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HEAVY MACHINE OPERATOR



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COMPETENCY STANDARDS

National Vocational Certificate Level 1-4

Version 1 - November, 2019



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Introduction

Heavy Machine Operators are in demand across the country and abroad. Their services are required for everything from road and bridge construction, back hoe operation, bulldozing, loading and grading, dredging and heavy paving, to excavating and much, much more. This is a good career opportunity for a reliable and responsible individual with a strong work ethic. Heavy Machine Operators (HMO) not only work on regular construction building jobs, but also on infrastructure projects (roads, bridges, and ports, otherwise called non-building construction), and in mining and timber operations.

In order to build the capacity of technical and vocational training institutes in Pakistan through provision of demand driven competencies-based trainings in construction sector the NAVTTTC, and TEVT Sector Support Program (TSSP) have joined hands together to develop qualifications for construction sector. These qualifications will not only build the capacity of existing workers of this sector but also support the youth to acquire skills best fit for this sector. The benefits and impact of development of these qualifications will be on both demand and supply side.

Based upon this demand of industry these competency-based qualifications for Heavy Machine Operator are developed under National Vocational Qualification Framework (NVQF) (Level 1 to 4). The qualifications mainly cover competencies along with related knowledge and professional skills which are essential for getting a job or self-employed.

The National Vocational & Technical Training Commission (NAVTTTC) has approved the Qualification Development Committee (QDC). The QDC consists experts from the relevant industries from different geographical locations across Pakistan and academicians who were consulted during the development process to ensure input and ownership of all the stakeholders. The National Competency Standards could be used as a referral document for the development of curricula to be used by training institutions.

Heavy Machine Operator curriculum will prepare students to efficiently operate heavy machines such as Dozers, Loaders, Excavator and Graders and to perform basic preventive maintenance on most types of heavy equipment. Coursework includes Safety, Heavy Machines operations, grades, Legal & environmental concerns & equipment maintenance. Graduates of this program may find employment with state and local government agencies and private contractors engaged in highway or other construction activities.



Detail of National Vocational Certificate Levels

The detail of the competency standards included in these qualifications are given below:

- National Vocational Certificate level 1, in (Construction Sector) “Helper”
 - Comply with Work Health and Safety Policies
 - Obey the Workplace Policies and Procedures
 - Follow Basic Communication Skills (General)
 - Operate Computer Functions (General)
 - Identify Machine & its Attachments
- National Vocational Certificate level 2, in (Construction Sector) “Heavy Machine Worker”
 - Comply with Personal Health and Safety Guidelines
 - Communicate the Workplace Policy and Procedure
 - Perform Basic Communication (Specific)
 - Perform Basic Computer Application (Specific)
 - Maintain Machine (with Engine Off)
 - Maintain Machine (with Engine Running)
 - Park Machines
- National Vocational Certificate level 3, in (Construction Sector) “Heavy Machine Operator”
 - Apply Work Health and Safety Practices (WHS)
 - Identify and Implement Workplace Policy and Procedures
 - Communicate at Workplace
 - Perform Computer Application Skills
 - Manage Personal Finances
 - Transport Machines
 - Operate Bulldozer
 - Operate wheel Loader
- National Vocational Certificate level 4, in (Construction Sector) “Expert Heavy Machine Operator”
 - Contribute to Work Related Health and Safety (WHS) Initiatives
 - Analyze Workplace Policy and Procedures
 - Perform Advanced Communication
 - Develop Advance Computer Application Skills
 - Manage Human Resource Services
 - Develop Entrepreneurial Skills
 - Operate Excavator
 - Operate Grader



Purpose of the Qualification

The purpose of the training is to provide skilled manpower to improve the existing capacity of construction sector. This training will provide the requisite skills to the trainees to operate Heavy Machines. It will enable the participants to meet the challenges in the field of construction industry. Further, to improve the skill level of the Operators and prepare them for the construction industry to meet the market competition nationally and internationally.

The core purpose of this qualification is to produce employable Heavy Machine Operators who could operate Heavy Machines according to national and international standards. In addition, this qualification will prepare unemployable youth to employee in construction sector.

Main Objectives of the Qualification

The Heavy Machine Operator qualifications level 1- 4 consists of theoretical and practical details required to operate heavy machines in construction industries. The main objectives of the qualification are as follows:

- Maintain Safety
- Identify Machine & its Attachments
- Develop Basic Literacy & Numeracy Skill
- Maintain Machine (with Engine Off)
- Maintain Machine (with Engine Running)
- Park Machines
- Develop basic communication Skill.
- Transport Machines
- Operate Bulldozer
- Operate wheel Loader
- Apply Occupational Health & Safety.
- Operate Excavator
- Operate Grader
- Plan Work
- Develop Professionalism.



Date of Validation

The level 1-4 of National vocational qualification on Heavy Machine Operator has been validated by the Qualifications Development Committee (QDC) members on December 13 - 14, 2018 in Peshawar and on 31st August 2019 in Lahore. Qualification will remain in currency until August, 2022.

Codes of Qualifications

The International Standard Classification of Education (ISCED) is a framework for assembling, compiling and analysing cross-nationally comparable statistics on education and training. ISCED codes for these qualifications are assigned as follows:

ISCED Classification for Heavy Machine Operator level 1-4

Code	Description
0732CON03	National Vocational Certificate level 1, in (Construction Sector) "Heavy Machine Helper"
0732CON04	National Vocational Certificate level 2, in (Construction Sector) "Heavy Machine Worker"
0732CON05	National Vocational Certificate level 3, in (Construction Sector) "Heavy Machine Operator"
0732CON06	National Vocational Certificate level 4, in (Construction Sector) "Expert Heavy Machine Operator"

**Members of Qualification Development Committee**

The following members participated in the Qualification development and validation process.

S#	Name	Designation	Organization	Role in QDC
1	Engr. Mohsin Jahanzeb	Instructor	GSTC, Faisalabad	QDC
2	Syed Akbar Khalid	Senior Instructor	VTI Kotri	QDC
3	Mr. M. Arshad Farooq	Manager Skills Development	FATA Development Authority, Peshawar	QDC
4	Muhammad Iqbal	Loader Operator	Margala Contractors	OP
5	Mr. Manzoor Ahmed	Excavator operator	Bahria Town Construction site	OP
6	Gohar Amin	Excavator/Shawal Operator	Margala Contractors	OP
7	M. Shafique Qamar	Shawal/loader operator	ZKB Contactors	OP
8	Khawar Javed	Trainer/ Operator	Awan Constructions, Islamabad	OP
9	Mr. Javed Iqbal	Bulldozer operator	Ittihad Training Institute, Rawalpindi	OP + CS
10	Mr. Malik Noor Khan	Manpower Supplier	Awan Brothers, Construction	OP + CS +Validation
11	Saifullah Khan	Excavator operator & Safety Manager	Awan Brothers, Construction	OP + CS +Validation
12	Jibran Shazib Abbas	Technical Advisor	Mater Heavy Machine Training institute Islamabad	CS + Validation
13	Engr. Muhammad Farooq Raza Khan	Mechanical Instructor	Hazza Institute of Technology, Rawalpindi	CS + Validation
14	Engr. M. Hamid Saeed	Asstt: HOD CTTI, Islamabad	Awan Construction, Rawalpindi	CS
15	M. Raheel Khan	Instructor	Mater Heavy Machine Training institute Islamabad	CS
16	Dilawar Abbas	Instructor	Mater Heavy Machine Training institute Islamabad	CS
17	Engr. M Abaas Arshad	Site Engineer (Infrastructure Development)	Bahria Town, Islamabad	Validation
18	Engr. Waqas Ali Shah	AM Technical Operations	Behria Town, Islamabad	Validation
19	Mr. Riasat ur Rehman	M&E Coordinator	Synohydro Corporation, Islamabad	Validation
20	Col. Altaf Qadar Bajwa	HOD Heavy machinery Training Department	CTTI-Islamabad	QDC+OP + CS+Vail+QA
21	Engr. Inayat ur Rahman	Certified DACUM Expert	Ex-Professor TEVTA KPK	OP+CS+Vali dation
22	Mr. Zulfiqar Ali Cheema	Deputy Director	NAVTTTC, Islamabad	OP + CS
23	Mr. Muqem ul Islam	DG (SS&C)	NAVTTTC, Islamabad	Chairman QDC



Entry Requirements

The entry for National Vocational Certificate level 1-4, in (Construction Sector) “Heavy Machine Operator” are given below:

Title	Entry requirements
National Vocational Certificate level 1, in (Construction Sector) “Helper”	Entry for assessment for this qualification is open. However, entry into formal training institutes, based on this qualification is open.
National Vocational Certificate level 2, in (Construction Sector) “Heavy Machine Worker”	Entry for assessment for this qualification is open. However, entry into formal training institute for this qualification is person having National Vocational Certificate level 1, in (Construction Sector) “Helper” or Middle.
National Vocational Certificate level 3, in (Construction Sector) “Heavy Machine Operator”	Entry for assessment for this qualification is open. However, entry into formal training institute for this qualification is person having National Vocational Certificate level 2, in (Construction Sector) “Heavy Machine Worker” or middle with hands on experience.
National Vocational Certificate level 4, in (Construction Sector) “Expert Heavy Machine Operator”	Entry for assessment for this qualification is open. However, entry into formal training institute for this qualification is person having National Vocational Certificate level 3, in (Construction Sector) “Expert Heavy Machine Operator” or GIII or middle with 1 year work experience.



Categorization and Levelling of the Competency Standards

Code	Name of Duty or (Module)	Level	Credit	Category
102200843	Comply with Work Health and Safety Policies	1	03	Generic
041700838	Obey the Workplace Policies and Procedures	1	02	Generic
001100850	Follow Basic Communication Skills (General)	1	05	Generic
061100855	Operate Computer Functions(General)	1	05	Generic
073200587	Identify Machine & its Attachments	1	14	Technical
102200844	Comply with Personal Health and Safety Guidelines	2	03	Generic
041700839	Communicate the Workplace Policy and Procedure	2	02	Generic
001100851	Perform Basic Communication (Specific)	2	03	Generic
061100856	Perform Basic Computer Application (Specific)	2	04	Generic
073200589	Maintain Machine (with Engine Off)	2	10	Technical
073200590	Maintain Machine (with Engine Running)	2	5	Technical
073200591	Park Machines	2	5	Functional
102200846	Apply Work Health and Safety Practices (WHS)	3	02	Generic
041700840	Identify and Implement Workplace Policy and Procedures	3	01	Generic
001100852	Communicate at Workplace	3	01	Generic
061100858	Perform Computer Application Skills	3	01	Generic
041300867	Manage Personal Finances	3	01	Generic
073200593	Transport Machines	3	5	Functional
073200594	Operate Bulldozer	3	16	Technical
073200595	Operate wheel Loader	3	14	Technical
102200848	Contribute to Work Related Health and Safety (WHS) Initiatives	4	03	Generic
041700841	Analyse Workplace Policy and Procedures	4	03	Generic
001100853	Perform Advanced Communication	4	03	Generic
061100858	Develop Advance Computer Application Skills	4	04	Generic
041300869	Manage Human Resource Services	4	02	Generic
041300860	Develop Entrepreneurial Skills	4	03	Generic
073200597	Operate Excavator	4	25	Technical
073200598	Operate Grader	4	28	Technical



