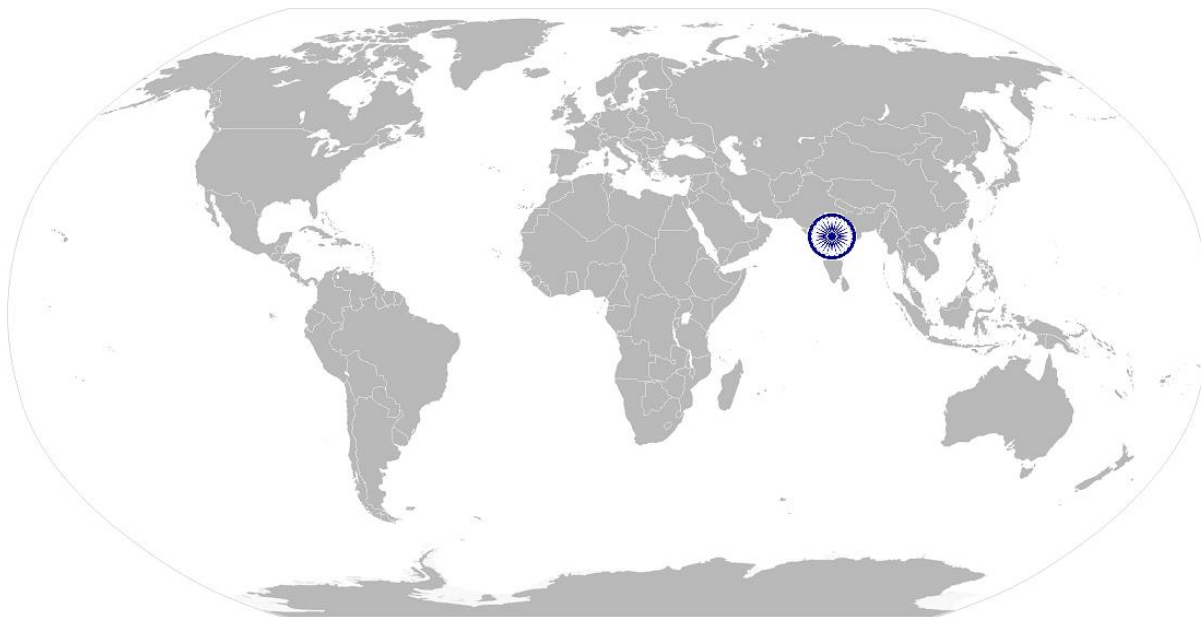|	
	PC8. review your knowledge, skills and competence regularly and take **appropriate action**
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company/ organization and its processes)	You need to know and understand: KA1. your organization's procedures and guidelines for developing your knowledge, skills and competence and your role and responsibilities in relation to this KA2. the importance of developing your knowledge, skills and competence to you and your organization KA3. different methods used by your organization to review skills and knowledge including: • training need analysis • skills need analysis • performance appraisals KA4. how to review your knowledge and skills against your job role using different methods and analysis KA5. different types of learning and development activities available for your job role and how to access these KA6. how to produce a plan to address your learning and development needs, who to agree it with and the importance of undertaking the planned activities KA7. different types of support available to help you plan and undertake learning and development activities and how to access these KA8. why it is important to maintain records of your learning and development KA9. methods of obtaining and accepting feedback from appropriate people on your knowledge skills and competence KA10. how to use feedback to develop in your job role
B. Technical Knowledge	You need to know and understand: KB1. the knowledge and skills required in your job role KB2. your current learning and development needs in relation to your job role KB3. different types of learning styles and methods including those that help you learn best KB4. the importance of taking responsibility for your own learning and development KB5. to the importance of learning and practicing new concepts, theory and how to apply these in the work environment or on samples. KB6. how to explore sample problems and apply solutions
Skills (S)	
	Writing Skills
	You need to know and understand how to:

SSC/N9005   Develop your knowledge, skills and competence

A. Core Skills/ Generic Skills	SA1. communicate with colleagues in writing
	Reading Skills
	You need to know and understand how to: SA2. read instructions, guidelines and procedures
	Oral Communication (Listening and Speaking skills)
	You need to know and understand how to: SA3. ask for clarification and advice from line managers
B. Professional Skills	**Decision Making**
	You need to know and understand how to: SB1. make a decision on a suitable course of action
	Plan and Organize
	You need to know and understand how to: SB2. plan and organize your work to achieve targets and deadlines
	Customer Centricity
	You need to know and understand how to: SB3. check that your own work meets customer requirements
	Problem Solving
	You need to know and understand how to: SB4. refer anomalies to the line manager
	Analytical Thinking
	You need to know and understand how to: SB5. analyze data and activities
	Critical Thinking
	You need to know and understand how to: SB6. apply balanced judgments to different situations
	Attention to Detail
	You need to know and understand how to: SB7. check your work is complete and free from errors SB8. get your work checked by peers
	Team Working
	You need to know and understand how to: SB9. work effectively in a team environment
C. Technical Skills	You need to know and understand how to: SC1. use information technology effectively SC2. agree objectives and work requirements SC3. keep up to date with changes, procedures and practices in your role

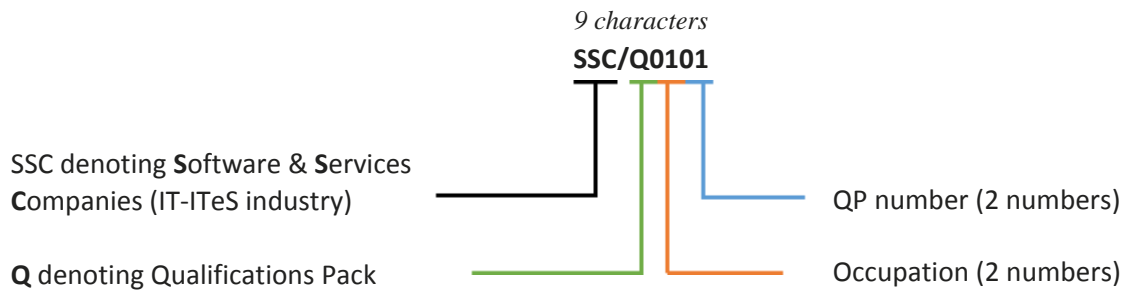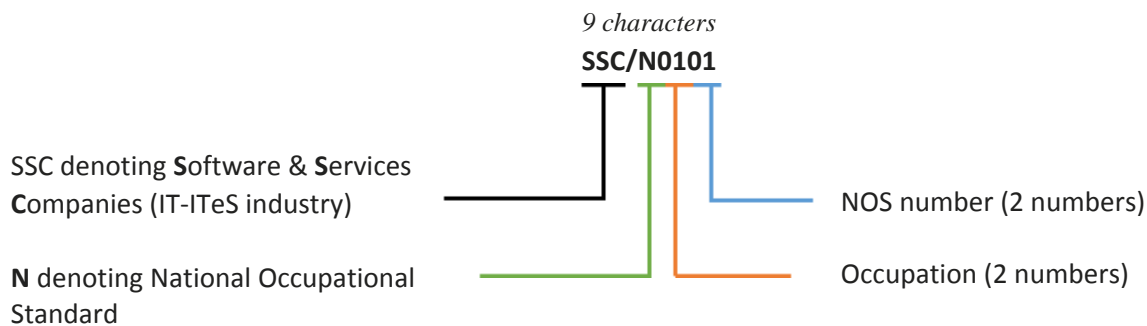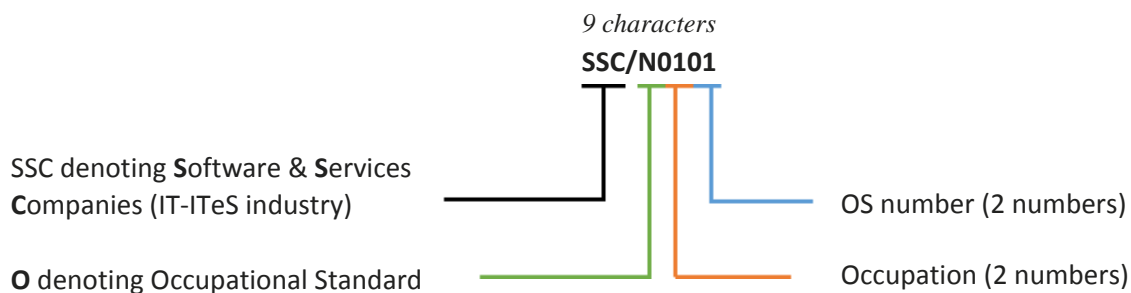| NOS Code	SSC/N9005		
Credits (NSQF)	TBD	Version number	1.0
Industry	IT-ITeS	Drafted on	30/04/2013
Industry Sub-sector	IT Services	Last reviewed on	31/01/2015
		Next review date	31/03/2016