Packaging of Qualifications

The National Vocational Qualifications have been packaged as detailed below:

<p>0732CON06 “Expert Heavy Machine Operator” National Vocational Certificate level 4, in (Construction Sector)</p>	<p>073200598 Operate Grader</p>
	<p>073200597 Operate Excavator</p>
	<p>Manage Human Resource Services</p>
	<p>Develop Advance Computer Application Skills</p>
	<p>Perform Advanced Communication</p>
	<p>Analyse and Develop Workplace Policy and Procedures</p>
	<p>Contribute to Work Related Health and Safety (WHS) Initiatives</p>
<p>0732CON05 “Heavy Machine Operator” National Vocational Certificate level 3, in (Construction Sector)</p>	<p>073200595 Operate Wheel Loader</p>
	<p>073200594 Operate Bulldozer</p>
	<p>073200593 Transport Machines</p>
	<p>Manage Personal Finances</p>
	<p>Perform Computer Application Skills</p>
	<p>Communicate at Workplace</p>
	<p>Identify and Implement Workplace Policy and Procedures</p>
<p>Apply Work Health and Safety Practices (WHS)</p>	



0732CON04
"Heavy Machine Worker"
National Vocational Certificate level 2,
in (Construction Sector)

- 073200591 Park Machines
- 073200590 Maintain Machine (with Engine Running)
- 073200589 Maintain Machine (with Engine Off)
- 061100856 Perform Basic Computer Application (Specific)
- 001100851 Perform Basic Communication (Specific)
- 041700839 Communicate the Workplace Policy and procedure
- 102200844 Comply with Personal Health and Safety Guidelines



0732CON03
"Helper"
National Vocational Certificate level 1,
in (Construction Sector)

- 073200587 Identify Machine & its Attachments
- 061100855 Operate Computer Functions(General)
- 001100850 Follow Basic Communication Skills (General)
- 041700838 Obey the Workplace Policies and Procedures
- 102200843 Comply with Work Health and Safety policies



Detail of Competency Standards

102200843 Comply with Work Health and Safety Policies

Overview: This unit describes the performance outcomes, skills and knowledge required to apply general work health and safety requirements in the workplace. Communicate work and health safety assess at work place. It describes generic work health and safety responsibilities applicable to employees without managerial or supervisory responsibilities.

Competency Units	Performance Criteria
CU1. Work safely at work place	P1. Identify relevant organizational safety policies and procedures P2. Categorize tools and equipment as per requirements P3. Maintain tools and equipment P4. Follow established safety procedures during work activities P5. Identify existing or potential safety issues to designated persons P6. Report work-related incidents and accidents to supervisor P7. Take necessary measures to minimizing risks
CU2. Communicate work health and safety (WHS) assess at work place	P1. Raise work health and safety issues with supervisor. P2. Contribute to workplace meetings and other consultative processes for work health and safety management at the workplace P3. Make suggestions for improving work health and safety practices
CU3. Minimize risks to personal safety at work place	P1. Identify situations that may endanger the personal safety P2. Document the incident regarding personal safety at work place P3. Eliminate workplace hazards regarding personal safety P4. Identify damaged items and equipment for personal safety P5. Notify supervisor regarding damaged items and equipment for personal safety



CU4. Minimize risks to public safety	P1. Identify situations that may endanger the public safety P2. Document the incident at work sites P3. Eliminate workplace hazards at work sites P4. Identify damaged items and equipment related to public safety P5. Notify Situation that may endanger situation for safety measures.
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Identify the commonly used tools and equipment used at workplace.
- K2:** Rights and responsibilities of employers and employees
- K3:** Consultative processes to manage and monitor health and safety issues to enable active participation in maintaining a safe workplace
- K4:** State potential hazards in the workplace
- K5:** State commonly used hazard signs and safety symbols

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Identify health and safety policies to maintain and avoid any unwanted incident.



041700838 Obey the Workplace Policies and Procedures

Overview: This unit describes the skills and knowledge required to develop and implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
CU1. Obey the workplace personal appearance and hygiene	P1. Wear suitable clothes for the workplace and respect local and cultural contexts P2. Meet specific company dress code requirements
CU2. Follow work ethics	P1. Follow company value/ ethics code/ conduct policies and guidelines P2. Use company resources in accordance with company ethical standards P3. Conduct personal behaviour and relationships in accord with company policy & procedures P4. Demonstrate ethical behaviour with co-workers P5. Report work incident situations or resolve accordingly
CU3. Demonstrate the Work place behaviours	P1. Practice the positive behaviour P2. Avoid arguing P3. Adopt flexibility in behaviour to accept the resistance
CU4. Communicate workplace policy & procedures	P1. Listen directions carefully P2. Ask relevant questions politely P3. Avoid to use abusive language/ expression P4. Respect co-workers and others
CU5. Review the implementation of workplace policy & procedures	P1. Ensure proper implementation of policies P2. Enlist the gaps for improvement P3. Follow the feedback, if any



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Rules, regulations and SOPs applicable to the organization
- K2:** Turnaround time to achieve target/goal.
- K3:** Operational hierarchal levels in an organization.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Follow work place policy personal appearances adopting company values/ ethics/ codes and broacher policies for ensuring work place SOP's



001100850 Follow Basic Communication Skills (General)

Overview: After successful completion of this module you will be able to listen attentively, develop non-verbal communication, and identify communication barriers, interview preparation for job and different communication platforms in the workplace and throughout your career.

This unit of competency is designed to manage the workers and other personnel that can help in improving work quality and quantity through basic communication skills

Competency Units	Performance Criteria
CU1. Adopt Effective listening to Skills	P1. Listen attentively to others to improve communication skills P2. Avoid interrupting while listening others P3. Ask questions to ensure understanding P4. Receive and follow instructions as given by supervisor P5. Give the speaker regular feedback to communicate appropriately
CU2. Develop Nonverbal communication with peers	P1. Maintain eye contact to improve communication P2. Use facial expressions and gestures P3. Use Body language to communicate appropriately P4. Participate within Peers
CU3. Prepare for Interview to get a job	P1. Prepare yourself for interview to employer P2. Follow schedule according to the sequence of interview P3. Use communication techniques used while appearing in interview P4. Provide basic evidence of related skill P5. Respond appropriately to strong client emotional reactions
CU4. Use communication platform at workplace	P1. Convey message using different communication plate forms <ul style="list-style-type: none">• Face to face• Video chat• Phone calls/messages• Social Media
CU5. Identify communication barriers to improve interpersonal skills	P1. Identify communication barriers to improve communication skills with each other. i.e. <ul style="list-style-type: none">• Attitudinal barrier



	<ul style="list-style-type: none">• Physical Barrier• Long differences• Conflicting information• Differing status, position /self-expression <p>P2. Use strategies to overcome these barriers in the client-counsellor relationship</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Minimizing communication barriers
- K2:** Listening, and responding with an open mind in a more effective way.
- K3:** appropriate communication methods.
- K4:** verbal and non-verbal messages appropriately.
- K5:** Confidence building
- K6:** Body language
- K7:** Appropriate Voice tone
- K8:** Interpersonal skills
- K9:** listening Skills

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Find a job through social media resources
 1. Prepare yourself to appear in interview by following points:
 - Effective listening skills
 - Body language
- Work in groups of 3-5 members.
 1. Think of a situation when you tried to communicate with another person. Or when somebody tried to communicate with you, and it failed.
 2. Think about the problems or barriers that interfered with the communication.



- List the reasons for failure identified by your group.
 - Non-verbal communication
- Have activity cards:
- Worried
 - Happy
 - Disappointed
 - Laughing
 - Annoying

Participants to draw one of the activity cards. Without speaking, communicate the feeling or emotion on the card to the rest of the group. Have one participant at time get up in front of the group.



061100855 Operate Computer Functions (General)

Overview: The competency Standard describe skills and knowledge required to setup a computer system, organize files in folders, and shutdown a computer system.

Competency Units	Performance Criteria
CU1. Set up the computer for use	P1. Identify physical components of computer P2. Identify peripheral devices of the computer P3. Connect all components of computer P4. Follow procedures to turn on the computer system
CU2. Organize files in folder	P1. Create folders/subfolders with suitable names P2. Save files in relevant folders. P3. Rename and move folders in different drives. P4. Move folders and files using drag and drop techniques P5. Save folders and files on different media P6. Search for folders/subfolders and files using appropriate tool bars P7. Delete Folder files P8. Restore deleted folder files
CU3. Shut down computer system	P1. Save any work to be retained P2. Close open application programs correctly P3. Shut down computer P4. Switch off any unused peripheral devices P5. Ensure computer safety

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Basic parts of a computer
- K2:** Definition of computer
- K3:** Definition of Drives
- K4:** enlist computer component



Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Switch on the computer
- Attach Computer component
- Switch on Peripheral devices
- Make a folder in any partition(drive) in hard disk
- Give name to the folder
- Save file in the folder
- delete the folder/File
- Shut down computer

The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments



073200587 Identify Machines & Its Attachments

Overview: This competency standard covers the skills and knowledge required to Identify Machine and its sizes, identify components & Attachments, identify capacities & capabilities of Machine, identify basic tools and supplies associated with Machines and Maintain Inventory of tools and equipment.

Competency Units	Performance Criteria
CU1. Identify Machine and its sizes.	<p>P1. Make a list of different heavy machines</p> <p>P2. Identify crawler machines</p> <p>P3. Identify wheeled/tire machines</p> <p>P4. Check specifications of crawler machines</p> <p>P5. Check specifications of wheeled/tire machines</p>
CU2. Identify components & Attachments	<p>P1. Identify different components of relevant machine</p> <p>P2. Identify different attachments of relevant machine</p>
CU3. Identify capacities & capabilities of Machine	<p>P1. Check capacity as per manufacturers specifications</p> <p>P2. Check capability as per manufacturers specifications</p> <p>P3. Ensure proper capacity of machine</p> <p>P4. Ensure proper capability of machine</p>
CU4. Identify basic tools and supplies associated with Machines	<p>P1. Check standard tools supplied with machines</p> <p>P2. Check spares/consumable materials</p> <p>P3. Adopt manufacturers specifications for tools and supplies</p>
CU5. Maintain Inventory of tools and equipment.	<p>P1. Check number of tools and equipment as per record</p> <p>P2. Report for faulty tools and equipment</p> <p>P3. Generate demand for defective tools and equipment</p> <p>P4. Maintain record of all tools and equipment</p>

Knowledge & Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Define common Heavy Machines & Industry terminologies.
- K2:** Describe Common Heavy Machine Capabilities, Advantages & Limitations.
- K3:** Describe Heavy Machines Attachments, their Purpose and Capabilities.
- K4:** Describe basic Tools, Supplies & Lubricants associated with Heavy Machines.



K5: Describe Inventory management procedure of Tools & Equipment.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify Machines and its related Attachments
- Identify Capability of machines
- Ensure Capability of attachments as per standards

Machines and Its Attachments

- **Bulldozer Attachments**
 - Blades
 - Ripper
- **Excavator (Wheel & Crawler) Attachments**
 - Buckets
 - Grappler
 - Coupler
 - Thumbs
 - Pulverize
 - Lifting
 - Rakes
 - Chuck
 - Blades
 - Ripper
 - Forks
 - Adapter
 - Hammer
 - Auger
 - Compactor
 - Stump Harvester
- **Motor Grader Attachments**
 - Angle Blade
 - Lift Group
 - One-way Plow
 - Snow Gate



- Snow Wing
- Straight Blade
- UV Angle Blade
- V-Plow
- **Wheel Loader Attachments**
 - Coupler
 - Boom Poles
 - Bucket
 - Fork
 - Grappler
 - Snow Blade
 - Trailer Hitches
 - Rotary Sweeper
 - Broadcast Spreader

**102200844 Comply with Personal Health and Safety Guidelines**

Overview: This Competency Standard identifies the competencies required to protect/apply occupational Safety, health and Environment at workplace according to the industry's approved guidelines, procedures and interpret environmental rules/regulations. Trainee will be expected to identify and use Personal Protective Equipment (PPE) according to the work place requirements. The underpinning knowledge regarding Observe Occupational Safety and Health (OSH) will be sufficient to provide the basis for the job at workplace.

Competency Units	Performance Criteria
CU1. Identify Personal Hazards at Workplace	<p>P1: Identify risk to personal health</p> <p>P2: Identify hygiene and safety at work place</p> <p>P3: Identify processes</p> <p>P4: Identify tools, equipment and consumable materials that have the potential to cause harm</p> <p>P5: Report, identified risk to Health, hygiene and safety to concerned</p>
CU2. Apply Personal Protective and Safety Equipment (PPE)	<p>P1: List the Personal Protective equipment</p> <p>P2: Select personal protective equipment in terms of type and quantity according to work orders.</p> <p>P3: Wear personal protective equipment according to job requirements.</p> <p>P4: Clean personal protective equipment</p> <p>P5: Stored Personal Protective equipment in proper place after use.</p>
CU3. Comply with Occupational Safety and Health (OSH)	<p>P1: Maintain cleanliness and hygiene as per organizational policy</p> <p>P2: Comply with Health, hygiene and safety precautions before starting work</p> <p>P3: Comply with organizational Health, hygiene and safety guidelines during work</p> <p>P4: Deal with resolvable problems according to prescribed procedures</p> <p>P5: Report un resolvable problems to concerned</p> <p>P6: Place the tools equipment etc at their prescribed place after</p>



	completion of work
CU4. Dispose of hazardous Waste/materials from the designated area.	P1: Identify hazardous waste materials which needs to be disposed off P2: Segregate hazardous or non-hazardous waste carefully from the designated area as per approved procedure P3: Use proper disposal hazardous containers for dispose-off hazardous waste as per procedure P4: Take necessary precautions like putting masks and gloves while disposing hazardous waste/ materials as per standard operating procedure

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Explain safety rules and regulations of organization
- K2:** List Personal protection and safety Equipment
- K3:** Describe meaning of Safety signs and symbols
- K4:** Demonstrate understanding of safety related Standard Operating Procedure/guidelines
- K5:** Describe waste disposal SOPs
- K6:** Explain best practices relating to clean and safe work environment

Critical Evidence(s) Required

The candidate needs to produce following critical evidence (s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of maintaining personal health and hygiene practices. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.



041700839 Communicate the Workplace Policy and Procedure

Overview: This unit describes the performance outcomes, skills and knowledge required to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision.

Competency Units	Performance Criteria
CU1. Identify workplace communication procedures	<p>P1. Identify organizational communication requirements and workplace procedures with assistance from relevant authority</p> <p>P2. Identify appropriate lines of communication with supervisors and colleagues.</p> <p>P3. Seek advice on the communication method/equipment most appropriate for the task</p>
CU2. Communicate at workplace	<p>P1. Use effective questioning, and active listening and speaking skills to gather and convey information</p> <p>P2. Use appropriate non-verbal behaviour at all times</p> <p>P3. Encourage, acknowledge and act upon constructive feedback</p>
CU3. Draft Written Information	<p>P1. Identify and comply with required range of written materials in accordance with organizational policy and procedures</p> <p>P2. Draft and present assigned written information for approval, ensuring it is written clearly, concisely and within designated timeframes.</p> <p>P3. Ensure written information meets required standards of style, format and detail.</p> <p>P4. Seek assistance and/or feedback to aid communication skills development</p>
CU4. Review Documents	<p>P1. Check draft for suitability of tone for audience, purpose, format and communication style</p> <p>P2. Check draft for readability, grammar, spelling, sentence and paragraph construction and correct any inaccuracies or gaps in content.</p> <p>P3. Check draft for sequencing and structure</p> <p>P4. Check draft to ensure it meets organizational requirements</p>



	P5. Ensure draft is proofread, where appropriate, by supervisor or colleague
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Knowledge and Understanding

- K1:** Key provisions of relevant regulations that may affect aspects of business operations, such as privacy laws
- K2:** Organizational policies, plans and procedures.
- K3:** Barriers to communication
- K4:** Communication model
- K5:** Verbal and written communication techniques

Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

**001100851 Perform Basic Communication (Specific)**

Overview: This unit describes the skills and knowledge required to assist in the development of communication competence by providing information regarding different forms of communication and their appropriate use.

By the end of this program, learners will be able, to communicate more effectively and efficiently by: working in a team, follow supervisor's instructions and develop generic communication work skills at workplace

Competency Units	Performance Criteria
CU1. Communicate in a team to achieve intended outcomes	<p>P1. Treat team members with respect</p> <p>P2. Maintain positive relationships to achieve common organizational goals</p> <p>P3. Get work related information from team</p> <p>P4. Identify interrelated work activities to avoid confusion</p> <p>P5. Adopt communication skills, which are designed in a team.</p> <p>P6. Identify problems in communication with a team</p> <p>P7. Resolve Communication barrier through discussion and mutual agreement</p>
CU2. Follow Supervisor's instructions as per organizational SOPs	<p>P1. Receive the instructions from Supervisor</p> <p>P2. Carry out the instructions of the supervisor</p> <p>P3. Report to the supervisor as per organizational SOPs</p>
CU3. Develop Generic communication skills at workplace	<p>P1. Develop basic reading skills</p> <p>P2. Develop Basic writing Skills</p> <p>P3. Develop basic listening skills</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Basic Learn and understand Types of communication
- K2:** Basic Reading Skills
- K3:** Basic Writing skills



- K4:** Basic Verbal communication skills
- K5:** Basic Problem solving skills
- K6:** Basic Self-Management Skills
- K7:** Basic Technology Skills
- K8:** Basic Interview Skills
- K9:** Basic Workplace dress code
- K10:** Basic The role of team members and functionality of the teams

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Make a list of appropriate communication skills with colleagues and supervisors



061100856 Perform Basic Computer Application (Specific)

Overview: This unit describes the skills and knowledge required to use spreadsheet to prepare a page of document, develops familiarity with Word, Excel, Access, PowerPoint, email, and computer graphics basics.

It applies to individuals who perform a range of routine tasks in the workplace using a fundamental knowledge of spreadsheets, Microsoft office and computer graphics in under direct supervision or with limited responsibility.

Competency Units	Performance Criteria
CU1. Create Word Documents	<p>P1. Open word processing application</p> <p>P2. Create a word document</p> <p>P3. Customize page layout with relevant name setting</p> <p>P4. Set up page in a word document</p> <p>P5. Edit word document as required</p> <p>P6. Use simple formatting tools when creating the document</p> <p>P7. Save word document to directory</p> <p>P8. Insert table in a word document</p> <p>P9. Insert appropriate images into document as necessary</p> <p>P10. Insert header/footer in a word document</p> <p>P11. Insert section break in a word document</p> <p>P12. Set style in word document</p> <p>P13. Select basic Print settings</p> <p>P14. Print the document</p>
CU2. Use internet for Browsing	<p>P1. Use search engines to open website</p> <p>P2. Search data on different topics</p> <p>P3. Refine search to increase relevance of information or content</p> <p>P4. Navigate a website to access the information or content required</p>



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Describing formatting styles and their effect on formatting, readability and appearance of documents
- K2:** Outline purpose, use and function of word-processing software.
- K3:** Editing in MS Word
- K4:** Formatting in MS word
- K5:** Use of different search engines
- K6:** Use of different web pages

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Identify the components of computer
- Follow organizational ergonomic work health and safety (WHS) requirements and practices
- Create, open and retrieve documents using customized basic settings
- Format documents by creating tables and adding text, objects and images
- Save and prints documents.
- Download data through web browser



073200589 Maintain Machines (with Engine Off)

Overview: This competency standard covers the skills and knowledge required to Inspect and service Lubrication, Electrical, Hydraulic, Cooling, Fuel, steering and braking system of the Heavy Machines. and supporting pneumatic (Air-filled) system

Competency Units	Performance Criteria
CU1. Inspect and service lubrication system	<p>P1. Locate components to be inspected</p> <p>P2. Check low oil levels, dirty filler cap</p> <p>P3. Select appropriate tools</p> <p>P4. Adjust oil levels</p> <p>P5. Identify and report leakages if any</p>
CU2. Inspect and service electrical system	<p>P1. Locate components to be inspected</p> <p>P2. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P3. Select appropriate tools for rectification of minor defects</p> <p>P4. Check water level of batteries</p> <p>P5. Replace batteries if required</p>
CU3. Inspect and service hydraulic system	<p>P1. Locate components to be inspected</p> <p>P2. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P3. Identify and report leakages and noise of the hydraulic system</p> <p>P4. Check hydraulic oil levels</p> <p>P5. Replace hoses/pipes if damaged</p>
CU4. Inspect and service cooling system	<p>P1. Adopt appropriate safety measures.</p> <p>P2. Ensure unobstructed airflow through radiator core</p> <p>P3. Locate components to be inspected</p> <p>P4. Check and Adjust coolant level</p> <p>P5. Replace belts and hoses if necessary</p>
CU5. Inspect and service air intake system	<p>P1. Locate components to be inspected</p> <p>P2. Check air service indicators</p> <p>P3. Select appropriate tools</p> <p>P4. Clean primary air filter.</p> <p>P5. Replace intake hoses and clamps if required</p>



CU6. Inspect and service fuel system	<p>P1. Locate components to be inspected</p> <p>P2. Identify and read fuel gauges and level indicator</p> <p>P3. Select appropriate tools</p> <p>P4. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P5. Perform basic maintenance such as cleaning of fuel strainer</p> <p>P6. Report fuel leakage if any</p>
CU7. Inspect and service suspension system	<p>P1. Locate components to be inspected</p> <p>P2. Select appropriate tools</p> <p>P3. Check gashes or bulges of tires</p> <p>P4. Grease, bearings, bushes and pins</p> <p>P5. Change damaged grease fittings</p>
CU8. Inspect and service drive train	<p>P1. Locate components to be inspected</p> <p>P2. Select appropriate tools</p> <p>P3. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P4. Check wear, leaks and damage to components</p> <p>P5. Identify defective undercarriage components</p>
CU9. Inspect and service braking system	<p>P1. Locate components to be inspected</p> <p>P2. Select appropriate tools</p> <p>P3. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P4. Top-up fluid reservoir</p> <p>P5. Identify defective components of braking system</p>
CU10. Inspect and service load bearing structure	<p>P1. Locate components to be inspected</p> <p>P2. Select appropriate tools</p> <p>P3. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P4. Grease, bushes and pins</p>
CU11. Inspect and service operator station/Cab	<p>P1. Locate and identify controls inside operator station/Cab</p> <p>P2. Identify missing or defective components or controls</p> <p>P3. Clean front/rear wind screen, windows and mirrors</p> <p>P4. Adjust mirrors</p>