Qualifications Pack

9 characters
SSC/Q0101

SSC denoting **S**oftware & **S**ervices **C**ompanies (IT-ITeS industry)

Q denoting Qualifications Pack

QP number (2 numbers)

Occupation (2 numbers)

National Occupational Standard

9 characters
SSC/N0101

SSC denoting **S**oftware & **S**ervices **C**ompanies (IT-ITeS industry)

N denoting National Occupational Standard

NOS number (2 numbers)

Occupation (2 numbers)

Occupational Standard

9 characters
SSC/N0101

SSC denoting **S**oftware & **S**ervices **C**ompanies (IT-ITeS industry)

O denoting Occupational Standard

OS number (2 numbers)

Occupation (2 numbers)

It is important to note that an OS unit can be denoted with either an '**O**' or an '**N**'.
- If an OS unit denotes 'O', it is an OS unit that is an international standard. An example of OS unit denoting 'O' is SSC/**O**0101.
- If an OS unit denotes '**N**', it is an OS unit that is a national standard and is applicable only for the Indian IT-ITeS industry. An example of OS unit denoting '**N**' is SSC/N0101

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

Sub-Sector	Range of Occupation numbers
IT Service (ITS)	01-20
Business Process Management (BPM)	21-40
Engg. and R&D (ERD)	41-60
Software Products (SPD)	61-80

Sequence	Description	Example
Three letters	Industry name (Software & Service Companies)	SSC
Slash	/	/
Next letter	Whether **Q**P or **N**OS	N
Next two numbers	Occupation Code	01
Next two numbers	OS number	01

IT - ITeS SSC
NASSCOM

सत्यमेव जयते
GOVERNMENT OF INDIA
MINISTRY OF SKILL DEVELOPMENT
& ENTREPRENEURSHIP

N·S·D·C
National
Skill Development
Corporation
Transforming the skill landscape

Criteria for Assessment of Trainees

Job Role	Web Developer
Qualification Pack	SSC/Q0503
Sector Skill Council	IT-ITeS

Guidelines for Assessment:
1. Criteria for assessment for each Qualification Pack (QP) will be created by the Sector Skill Council (SSC). Each performance criteria (PC) will be assigned Theory and Skill/Practical marks proportional to its importance in NOS.
2. The assessment will be conducted online through assessment providers authorised by SSC.
3. Format of questions will include a variety of styles suitable to the PC being tested such as multiple choice questions, fill in the blanks, situational judgment test, simulation and programming test.
4. To pass a QP, a trainee should pass each individual NOS. Standard passing criteria for each NOS is 70%.
5. For latest details on the assessment criteria, please visit www.sscnasscom.com.

			Marks Allocation		
Assessment Outcomes	**Assessment Criteria for Outcomes**	**Total Mark**	**Out of**	**Theory**	**Skills Practical**
1. SSC/N0501 (Contribute to the design of software products and applications)	PC1. check your understanding of the Business Requirements Specification (BRS)/User Requirements Specification (URS) with appropriate people		10	10	0
	PC2. check your understanding of the Software Requirements Specification (SRS) with appropriate people		10	10	0
	PC3. check your understanding of High Level Design (HLD) with appropriate people		10	10	0
	PC4. design basic programming structures to implement functionality in line with requirements defined in BRS/URS, SRS and HLD	**100**	30	0	30
	PC5. review your designs with appropriate people		5	5	0
	PC6. analyze inputs from appropriate people to identify, resolve and record design defects and inform future designs		15	5	10
	PC7. document your designs using standard templates and tools		10	0	10
	PC8. comply with your organization's policies, procedures and guidelines when contributing to the design of software products and applications		10	0	10
		Total	100	40	60