	<p>P5. Replace broken mirror/frame</p> <p>P6. Adjust seat and seat belt</p> <p>P7. Check nobs of all lights and indicators</p>
CU12. Inspect safety equipment	<p>P1. Ensure safety equipment is securely mounted</p> <p>P2. Replace expired fire extinguisher</p> <p>P3. Ensure wearing of PPE</p>
CU13. Inspect and service Attachments	<p>P1. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P2. Select appropriate tools</p> <p>P3. Perform basic maintenance such as greasing, bushing and pins</p> <p>P4. Report worn teeth</p>
CU15. Inspect and service supporting pneumatic (Air-filled) system	<p>P1. Locate components to be inspected</p> <p>P2. Select appropriate tools</p> <p>P3. Identify service needs, defects and hazardous conditions through visual/physical inspection</p> <p>P4. Perform basic maintenance, such as choked drain valves</p> <p>P5. Replace air lines if damaged</p>

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Describe Functions of different Mechanical Systems in Heavy Machines
- K2:** Explain Inspection & Maintenance of Heavy Machines, and their associated Attachments
- K3:** Describe Inspection & Maintenance procedure of different Mechanical Systems in Heavy Machines

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Inspect and service braking system



- Inspect and service hydraulic system
- Inspect and service lubrication system
- Inspect and service cooling system

Tools and Equipment

- Basic tools, such as grease gun
- Hammer
- Screwdrivers
- Pliers
- Self-locking pliers
- Adjustable wrench
- Assorted other wrenches
- Basic supplies, such as grease, oil, window cleaner, rags, ice scraper, whisk broom



073200590 Maintain Machines (with Engine Running)

Overview: This competency standard covers the skills and knowledge required to start engine monitor warning systems, warm up engine, cycle equipment functions, comply with Scheduled Maintenance Requirements and Maintain Logbook.

Competency Units	Performance Criteria
CU1. Start engine monitor warning systems	P1. Identify leaks and burnt lights P2. Select appropriate tools P3. Replace fuses and tighten loose fittings
CU2. Warm up engine	P1. Monitor instrument panel P2. Warm up engine according to manufacturer's instructions
CU3. Check function of different systems	P1. Activate all functions, such as brakes, steering, lights, wipers and hydraulic functions P2. Identify problems with functions P3. Perform required service
CU4. Comply with Scheduled Maintenance Requirements	P1. Comply with safety requirements P2. Read indicators/warning signals and remove the problem P3. Maintain record and documentation P4. Perform scheduled maintenance
CU5. Maintain Logbook	P1. Record fuel consumption P2. Record oil change P3. Record time period/mileage of vehicle for schedule maintenance

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe warning systems of machines
- K2:** Describe different types of machine warning features
- K3:** Describe procedure of engine warming up



- K4:** Describe cycle equipment functions
- K5:** Enlist Techniques of Scheduled Maintenance
- K6:** Describe procedure to maintain Logbook

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Start engine monitor warning systems
- Warm up engine
- Maintain Logbook

Tools and Equipment

- Utility documentation
- Logbooks
- Service Manuals
- Operational Manuals



073200591 Park Machines

Overview: This competency standard covers the skills and knowledge required to Clean under carriage and attachments, Park equipment in appropriate location, shut down and secure equipment, perform housekeeping tasks, and Perform visual inspection.

Competency Units	Performance Criteria
CU1. Clean under carriage and attachments	P1. Clean machine body, wheels, and undercarriage P2. Clean attachments according to manufacturer's specifications and company policy and procedure
CU2. Park equipment in appropriate location	P1. Identify appropriate parking location P2. Park equipment according to manufacturer's policy and procedure P3. Lower the attachments to the ground level according to the company policy and procedure P4. Put paddings under the attachment if the machine is to be parked for longer duration
CU3. Shut down and secure equipment	P1. Shut down equipment according to the manufacturer's instructions. P2. Secure equipment against movement and damage
CU4. Perform housekeeping tasks	P1. Clean wind shields, side rails, steps and instrument panel P2. Sweep floor P3. Remove garbage P4. Apply glass/mirror covers
CU5. Perform visual inspection	P1. Check parked equipment visually P2. Identify existing or potential problems P3. Communicate with appropriate personnel such as supervisor/mechanic



Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Read Manufacturers' instructions
- K2:** Read Company policies and procedures
- K3:** Define importance of cleaning tracks, wheels, rollers, and attachments.
- K4:** Describe suitable and safe parking locations, such as dry and clean surface, level, away from fuel storage or water courses, secure area.

Critical Evidence(s)

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Park machine at appropriate location.
- Switch off and secure machine.
- Perform housekeeping tasks.
- Perform visual inspection.



102200846 Apply Work Health and Safety Practices (WHS)

Overview: This unit describes the skills to work with safety and participate in hazard assessment activities, follow emergency procedures and participate OHS practices in process.

Competency Units	Performance Criteria
CU1. Implement safe work practices at work place	P1. Implement relevant rules and procedures of WHS at work place. P2. Comply with duty of care requirements P3. Use personal protective equipment according to safe work practices P4. Contribute to WHS consultative activities P5. Raise WHS issues with relevant personnel
CU2. Participate in hazard assessment activities a work place	P1. Identify hazards or WHS issues in the workplace to relevant personnel P2. Assess and control risks according to own level of responsibility, in line with workplace procedures P3. Report hazards or WHS issues in the workplace to relevant personnel P4. Document risk control actions as required
CU3. Follow emergency procedures at workplace	P1. Report emergencies or incidents promptly to relevant personnel P2. Deal with emergencies in line with own level of responsibility P3. Implement evacuation procedures as required
CU4. Participate in OHS consultative processes	P1. Contribute to workplace meetings, inspections or other consultative activities P2. Raise OHS (Occupational Health and Safety) issues with designated persons in accordance with organizational procedures
	P3. Take actions to eliminate workplace hazards or to reduce risks



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Outline the WHS rights and responsibilities that apply to own role
- K2:** Explain the term duty of care
- K3:** Describe typical health and safety roles in the workplace
- K4:** List and describe common safety signs and symbols
- K5:** Explain procedures for reporting hazards, risks, incidents and accidents
- K6:** Identify and describe common hazards and major causes of accidents relevant to the workplace
- K7:** Explain what the term risk control means
- K8:** List and describe potential emergency situations and how to respond to them

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

Demonstrate evidences of the Health and safety Processes to avoid any incident.



041700840 Identify and Implement Workplace Policy and Procedures

Overview: This unit describes the skills and knowledge required to develop and implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
CU1. Identify workplace policy & procedures	P1. Identify the workplace policy & procedures P2. Apply appropriate strategies that can be used to measure whether your workplace health and safety obligations are being met. P3. Assure the policies are realistic, resources and personnel to implement P4. Implement the policy & procedures that reflects the organizations commitments P5. Ensure the appropriate methods of implementation, outcomes and performance indicators
CU2. Implement workplace policy & procedures	P1. Apply and assign responsibility for recording systems to track continuous improvements in policy & procedures P2. Implement strategies for continuous improvement in effective and efficient information
CU3. Communicate workplace policy & procedures	P1. Communicate procedures to help implement workplace policy P2. Inform those involved in implementing the policy about expected outcomes, activities to be undertaken and assigned responsibilities
CU4. Review the implementation of workplace policy & procedures	P1. Identify the trends that may require remedial actions P2. Record the trends that may require remedial actions. P3. Ensure policy and procedures as required are made for continuous improvement of performance



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Legislation, regulations and codes of practice applicable to the organization
- K2:** internal and external sources of information and organizational policy & procedures
- K3:** Typical barriers to implementing policies and procedures in an organization.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

Identify evidences of the ability to implement work place policy and procedures. briefly identify work place procedures to avoid incident.



001100852 Communicate at Workplace

Overview: This unit describes the performance outcomes, skills and knowledge required to develop communication skills in the workplace. It covers gathering, conveying and receiving information, along with completing assigned written information under direct supervision.

Competency Units	Performance Criteria
CU1. Communicate within the organization	P1. Communicate within a department P2. Communicate with other departments. P3. Use various media to communicate effectively P4. Communicate orally and written
CU2. Communicate outside the organization	P1. Deal with vendors P2. Deal with clients/customers P3. Interact with other organisations P4. Use various media to communicate effectively P5. Work with people of different cultures / backgrounds
CU3. Communicate effectively in workgroup	P1. Assess the issues to provide relevant suggestion to group members P2. Resolve the issues/ problems /conflicts within the group P3. Arrange group working sessions to increase the level of participation in the group processes P4. Communicate messages to group members clearly to ensure interpretation is valid P5. Communicate style /manner to reflect professional standards/ awareness of appropriate cultural practices P6. Act upon constructive feedback
CU4. Communicate in writing	P1. Identify relevant procedures for written information P2. Use strategies to ensure correct communication in writing. i.e. <ul style="list-style-type: none">• correct composition• clarity• comprehensiveness• accuracy• appropriateness



	<p>P3. Draft assigned written information for approval, ensuring it is written within designated timeframes</p> <p>P4. Ensure written information meets required standards of style, format and detail</p> <p>P5. Seek assistance / feedback to aid communication skills development</p>
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Importance of intra and inter organizational communication
- K2:** Basics of business communication
- K3:** Defining Modes of communication
- K4:** Effective communication in workgroup
- K5:** Communicating through writing
- K6:** The importance of teamwork

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

In your current position, what types of written communication do you use most often? (List them all).



061100858 Perform Computer Application Skills

Overview: This unit describes the skills and knowledge required to use spreadsheet applications, prepare in page documents, develops familiarity with Word, Excel, Access, PowerPoint, email, and computer graphics basics.

It applies to individuals who perform a range of routine tasks in the workplace using a fundamental knowledge of spreadsheets, Microsoft office and computer graphics in under direct supervision or with limited responsibility.

Competency Units	Performance Criteria
CU1. Prepare In-page documents as per required information	P1. Set keyboard preferences according to information requirements P2. Layout Page according to information requirements P3. Toggle between Languages P4. Identify the usage of tool bar P5. Insert Columns as per requirement P6. Print the document
CU2. Prepare Spreadsheets as per required information	P1. Create workbook according to information requirements P2. Insert sheet according to information requirements P3. Enter basic formulae / functions using cell referencing when required P4. Correct formulas when error messages occur P5. Use a range of common tools during spreadsheet development P6. Edit columns and rows within the spreadsheet Filter data P7. Save the spreadsheet to a folder on a storage device P8. Format spreadsheet using formatting features as required P9. Incorporate object and chart in spreadsheet P10. Print spreadsheet
CU3. Use MS Office as per required information	P1. Use Microsoft Word for documentation P2. Use Microsoft Excel for documentation P3. Use Microsoft PowerPoint for presentation P4. Perform OneNote P5. Perform Outlook for emails



	P6. Perform Publisher applications
CU4. Perform computer graphics in basic applications	P1. Perform graphic fundamentals in basic applications P2. Draw Points and lines to make images P3. Draw Dots in space to make images P4. Draw lightening blot Shapes to make images P5. Enlarge circles and rectangles to block in forms
CU5. Create Email account for communications	P1. Make email account for communications P2. . Compose text of an email message according to organizational guidelines as required P3. Create an automatic signature for the user P4. Attach files to email message where required P5. Send email message P6. Reply to / forward a received message using available features P7. Save an attachment to the relevant folder P8. Save email message using available settings P9. Adjust email accounts to restrict and quarantine possible email security problems <ul style="list-style-type: none">• Print email message as per requirements

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** List basic technical terminology related to reading help files and prompts
- K2:** Explain the effect of formatting and appearance on the readability and usability of spreadsheets
- K3:** Outline log-in procedures relating to accessing a personal computer (PC)
- K4:** Describe the purpose, use and function of spreadsheet applications.



K5: Understand **MS Word** to create documents, flyers, publications

K6: Understand **MS PowerPoint** to create presentations

K7: Understand **MS Excel** to store, organize, and manipulate data

K8: Understand **OneNote** to organize data you collect including handwritten notes, drawings, screen captures, audio clips, and more

K9: Understand of Publisher to create extensive publications, posters, flyers, menus

K10: Understand **Outlook** to manage email and calendars, to do lists, and contacts

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Create spreadsheets
- Customize basic settings
- Format spreadsheets
- Apply basic formulas
- Insert objects and charts in spreadsheets
- Save and print spreadsheets.



041300867 Manage Personal Finances

Overview: This unit of competency describes the outcomes required to manage develop, implement and monitor a personal budget in order to plan regular savings and manage debt effectively.

Competency Units	Performance Criteria
CU1. Develop a personal budget	<p>P1. Calculate current living expenses using available information to prepare a personal budget.</p> <p>P2. Keep a record of all income and expenses for a short period of time to help estimate ongoing expenses.</p> <p>P3. Subtract total expenses from total income to determine a surplus or deficit budget for the specified period.</p> <p>P4. Find reasons for a deficit budget and ways to reduce expenditure identified.</p> <p>P5. Identify ways to increase income</p>
CU2. Develop long term personal budget	<p>P1. Analyse income and expenditure and set long term personal financial goals.</p> <p>P2. Develop a long-term budget based on the outcomes of short-term budgeting.</p> <p>P3. Identify obstacles that might affect the business</p> <p>P4. Formulate a regular savings plan based on budget</p>
CU3. Identify ways to maximize future finances	<p>P1. Determine sources to maximize personal income,</p> <p>P2. Get further education or training to maintain or improve future income.</p> <p>P3. Identify the need for debt to finance living and other expenses,</p> <p>P4. Determine the appropriate levels of debt and repayment.</p> <p>P5. Consolidate existing debt, where possible, to minimize interest costs and fees.</p> <p>P6. Seek professional money management services.</p>



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain the abilities to plan and organize to keep records and monitor a personal budget
- K2:** Describe abilities to set and review goals
- K3:** Explain basic financial management and record keeping to enable development and management of a personal budget
- K4:** Describe benefits of financial goal setting and personal budgeting to enable effective management of personal finances
- K5:** Outline numeracy skills to compare income and expenditure

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

Demonstrates competency to provide evidence of the ability to manage personal finances. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.



073200593 Transport Machines

Overview: This competency standard covers the skills and knowledge required to Prepare to load machine and attachments, Load or assist with loading machine and attachments, Assist with securing machine and attachments. Unload or assist with unloading machine and attachments, Prepare rubber-tired machine for road travel, and Drive rubber tired machine on Public roads

Competency Units	Performance Criteria
CU1. Prepare to load machine and attachments	<p>P1. Assess hazards, such as ground and utility lines</p> <p>P2. Prepare machines and attachments for transport, such as clean tracks or wheels or disassemble for transport</p>
CU2. Load or assist with loading machine and attachments	<p>P1. Minimise hazards, such as uneven ground and utility lines</p> <p>P2. Load or assist with loading of machines and attachments</p> <p>P3. Respond to hand signals</p>
CU3. Assist with securing machine and attachments	<p>P1. Protect equipment from damage, such as cover windshield and exhaust pipe</p> <p>P2. Secure attachments, such as bucket</p> <p>P3. Assist transport vehicle driver, as required, to secure machines, attach warning flags and reflectors</p>
CU4. Unload or assist with unloading machine and attachments	<p>P1. Assess and adjust to hazards, such as overhead obstructions, narrow landing areas</p> <p>P2. Unload or assist with unloading machines and attachments</p> <p>P3. Assist transport vehicle driver, as required, to remove tie-down, warning flags and reflectors</p> <p>P4. Clean equipment.</p>
CU5. Prepare rubber-tired machine for road travel	<p>P1. Secure attachments in proper position for road travel</p> <p>P2. Complete inspection, such as check brakes, steering, lights, tires and back-up warnings</p> <p>P3. Clean equipment</p>
CU6. Drive rubber tired machine on public roads	<p>P1. Comply with legislation, such as traffic laws</p> <p>P2. Possess appropriate and valid driver license</p> <p>P3. Read maps</p> <p>P4. Follow route to destination</p> <p>P5. Adjust to road and weather conditions such as adjust speed</p> <p>P6. Recognize and avoid potential hazards</p>



Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Define Loading/unloading techniques
- K2:** Estimate carrying capacities of transport vehicles
- K3:** Describe Road, weather and deck conditions
- K4:** Define Hazards and blocking
- K5:** Describe Hand signals.
- K6:** Describe Tie-down points.
- K7:** Explain limitations on public roads, such as speed and blind spots
- K8:** Define applicable legislation, such as traffic laws
- K9:** Explain Route and destination
- K10:** Define Proper positioning of attachments for road travel

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Prepare to load machine and attachments.
- Load or assist with loading machine and attachments.
- Assist with securing machine and attachments.
- Unload or assist with unloading machine and attachments.
- Prepare rubber-tired machine for road travel.
- Drive rubber tired machine on public roads.



073200594 Operate Bulldozer

Overview: This competency standard covers the skills and knowledge required to Operate Controls, Strip and stockpile surface materials, Cut and fill material, create slopes, create ditches, spread ballast, Rip dense materials, Clear land, and Push scraper

Competency Units	Performance Criteria
CU1. Operate controls	<p>P1. Operate controls smoothly and safely</p> <p>P2. Operate different operating controls simultaneously as required</p> <p>P3. React to changing conditions/situations</p>
CU2. Strip and stockpile surface materials	<p>P1. Distinguish waste layer from structural layer</p> <p>P2. Remove waste layer</p> <p>P3. Move full blade load with optimum capacity</p> <p>P4. Clean up windrows and any remaining waste material</p> <p>P5. Stockpile waste materials.</p>
CU3. Cut and fill material	<p>P1. Estimate the depth of cuts and fills</p> <p>P2. Apply grade checking instruments</p> <p>P3. Cut “humps” and create enough loose material to fill blade before pushing to haulage distance</p> <p>P4. Push material to fill depressions</p> <p>P5. Match blade load with available power and traction</p> <p>P6. Perform rough levelling of ground</p> <p>P7. Eliminate windrows and clean up</p>
CU4. Create slopes	<p>P1. Interpret stakes/specifications</p> <p>P2. Apply grade checking instruments</p> <p>P3. Cut the slope next to each row of stakes</p> <p>P4. Perform heavy cuts down hill</p> <p>P5. Match blade load with available power and traction</p> <p>P6. Apply safe practices regarding stability issues</p> <p>P7. Grade area to a given slope and eliminate windrows and clean up</p>
CU5. Create ditches	<p>P1. Identify the required profile using grade checking instruments</p> <p>P2. Create ditch of specified dimensions</p> <p>P3. Stockpile or blend in material</p> <p>P4. Level the ground roughly, eliminate windrows and clean up</p>



CU6. Spread ballast	P1. Identify dumping location and pattern P2. Match blade load with available power and traction P3. Spread material P4. Grade to requisite level
CU7. Rip dense materials	P1. Rip hard strata P2. Balance ripper load depth & load to available power and traction
CU8. Clear land	P1. Work around obstructions and hazards P2. Clear land in accordance with job specifications
CU9. Push scraper	P1. Balance engine power to load and traction P2. Minimize wear & tear impact, track spinning P3. Assess grade and level P4. Remove obstacles and rocks

Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Explain nomenclature of machine
- K2:** Describe types and sizes of Machines.
- K3:** Describe components and functions of Machines.
- K4:** Define capacities & capabilities of Machines.
- K5:** Describe attachments and its purposes.
- K6:** Describe basic tools and supplies.
- K7:** Describe Safety equipment.
- K8:** Describe daily maintenance work
- K9:** Describe Machine emergency shut-down procedure.
- K10:** Define basic operating functions.
- K11:** Explain Pre-start checks, Start-up/Shutdown Procedures.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Operate Controls



- Strip and stockpile surface materials
- Cut and fill material
- Create slopes
- Create ditches
- Spread ballast
- Rip dense materials
- Clear land
- Push scraper

Tools and Equipment

- Bulldozer
- Color-code cards
- Utility documentation
- Logbooks
- Service Manuals
- O. H. S Regulation



073200595 Operate Wheel Loader

Overview: This competency standard covers the skills and knowledge required to Install Attachments, Operate Controls, Dig, Carry (tram) & Stockpile Materials. Place and Spread materials, backfill trenches & Excavate, and Load Trucks.

Competency Units	Performance Criteria
CU1. Install Attachments	P1. Select appropriate tools P2. Position equipment and attachment for installation P3. Respond to hand signals P4. Install attachments safely
CU2. Operate Controls	P1. Operate controls smoothly and safely P2. Operate different operating controls simultaneously as required P3. React changing conditions/situations
CU3. Dig, Carry (tram) & Stockpile Materials	P1. Fill bucket in loose material P2. Carry loose material to a short distance P3. Place material in a stockpile P4. Maintain smooth pit floor/running surface
CU4. Place and Spread materials	P1. Load bucket quickly and fully in loose material P2. Carry loose material to a short distance P3. Spread material P4. Maintain smooth pit floor/running surface
CU5. Backfill trenches & Excavate	P1. Place backfill material P2. Manage piles of imported aggregates to minimize waste P3. Spread materials at the work site P4. Excavate soft soil strata
CU6. Load Trucks	P1. Arrange the loading site P2. Maintain the pit floor, level, smooth and clear of obstructions P3. Load smoothly and gently P4. Communicate with signaller P5. Load truck as per capacity



Knowledge and Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Describe types and sizes of Wheel loader.
- K2:** Describe components and their functions.
- K3:** Describe capacities & capabilities.
- K4:** Describe attachments and purposes.
- K5:** Describes basic tools and supplies.
- K6:** Describe Safety equipment.
- K7:** Explain daily maintenance work
- K8:** Describe Machine emergency shut-down procedure.
- K9:** Describe basic operating functions.
- K10:** Define Pre-start checks, start-up/shutdown procedures.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Install attachments
- Operate controls
- Dig, carry (tram) & stockpile materials
- Lift and place, spread, & grade materials
- Backfill trenches & excavate
- Load trucks



102200848 Contribute to Work Related Health and Safety (WHS) Initiatives

Overview: This unit describes the skills and knowledge required to manage the identification, review, development, implementation and evaluation of effective participation and consultation processes as an integral part of managing work health and safety (WHS).