2. SSC/N0503 (Develop media content and graphic designs for software products and Applications)	PC1. check your understanding of the Business Requirements Specification (BRS), Software Requirements Specification (SRS), High Level Design (HLD) and Low Level Design (LLD) with appropriate people		10	10	0
	PC2. access reusable components, media and graphical packages and tools from your organization's knowledge base		10	0	10
	PC3. convert requirements into media content and graphic designs, leveraging reusable components where available		20	0	20
	PC4. review media content and graphic designs with appropriate people and analyze their feedback	**100**	10	5	5
	PC5. record any defects and corrective actions taken to inform future work		10	0	10
	PC6. rework media content and graphic designs, incorporating feedback		10	5	5
	PC7. submit media content and graphic designs for approval by appropriate people		10	0	10
	PC8. update your organization's knowledge base with your experiences of the media content and graphic designs developed		10	0	10
	PC9. comply with your organization's policies, procedures and guidelines when developing media content and graphic designs for software products and applications		10	0	10
	Total		100	20	80
3.SSC/N9001 (Manage your work to meet requirements)	PC1. establish and agree your work requirements with appropriate people		7.5	0	7.5
	PC2. keep your immediate work area clean and tidy		15	7.5	7.5
	PC3. utilize your time effectively		15	7.5	7.5
	PC4. use resources correctly and efficiently		15	7.5	7.5
	PC5. treat confidential information correctly	**100**	7.5	0	7.5
	PC6. work in line with your organization's policies and procedures		15	0	15
	PC7. work within the limits of your job role		7.5	0	7.5
	PC8. obtain guidance from appropriate people, where necessary		7.5	0	7.5
	PC9. ensure your work meets the agreed requirements		10	0	10
	Total		100	22.5	77.5
4.SSC/N9002 (Work effectively with colleagues)	PC1. communicate with colleagues clearly, concisely and accurately	**100**	20	0	20

	PC2. work with colleagues to integrate your work effectively with theirs		10	0	10
	PC3. pass on essential information to colleagues in line with organizational requirements		10	10	0
	PC4. work in ways that show respect for colleagues		20	0	20
	PC5. carry out commitments you have made to colleagues		10	0	10
	PC6. let colleagues know in good time if you cannot carry out your commitments, explaining the reasons		10	10	0
	PC7. identify any problems you have working with colleagues and take the initiative to solve these problems		10	0	10
	PC8. follow the organization's policies and procedures for working with colleagues		10	0	10
		Total	100	20	80
5.SSC/N9003 (Maintain a healthy, safe and secure working environment)	PC1. comply with your organization's current health, safety and security policies and procedures		20	10	10
	PC2. report any identified breaches in health, safety, and security policies and procedures to the designated person		10	0	10
	PC3. identify and correct any hazards that you can deal with safely, competently and within the limits of your authority		20	10	10
	PC4. report any hazards that you are not competent to deal with to the relevant person in line with organizational procedures and warn other people who may be affected	**100**	10	0	10
	PC5. follow your organization's emergency procedures promptly, calmly, and efficiently		20	10	10
	PC6. identify and recommend opportunities for improving health, safety, and security to the designated person		10	0	10
	PC7. complete any health and safety records legibly and accurately		10	0	10
		Total	100	30	70
6.SSC/N9004 (Provide data/information in standard formats)	PC1. establish and agree with appropriate people the data/information you need to provide, the formats in which you need to provide it, and when you need to provide it		15	15	0
	PC2. obtain the data/information from reliable sources	**100**	15	0	15
	PC3. check that the data/information is accurate, complete and up-to-date		15	5	10
	PC4. obtain advice or guidance from appropriate people where there are problems with the data/information		5	5	0

	PC5. carry out rule-based analysis of the data/information, if required		20	0	20
	PC6. insert the data/information into the agreed formats		10	0	10
	PC7. check the accuracy of your work, involving colleagues where required		10	0	10
	PC8. report any unresolved anomalies in the data/information to appropriate people		5	5	0
	PC9. provide complete, accurate and up-to-date data/information to the appropriate people in the required formats on time		5	0	5
		Total	100	30	70
7.SSC/N9005 (Develop your knowledge, skills and competence)	PC1. obtain advice and guidance from appropriate people to develop your knowledge, skills and competence		20	7	13
	PC2. identify accurately the knowledge and skills you need for your job role		14	7	7
	PC3. identify accurately your current level of knowledge, skills and competence and any learning and development needs		14	0	14
	PC4. agree with appropriate people a plan of learning and development activities to address your learning needs	**100**	7	0	7
	PC5. undertake learning and development activities in line with your plan		12	0	12
	PC6. apply your new knowledge and skills in the workplace, under supervision		12	0	12
	PC7. obtain feedback from appropriate people on your knowledge and skills and how effectively you apply them		7	0	7
	PC8. review your knowledge, skills and competence regularly and take appropriate action		14	7	7
		Total	100	21	79