Competency Units	Performance Criteria
<p>CU1. Contribute to initiate work-related health and safety measures</p>	<p>P1. compile database on work-related health and safety</p> <p>P2. Identify measures that address legal obligations.</p> <p>P3. Consult with individuals/ parties to formulate measures and initiatives</p> <p>P4. Consult with individuals/parties to identify factors impacting on work-related health and safety</p> <p>P5. Participate in consultative meetings.</p>
<p>CU2. Contribute to establish work-related health and safety measures</p>	<p>P1. Assist in planning of work-related health and safety measures</p> <p>P2. Contribute to the development of work-related health and safety measures</p> <p>P3. Identify to implement work-related health and safety measures i.e.</p> <ul style="list-style-type: none"> • resourcing requirements, • timelines • responsibilities <p>P4. Assist to implement work-related health and safety measures and initiatives i.e.</p> <ul style="list-style-type: none"> • scheduling • liaison • administering resources • communication
<p>CU3. Contribute to ensure legal requirements of WHS measures</p>	<p>P1. Identify WHS legal requirements</p> <p>P2. Apply knowledge of all aspects of WHS measures to</p> <ul style="list-style-type: none"> • Consultation • workplace policies • participation processes <p>P3. Ensure, WHS measures are in accordance with legal</p>



	requirements
CU4. Contribute to review WHS measures	<p>P1. Develop effective practices to review work-related health and safety measures</p> <p>P2. Assist individuals and parties related to WHS measures in following activities</p> <ul style="list-style-type: none">• preparing reports• communicating review• evaluating outcomes
CU5. Evaluate the organization's WHS system	<p>P1. Assess ongoing compliance with OHS (Occupational Health and safety)</p> <p>P2. Take feedback from concerned persons regarding WHS measures.</p> <p>P3. Assess the overall effectiveness of WHS management practices</p> <p>P4. Assist the development process of WHS measures in following ways</p> <ul style="list-style-type: none">• Suggest amendments• Document amendments• Implement amendments <p>P5. Take feedback from concerned persons regarding WHS measures.</p> <p>P6. Communicate improvements in WHS Measures</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Explain the application of relevant mandatory health monitoring, including biological monitoring, to help secure work health and safety
- K2:** Explain the difference between work-related health and safety measures and initiatives designed to meet specific legislative requirements and obligations, and those designed to support non-statutory health promotion programs, and give examples of each



- K3:** List factors that impact on work-related health and safety and their potential effects
- K4:** Identify internal and external sources of WHS information and data, and how to access them
- K5:** Outline organizational WHS and other relevant policies, procedures, processes and systems, including human resources
- K6:** Summarize relevant WHS legislation, other legislation (such as privacy and workers compensation) and common law rights and duties specific to work-related health and safety measures and initiatives
- K7:** Describe work-related health and safety measures and initiatives that either address specific legislative requirements and obligations, or support non-statutory health prevention programs, including:
 - The factors impacting on worker health and safety that they address
 - Effectiveness
 - Costs and benefits
 - Criteria for decisions regarding their implementation in a specific workplace
 - How they should be implemented.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to contribute work-related health and safety measures and initiatives. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.



041700841 Comply with Workplace Policy and Procedures

Overview: This unit describes the skills and knowledge required to implement a workplace policy & procedures and to modify the policy to suit changed circumstances. It applies to individuals with managerial responsibilities who undertake work developing approaches to create, monitor and improve strategies and policies within workplaces and engage with a range of relevant stakeholders and specialists.

Competency Units	Performance Criteria
CU1. Manage work timeframes	P1. Complete work tasks within deadlines in according to order of priority P2. Supervisors are informed of any delays in work times or projects
CU2. Manage to convene meeting	P1. Develop agenda in line with meeting purpose P2. Select participants and notify them accordingly P3. Carryout meeting arrangements according to the time P4. Record the minutes of the meeting
CU3. Decision making at workplace	P1. Identify the problem, challenge or opportunity P2. Generate an array of possible solutions or responses P3. Evaluate the costs and benefits associated with each option P4. Assess the impact of the decision and modify the course of action as needed
CU4. Set and meet own work priorities at instant	P1. Take initiative to prioritize and facilitate competing demands to achieve organizational goals and objectives P2. Use technology efficiently and effectively to manage work priorities and commitments P3. Maintain appropriate work-life balance
CU5. Develop and maintain professional competence	P1. Assess personal knowledge and skills against competency P2. Participate in networks to enhance personal knowledge, skills and work relationships P3. Seek feedback from employees, clients and colleagues to develop and improve competence



CU6. Follow and implement work safety requirements	P1. Identify and report emergency incidents P2. Practice organizational policy and procedures for responding to emergency incidents P3. Identify and implement workplace procedures and work instructions for controlling risks
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Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard.

This includes the knowledge of:

- K1:** Healthy work life balance
- K2:** Meeting terminologies, structures and arrangements
- K3:** Relevant organizational procedures and policies regarding meetings, chairing and minutes.
- K4:** Barriers to implement policies and procedures in an organization and possible strategies to address them.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to understand workplace policy and procedures. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments



001100853 Perform Advanced Communication

Overview: This unit describes the performance outcomes, skills and knowledge required to develop communication skills used professionally. It covers plan and organise work and conduct trainings at workplace, along with demonstrating professional skills independently.

Competency Units	Performance Criteria
CU1. Demonstrate professional skills	P1. Use different modes of communication to communicate <ul style="list-style-type: none">• Speaking• Reading• Writing• Listening• Presentation• visual representation etc P2. Develop CV Skills according requirements P3. Upgrade professional skills by attending trainings, webinars, conferences etc. P4. Perform Continuous professional development as required at workplace P5. Develop interview skills
CU2. Plan and Organize work	P1. Identify task requirements. P2. Plan steps to complete tasks. P3. Review planning and organizing process. P4. Organize work.
CU3. Provide trainings at workplace	P1. Assess the need for training P2. Prepare trainees for the learning experience P3. Present training session P4. Support trainees in managing their own learning P5. Facilitate group learning P6. Provide opportunity for practice P7. Provide feedback on progress on trainees P8. Review delivery experience



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explaining the training skills
- K2:** Identification of the professional skills
- K3:** Describing the advanced language skills
- K4:** Understanding of the assessment and trainees feedback methods
- K5:** Direct and indirect communication methods
- K6:** Explaining the need of the training type at the work place

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Job sheet
- Office emails and coordination reports
- Feedback proforma



061100858 Develop Advance Computer Application Skills

Overview: This unit provides an overview of Microsoft Office programs to create personal, academic and business documents following current professional and/or industry standards, i.e. Data Entry, Power Point Presentation and managing data base and graphics for Design

It applies to individuals employed in a range of work environments who need to be able to present a set range of data in a simple and direct forms

Competency Units	Performance Criteria
CU1. Manage Information System to complete a task	P1. Perform Data Entry in MS office P2. Manage File/folder in MS office P3. Perform Scanning of document P4. Maintain Office Record in drives P5. Perform Printing of document P6. Search required Files/Folders P7. Convert Files in required format. P8. Manage sizes of Files/Folders <ul style="list-style-type: none">• Compress• Zip /unzip
CU2. Prepare Presentation using computers	P1. Prepare presentation as per requirements, i.e. <ul style="list-style-type: none">• Open blank presentation and add text / graphics• Create a simple design for a presentation• Apply existing styles within a presentation• Use presentation template and slides to create a presentation• Use various tools to improve the look of the presentation• Save presentation to the appropriate storage device and folder with required name P2. Customize basic settings to meet user requirements P3. Format presentation as require <ul style="list-style-type: none">• Develop organizational charts• Add objects and manipulate to meet presentation purposes• Modify slide layout, including text and colours, to meet



	<p>presentation requirements</p> <ul style="list-style-type: none">• Save presentation in another format• Save to storage device and close presentation <p>P4. Add slide show effect into presentation as required to enhance the presentation</p> <ul style="list-style-type: none">• Incorporate pre-set Animation• Apply Multimedia effects• Record Narration• Apply hyperlink• Apply video• Rehearse Timings• Test presentation for overall effect <p>P5. Print the presentation</p> <ul style="list-style-type: none">• Select appropriate print format for presentation• Select preferred slide orientation• Add notes and slide numbers• Preview slides and run spell check before presentation• Print selected slides and submit presentation to appropriate person for feedback <p>P6. Practice verbal presentation</p> <p>P7. Practice presentation through AV Aids</p>
<p>CU3. Use Microsoft Access to manage database</p>	<p>P1. Collect the data using a standard data base package.</p> <p>P2. Start access to manage database i.e.</p> <ul style="list-style-type: none">• identify problem statement of Data• Develop a table with fields /attributes according to database usage/ user requirements• Create a primary key and establish an index for each table• Modify table layout and field attributes as required• Create a relationship between the two tables• Add data in a table according to information requirements• Add records as required• delete records as required• Save database to storage area



	<ul style="list-style-type: none">• close down database to storage area• Apply criteria in the following Query• SQL view of Query• Wildcards of query• Query Criteria <p>P3. Customize basic settings:</p> <ul style="list-style-type: none">• Adjust page layout to meet user requirements• Open and view different toolbars• Format font as appropriate for the purpose of the database entries• Create reports• Design reports to present data in a logical sequence• Modify reports to include or exclude additional requirements• Distribute reports to appropriate person in a suitable format <p>P4. Create forms</p> <ul style="list-style-type: none">• Use a wizard to create a simple form• Open existing database and modify records through a simple form• Rearrange objects within the form to accommodate information requirements
<p>CU4. Develop graphics for Design</p>	<p>P1. Develop graphic design concepts based on a thorough understanding of the communication need</p> <p>P2. Use design techniques confidently to produce designs</p> <p>P3. Integrate design tools skilfully to produce designs</p> <p>P4. Evaluate the success of completed designs to meet objectives</p> <p>P5. evaluate feedback from client / peers</p>



Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out the tasks covered in this competency standard. This includes the knowledge of:

- K1:** List basic technical terminology to read help files and prompts
- K2:** Outline the different types of formal and informal presentations
- K3:** Explain Power point presentation
- K4:** Segregation of Data
- K5:** Define the relation among data
- K6:** Define criteria in the query
- K7:** Creates and modify reports and forms.
- K8:** Outline basic database design principles
- K9:** Current graphic design software
- K10:** Discuss features of current and emerging technologies used in graphic design practice and the options they present for effective graphic design solution

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Design and develop a simple database using a standard database package
- Create, format and prepare presentations for distribution and display
- Customize basic settings
- Add slide show effects.
- Generate employment report from given data by using Microsoft Access.



041300869 Manage Human Resource Services

Overview: This unit describes the skills and knowledge required to plan, manage and evaluate delivery of human resource services, integrating business ethics. It applies to individuals with responsibility for coordinating a range of human resource services across an organization. They may have staff reporting to them.

Competency Units	Performance Criteria
<p>CU1. Determine strategies for delivery of human resource services</p>	<p>P1. Analyse business strategy and operational plans to determine human resource requirements</p> <p>P2. Review external business environment that likely impact on organization’s human resource requirements</p> <p>P3. Consult line and senior managers to identify human resource needs in their areas</p> <p>P4. Review organization’s requirements for diversity in the workforce</p> <p>P5. Deliver human resource services that comply with business goals</p> <p>P6. Develop strategic action plan for delivery of human resource services</p> <p>P7. Develop roles and responsibilities of human resource team</p> <p>P8. Develop quality assurance policy</p>
<p>CU2. Manage the delivery of human resource services</p>	<p>P1. Communicate human resource strategies and services to internal and external stakeholders</p> <p>P2. Develop and negotiate service agreements between</p> <ul style="list-style-type: none"> • The human resource team, • Service providers • Client groups <p>P3. Document service specifications, performance standards and timeframes</p> <p>P4. Document /communicate service</p> <ul style="list-style-type: none"> • Specifications, • Performance standards • Timeframes <p>P5. Monitor Quality assurance processes</p> <p>P6. Ensure that services are delivered by appropriate providers,</p>



	<p>according to service agreements and operational plans</p> <p>P7. Identify underperformance of human resource team or service providers</p>
<p>CU3. Evaluate human resource service delivery</p>	<p>P1. Establish Management information system for human resource services</p> <p>P2. Conduct survey to determine level of satisfaction</p> <p>P3. Analyse feedback of survey</p> <p>P4. Recommend changes to service delivery</p> <p>P5. Support agreed change processes across the organization</p>
<p>CU4. Manage integration of business ethics in human resource practices</p>	<p>P1. Ensure ethics in personal behaviour</p> <p>P2. Ensure code of conduct is observed across the organization,</p> <p>P3. Observe confidentiality requirements in dealing with all human resource information</p> <p>P4. Deal promptly with unethical behaviour</p> <p>P5. Ensure all persons responsible for human resource functions understand requirements regarding their ethical behaviour</p>

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Identify the key provisions of legal and compliance requirements that apply to managing human resources
- K2:** Summarize the organization's code of conduct
- K3:** Explain human resource strategies and planning processes and their relationship to business and operational plans
- K4:** Describe performance and contract management
- K5:** Explain how feedback is used to modify the delivery of human resources.



Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to manage human resource services. The evidence should integrate employability skills with workplace tasks and job roles and verify competency is able to be transferred to other circumstances and environments.

Performance requirements

This competency is to be assessed using standard and authorized work practices, safety requirements and environmental constraints. Demonstrated evidence is required of the ability to:

- Plan and manage human resource delivery within legislative, organizational and business ethics frameworks
- Communicate effectively with a range of senior personnel
- Identify and arrange training support where appropriate
- Calculate human resource return on investment within the organization.



041300860 Develop Entrepreneurial Skills

Overview: This Competency Standard identifies the competencies required to develop entrepreneurial skills, in accordance with the organization's approved guidelines and procedures. You will be expected to develop a business plan, collect information regarding funding sources, develop a marketing plan and develop basic business communication skills. Your underpinning knowledge regarding entrepreneurial skills will be sufficient to provide you the basis for your work.

Competency Units	Performance Criteria
CU1. Develop a business plan	<p>P1. Conduct a market survey to collect following information</p> <ul style="list-style-type: none">• Customer /demand• Tools, equipment, machinery and furniture with rates• Raw material• Supplier• Credit / funding sources• Marketing strategy• Market trends• Overall expenses• Profit margin <p>P2. Select the best option in terms of cost, service, quality, sales, profit margin, overall expenses</p> <p>P3. Compile the information collected through the market survey, in the business plan format</p>
CU2. Collect information regarding funding sources	<p>P1. Identify the available funding sources based on their terms and conditions, maximum loan limit, payback time, interest rate</p> <p>P2. Choose the best available option according to investment requirement</p> <p>P3. Prepare documents according to the loan agreement requirement</p> <p>P4. Include the information of funding sources in the business plan</p>
CU3. Develop a marketing plan	<p>P1. Make a marketing plan for the business including product, price, placement, promotion, people, packaging and positioning</p>



	P2. Include the information of marketing plan in the business plan
CU4. Develop basic business communication skills	P1. Communicate with internal customers e.g.: labour, partners and external customers e.g.: suppliers, customers etc., using effective communication skills P2. Use different modes of communication to communicate internally and externally e.g.: presentation, speaking, writing, listening, visual representation, reading etc. P3. Use specific business terms used in the market

Knowledge and Understanding

The candidate must be able to demonstrate underpinning knowledge and understanding required to carry out tasks covered in this competency standard. This includes the knowledge of:

- K1:** Explain the 7ps of marketing including product, price, placement, promotion, people, packaging and positioning
- K2:** Describe 7Cs of business communication
- K3:** Define different modes of communication and their application in the industry
- K4:** Enlist specific business terms used in the industry
- K5:** Enlist the available funding sources
- K6:** Explain how to get loan to start a new business
- K7:** Explain market survey and its tools e.g.: questionnaire, interview, observation etc
- K8:** Describe the market trends for specific product offering
- K9:** State the main elements of business plan
- K10:** Explain how to fill the business plan format

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) to be competent in this competency standard:

A person who demonstrates competency in this unit must be able to provide evidence of the ability to develop Entrepreneurial Skills.



Performance requirements

- Conduct market survey and formulate business plans in terms of feasibility, investment potential, risk, and completeness.
 - Demonstrate the use of both verbal and non-verbal business communication.
- Effectively present business ideas and profile



073200597 Operate Excavator

Overview: This competency standard covers the skills and knowledge required to Comply with safety requirements, Sets up equipment, Install attachments, Operate controls of Wheel Excavator, Operate controls of Crawler Excavator, Create Slopes, Build, excavate, and maintain haul roads and ramps, Create mass Excavation, Excavate trenches, Excavate ditches Load Trucks, Cut and fills materials, Stock piles materials, Excavate Back fills trenches, Hoist objects, Clear land, Demolish buildings and other structures, and Monitor performance of equipment

Competency Units	Performance Criteria
CU1. Comply with safety requirements	P1. Operate safety controls and equipment. P2. Respond to caution, warning and hazard signs, lights and symbols.
CU2. Set up equipment	P1. Adjust factors affecting safe operation of equipment. P2. Maintain stability of equipment. P3. Position equipment correctly. P4. Communicate with traffic control person.
CU3. Install attachments	P1. Select appropriate tools. P2. Position equipment and attachment for installation. P3. Respond to hand signals P4. Install attachments safely.
CU4. Operate controls of Wheel Excavator	P1. Operate control smoothly and safely P2. Operate different operating controls simultaneously as required. P3. React to changing conditions/situations.
CU5. Operate controls of Crawler Excavator	P1. Operate control smoothly and safely P2. Operate different operating controls simultaneously as required. P3. React to changing conditions/situations.
CU6. Create Slopes	P1. Interpret specifications of slope. P2. Practice grade checking instruments P3. Fill cuts in the slope with a partial bucket technique.
CU7. Build, excavate, and maintain haul roads	P1. Work around obstructions and hazards. P2. Practice grade checking devices.



and ramps	<p>P3. Protect existing structures and utilities.</p> <p>P4. Build, excavate or maintain haul roads and ramps in accordance with job specifications.</p>
CU8. Create mass Excavation.	<p>P1. Adopt laser location for line of sight as excavation progresses.</p> <p>P2. Perform straight edges and stable sides.</p> <p>P3. Dig offset from footing location.</p> <p>P4. Keep the machine level.</p> <p>P5. Level to very fine tolerance.</p> <p>P6. Adopt partial bucket technique.</p>
CU9. Excavate trenches	<p>P1. Work around site obstructions and hazards.</p> <p>P2. Maintain equipment in stable position and correct location for job.</p> <p>P3. Practice grade checking devices.</p> <p>P4. Excavate trench in accordance with job specifications.</p> <p>P5. Respond to hand signals.</p>
CU10. Excavate ditches	<p>P1. Work around site obstructions and hazards.</p> <p>P2. Maintain equipment in stable position and correct location for job.</p> <p>P3. Practice grade checking devices.</p> <p>P4. Excavate ditches in accordance with job specifications.</p> <p>P5. Respond to hand signals.</p>
CU11. Load Trucks	<p>P1. Work around obstructions and hazards.</p> <p>P2. Direct loading vehicle operators.</p> <p>P3. Align according to the position of truck.</p> <p>P4. Load transport vehicles in accordance with job specifications.</p> <p>P5. Respond to hand signals</p>
CU12. Cut and fills materials	<p>P1. Work around site obstructions and hazards</p> <p>P2. Position equipment correctly</p> <p>P3. Practice grade checking devices</p> <p>P4. Cut and fill material in accordance with job specifications</p> <p>P5. Tamp the filled material</p> <p>P6. Respond to hand signals</p>
CU13. Stock piles materials	<p>P1. Work around site obstructions and hazards</p> <p>P2. Stockpile material in accordance with jobs specifications</p>
CU14. Excavate and Back	<p>P3. Work around site obstructions and hazards</p>



<p>fills trenches</p>	<p>P4. Ensure that structures or utility lines are not damaged during backfilling</p> <p>P5. Maintain stability of equipment</p> <p>P6. Level or layer the material</p> <p>P7. Practice grade checking devices</p> <p>P8. Backfill trenches/excavations in accordance with job specifications</p> <p>P9. Respond to hand signals</p>
<p>CU15. Hoist objects</p>	<p>P1. Inspect rigging (ropes) components visually</p> <p>P2. Identify and discard worn or damaged rigging components</p> <p>P3. Communicate with appropriate personnel to replace worn or damaged components</p> <p>P4. Work around obstructions and hazards</p> <p>P5. Set up equipment in stable position and correct location for jobs.</p> <p>P6. Hoist materials in accordance with manufacturer's specifications job specifications and legislation</p> <p>P7. Respond to hand signals</p>
<p>CU16. Clear land</p>	<p>P1. Work around obstructions and hazards</p> <p>P2. Install attachments</p> <p>P3. Maintain haul roads as required</p> <p>P4. Clear land in accordance with job specifications.</p>
<p>CU17. Demolish buildings and other structures</p>	<p>P1. Work around obstructions and hazards</p> <p>P2. Position equipment safely while demolition and always have means of exist</p> <p>P3. Demolish structures and remove demolished materials in accordance with job specifications</p> <p>P4. Respond to hand signals</p>
<p>CU18. Monitor performance of machines</p>	<p>P1. Interpret information from gauges and symbols</p> <p>P2. Monitor performance using own senses</p> <p>P3. Identify equipment problems</p>



Knowledge & Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore, he/she must be able to:

- K1:** Describe types and sizes of Machines.
- K2:** Describe components and functions.
- K3:** Explain capacities & capabilities.
- K4:** Describes attachments and purposes.
- K5:** Define basic tools and supplies.
- K6:** Explain safety equipment.
- K7:** Describe daily maintenance work
- K8:** Define Machine emergency shut-down procedure.
- K9:** Describe basic operating functions.
- K10:** Explain Pre-start checks, start up and shutdown procedures.

Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Install attachments
- Operate controls of Wheel Excavator
- Operate controls of Crawler Excavator
- Create Slopes
- Create mass Excavation.
- Excavate trenches
- Excavate ditches
- Load Trucks
- Cut and fills materials
- Stock piles materials
- Excavate and back fill trenches
- Hoist objects
- Clear land
- Demolish buildings and other structures.

**073200598 Operate Motor Grader**

Overview: This competency standard covers the skills and knowledge required to Operate Controls, Apply Grading Fundamentals, Form and handle windrows, Strip surface materials, Cut and fill material, maintain access roads, create slopes, create ditches, create shouldering, Form sub-grade, Place aggregates to specified elevations (finish grading), and Clear snow.

Competency Units		Performance Criteria
CU1. Operate Controls		P1. Operate controls smoothly and safely P2. Operate different operating controls simultaneously as required P3. React to changing conditions/situations
CU2. Apply Grading Fundamentals		P1. Apply wheel lean control P2. Apply frame articulation fundamentals P3. Select gear and engine speed P4. Apply grading tips
CU3. Form and handle windrows		P1. Choose gear and engine speed P2. Choose blade position P3. Cut material to form a windrow P4. Move material back over area
CU4. Strip surface materials		P1. Distinguish waste layer from structural layer P2. Strip waste materials (usually organic) P3. Finish windrows of stripped material
CU5. Cut and fill material		P1. Estimate the height of cut and fill P2. Choose blade tilt, angle and position P3. Cut heights P4. Match blade load to available power and traction P5. Move material to low areas P6. Grade area to desired profile
CU6. Maintain access roads		P1. Identify drainage structures, culverts and obstacles P2. Adjust windrow to allow traffic to continue P3. Choose blade position, wheel lean, articulation, gear and



	<p>speed</p> <p>P4. Reshape and recover materials for the road surface</p> <p>P5. Cut shoulders and move material to centre or from one side to another</p>
CU7. Create slopes	<p>P1. Identify required slope</p> <p>P2. Apply grade checking instruments</p> <p>P3. Choose blade position, wheel lean, articulation, gear and speed</p> <p>P4. Smooth the area at the base of the slope for smooth working platform</p> <p>P5. Start at the top of slope</p> <p>P6. Shape the shoulder accurately</p>
CU8. Create ditches	<p>P1. Identify the required profile using grade checking instruments</p> <p>P2. Choose blade position, wheel lean, articulation, gear and speed</p> <p>P3. Shape ditch by repeated passes</p>
CU9. Create shouldering	<p>P1. Choose blade position, wheel lean, articulation, gear and speed</p> <p>P2. Position grader with outer tires on pavement, and inner tires just off pavement on shoulder for left side shoulder</p> <p>P3. Position grader with inner tires on pavement, and outer tires just off pavement on shoulder for right side shoulder</p> <p>P4. Move only enough material to pavement edge to dress the shoulder</p> <p>P5. Roll the windrow back away from the pavement edge</p> <p>P6. Shape the shoulder accurately</p>
CU10. Form sub-Grade	<p>P1. Choose blade tilt, angel and position</p> <p>P2. Match blade load to available power and traction</p> <p>P3. Remove unsuitable material</p> <p>P4. Cut and fill load bearing soils to create desired profile</p> <p>P5. Shape for drainage and ditch as required</p>
CU11. Place aggregates to specified elevations (finish grading)	<p>P1. Identify the required profile using grade checking instruments</p> <p>P2. Get the correct volume in the efficient placement</p> <p>P3. Position for efficient spreading</p>



	<p>P4. Get correct volume of aggregates</p> <p>P5. Shift the circle and blade towards the piles</p> <p>P6. Cut out windrows only as large as the machine can handle without tire spinning</p> <p>P7. Angle the blade as appropriate</p> <p>P8. Precise control to achieve elevations and shape to very accurate tolerances</p>
CU12. Clear snow and ice	<p>P1. Choose proper attachment, as chains, V-plow, wing plow, skid shoes and wing gates</p> <p>P2. Identify snow type, moisture content, density, weight, depth of snow, underlying surface, weather, visibility, traffic, obstacles and hidden structures</p> <p>P3. Mount chain on tires carefully</p> <p>P4. Drive the machine in higher speed to move snow across and off the blade</p>

Knowledge & Understanding

The candidate must possess underpinning knowledge and understanding required to carry out tasks covered in this competency standard. Therefore he/she must be able to:

- K1:** Describe types and sizes of Machines.
- K2:** Describe components and functions.
- K3:** Define capacities & capabilities.
- K4:** Describe attachments and its purposes.
- K5:** Describe basic tools and supplies.
- K6:** Describe safety equipment.
- K7:** Explain daily maintenance work
- K8:** Describe Machine emergency shut-down procedure.
- K9:** Define basic operating functions.
- K10:** Explain Pre-start checks, start up and shutdown procedures



Critical Evidence(s) Required

The candidate needs to produce following critical evidence(s) in order to be competent in this competency standard:

- Operate Controls.
- Strip surface materials.
- Cut and fill material.
- Maintain access roads.
- Create slopes.
- Create ditches.
- Create shouldering.
- Form road base (sub-grade).
- Place aggregates to specified elevations (finish grading).



Complete List of Tools and Equipment

List of Machines and Tools

Sr. #	Description
1.	Steel-toed footwear,
2.	hard hat,
3.	safety gloves,
4.	appropriate safety glasses,
5.	high visibility vest,
6.	hearing protection,
7.	breathing apparatus,
8.	De-electric boots and gloves for protection from electrical shock.
9.	fall protection, and other applicable PPE
10.	Site emergency response plan,
11.	fire extinguishers,
12.	fire blankets,
13.	respirators, masks,
14.	fire hoses,
15.	first aid kits, stretchers, WHMIS book, and other related tools and gear
16.	basic tools, such as grease gun,
17.	hammer,
18.	screwdrivers,
19.	pliers,
20.	self-locking pliers,
21.	adjustable wrench,
22.	assorted other wrenches, measuring tape(100m)
23.	Basic supplies, such as grease, oil, window cleaner, rags, ice scraper, whisk broom.
24.	Colour-code cards, utility documentation. Logbooks Service Manuals, OHS Regulation,
MACHINES	
1	A. Bulldozer. Attachments: - 1. Blades. 2. Ripper



Sr. #	Description
2	B. Excavator (Wheel & Crawler). Attachments: - 1. Buckets. 2. Grapppler. 3. Coupler. 4. Thumbs. 5. Pulverize. 6. Lifting. 7. Rakes. 8. Chuck 9. Blades. 10. Ripper. 11. Forks. 12. Adapter. 13. Hammer. 14. Auger. 15. Compactor. 16. Stump Harvester.
3	C. Motor Grader. Attachments: - 1. Angle Blade. 2. Lift Group. 3. One-way Plow. 4. Snow Gate. 5. Snow Wing. 6. Straight Blade, 7. UV Angle Blade. 8. V-Plow
4	D. Wheel Loader. Attachments: - 1. Coupler. 2. Dozer Blade. 3. Boom Poles. 4. Bucket. 5. Fork. 6. Grapppler. 7. Snow Blade, 8. Trailer Hitches. 9. Rotary Sweeper. 10. Broadcast Spreader

Specification of Machines & Consumable

Bulldozer Specification & Consumable

S.#	Length (mm)	D50A-17	D65A-8	D85-18/D85A	D155A-1
1.	Overall Length	4765	5135	5750	6880
2.	Overall Width	2145	3970	3725	4130
3.	Overall Height	2900	3020	3395	3720
4.	Overall Op Weight	12240	15890	23510	33690
5.	Ground Clearance	315	400	400	500
6.	Track Shoes Width	460	460	560	560
7.	Grade Ability (degree)	30	30	30	30
8.	Ground Pressure (kg/cm ²)	0.62	0.67	0.62	0.77
9.	Horse Power	120	165	220	320
10.	Type of Dozer	Angle	Tilt	Tilt	Tilt
11.	Fuel (LT)	250	320	450	660
12.	Engine Oil (LT)	30	30	43	71
13.	Hydraulic Oil (LT)	87	108	110	164
14.	Transmission Oil (LT)	18	52	122	185
15.	Cooling Water (LT)	52	63	79	165
16.	Steering Oil (LT)	63	70	Nil	Nil
17.	Final Drive Case Oil (LT)	52 (26 each side)	62 (31 each side)	72 (36 each side)	110 (55 each side)



Excavator Specification & Consumable

S#	Specification	PC120	PC150	PC200
1	Bucket Capacity (m ³)	0.50m ³	0.55m ³	0.7m ³
2	Operating Weight (Kg)	12030kg	14500kg	18000kg
3	Overall Length (mm)	7050	8350	9380
4	Overall Width (mm)	2500	2550	2740
5	Overall Height (mm)	2700	2900	2940
6	Swing Speed (rpm)	20	19.6	13
7	Travel Speed (Km/h)	3km/h	3.2km/h	3.5km/h
8	Grade ability (Degree)	25 % to 30%	35%	35%
9	Ground Pressure (Kg/cm ²)	0.45 Kg/cm ²	0.47 Kg/cm ²	0.47 Kg/cm ²
10	Max. Excavation (mm)	3060	5400	6550
11	Max. Stockpile (mm)	4420mm	5530mm	6255mm
12	Max. Stretch (mm)	7050mm	8440mm	9850mm
13	Horsepower (HP)	85.4 HP	86 HP	106 HP
14	Fuel Capacity (LT)	230LT	280 LT	540 LT
15	Engine Oil (LT)	11 LT	24LT	24LT
16	Hydraulic Oil (LT)	100LT	250LT	250LT
17	Swing case Oil (LT)	2.5LT	7LT	8LT
18	Water (Lt)	15.7LT	24LT	24LT
19	Track Chain Pulley	20 to 25mm	20 to 25mm	60 to 100mm
20	Final Drive	Each side	Each side	Each side
		2.5 LTR	2.5 LTR	7.4 LTR

Motor Grader Specification & Consumable

S.#	Detail	MG200	MG330	MG430	GD-605-A3
1.	Heaped Blade Capacity	3.06 m ³	3.9 m ³	1.01 m ³	3.9 m ³
2.	HP (Horse Power)	115 hp	135 hp	155 hp	145 hp
3.	Op/Weight	9885 kg	10920 kg	12220 kg	12870 kg
4.	Fuel	210 ltr	230ltr	275 ltr	250 ltr
5.	Engine Oil	12 ltr	13 ltr	13 ltr	24 ltr
6.	Hydraulic Oil	70 ltr	67 ltr	67 ltr	60 ltr R/Fel
7.	Transmission	40 ltr	23 ltr	32 ltr	30 ltr
8.	Water	21 ltr	34 ltr	46 ltr	45 ltr



9.	Tire Pressure	2.25	1.8	2.6	2.45kg
10.	Gear Oil/Final Drive	2.5 ltr	3.4 ltr	3.5 ltr	26 CTR
11.	Tandem Oil	48 ltr	73 ltr	85 ltr	72 tr 36X36

Wheel Loader Specification & Consumable

S#	Items	WA450	WA320	WA200	966F cat	928Fcat
1	Horsepower (HP)	237	165	110	220	120
2	Operating Weight (Kg)	19100	13450	92100	20905	11148
3	Bucket Capacity (m3)	3.5	2.8	1.7	3.8	2
4	Grade ability (Degree)	30	35	33	35	35
5	Speed/Hour	34-38	38	37	48	45
6	Fuel (LT)	330	228	170	304	189
7	Engine Oil (LT)	32	19.5	24	28	20
8	Hydraulic Oil (LT)	230	89	83	205	100
9	Transmission Oil (LT)	61	74	35	59	30
10	Cooling Water (LT)	65	20	38	48	41
11	F/R Axial oil (LT)	120	48	34	47	50
12	Tire Pressure (Kg/cm2)	2.8	2.5	2.5	2.8	2.5



List of Stationary

Sr. #	Description
1.	Handbooks
2.	Design books
3.	Pencils
4.	Rubber
5.	Sharpener
6.	Paper Cutter
7.	Seizers
8.	Colours
9.	White charts
10.	Brown sheets
11.	White board markers
12.	Permanent markers
13.	File cover and files

