



National Competency Standards Level-5  
for  
"Tunnel Farming, Green House & Agri Business"  
(Off-season Vegetable production & Agri. Business)





## **ACKNOWLEDGEMENT**

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NAVTTC team under the supervision of Dr. Faheem Khan, Executive Director, NAVTTC, initiated development of CBT & A based qualifications for 200 traditional / hi-tech trades under the Prime Minister “skill for all” Programme.

Nobody has been more important in the pursuit of this project than Dr. Faheem Khan, Executive Director, NAVTTC, whose patronage and support remained there throughout the development process. I also thank specially to Syed Javed Hassan Chairman NAVTTC who made it happened in this challenging time who made it happened in this challenging time.



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## 1. Introduction

Agriculture is considered as the backbone of Pakistan's economy, which accounts for about 18.9% of Pakistan's GDP and employs about 42.3% of the labor force. Where agriculture is considered as the largest sector that supports GDP, horticulture sector (fruit and vegetables) contributes only 11 % to the total value addition. Pakistan exports vegetables to Afghanistan, Malaysia, Russia, Bahrain, UAE and Sri Lanka but not impressive figures. Despite favorable climatic and cropping condition Pakistan has repeatedly seen shortages of different vegetables like onions or tomatoes in the market that caused price rise and difficulty for many people. More than 35 varieties of vegetables are growing in different climatic zones in different provinces of Pakistan. Many Surveys reports different reasons for low production of vegetables in Pakistan. The government in history executed various projects to urge the farmer community for cultivation of vegetables but due to lack of technical skills and limited resources, farmers have not adopted this sector in a very impressive way.

Vegetable production can be heightening by improving cultivation techniques and enhancing profitability for farmers. Off-season vegetable production is also an important technique to enhance profits and meet market demand. Production of vegetables out of normal season through different techniques is called “off-season vegetable”. Growing Off-season vegetables not only provides fresh vegetables to the daily dietary meal of the consumers but also helps farmers to get abnormal profit as supply in the off-season is always lower than that of its demand.

Therefore, the importance of knowledge related to off-season vegetable production through the latest techniques makes this diploma very valuable not only in agriculture but also in its usefulness in all areas of our daily life. Market demands for qualified workers are therefore a need for time and can only be addressed by developing specific skills standards in partnership with all stakeholders and industry experts. Recognizing this fact, the National Vocational and Technical Training Commission (NAVTTTC) has developed the National Vocational Qualifications Framework (NVQF) for tunnel farming, green house and agri. Business (off season vegetable production) qualifications. These competency standards have been developed by the Qualification Development Committee (QDC) and validated by the Qualification Validation Committee (QVC) with representation from the country's leading departments (IAGS, PU Lahore, UVAS, UAF, PCSIR and ARI KPK).



**National Competency Standards for “Tunnel Farming, Green House & Agri Business”**



## 2. Purpose of the Qualification

The aim of this qualification is to set high and applicable professional standards for all stake holders in agriculture sector. The basic goals of establishing these credentials are as follows:

1. Equip with the latest off-season vegetable production techniques
2. Improve trainees' professional competence
3. Provide opportunities for recognition of non-formal or informal skills
4. Raise standard and efficacy of scientific training and assessment
5. Improve crop production through the best management skills
6. Enable the existing workforce to learn new technologies and methods
7. Producing a skilled workforce for off-season vegetable production



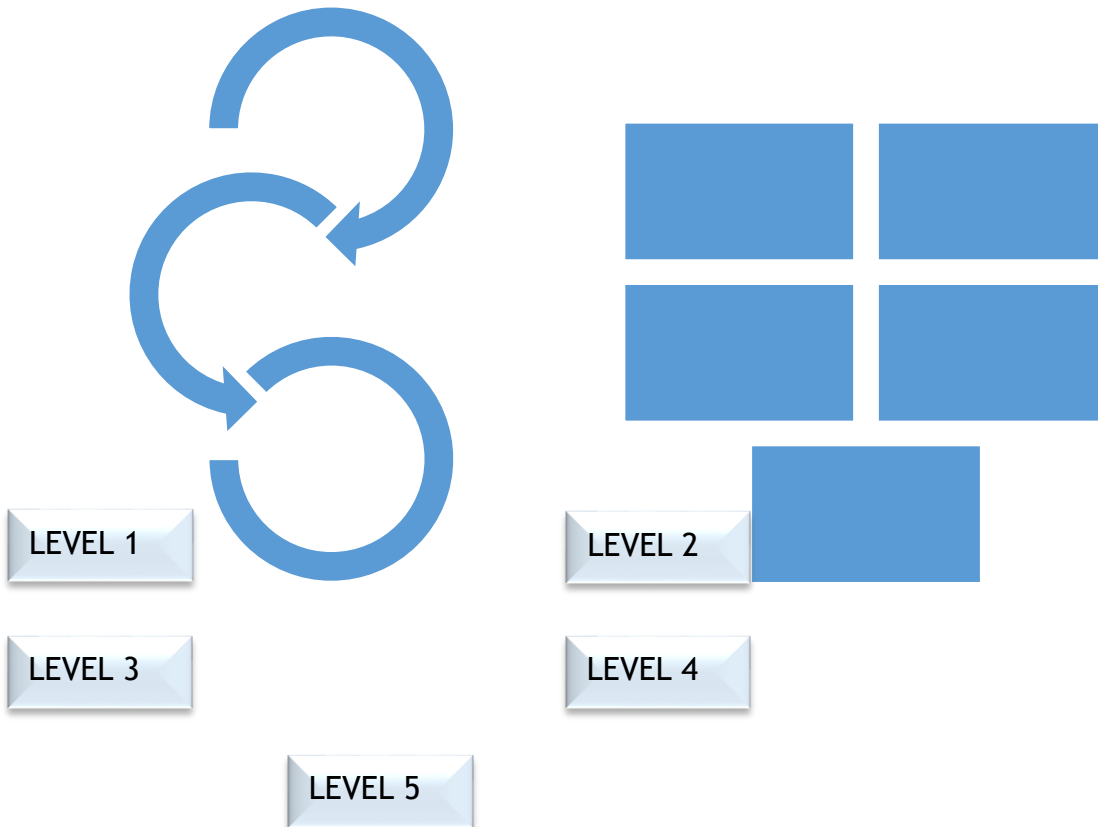
### 3. Core competencies of the Qualification

Following are the core competencies of the qualification and with credit hour:

Sr.	CS	CH	Category		

### 4. Common Courses with respective levels

To be filled in validation workshop

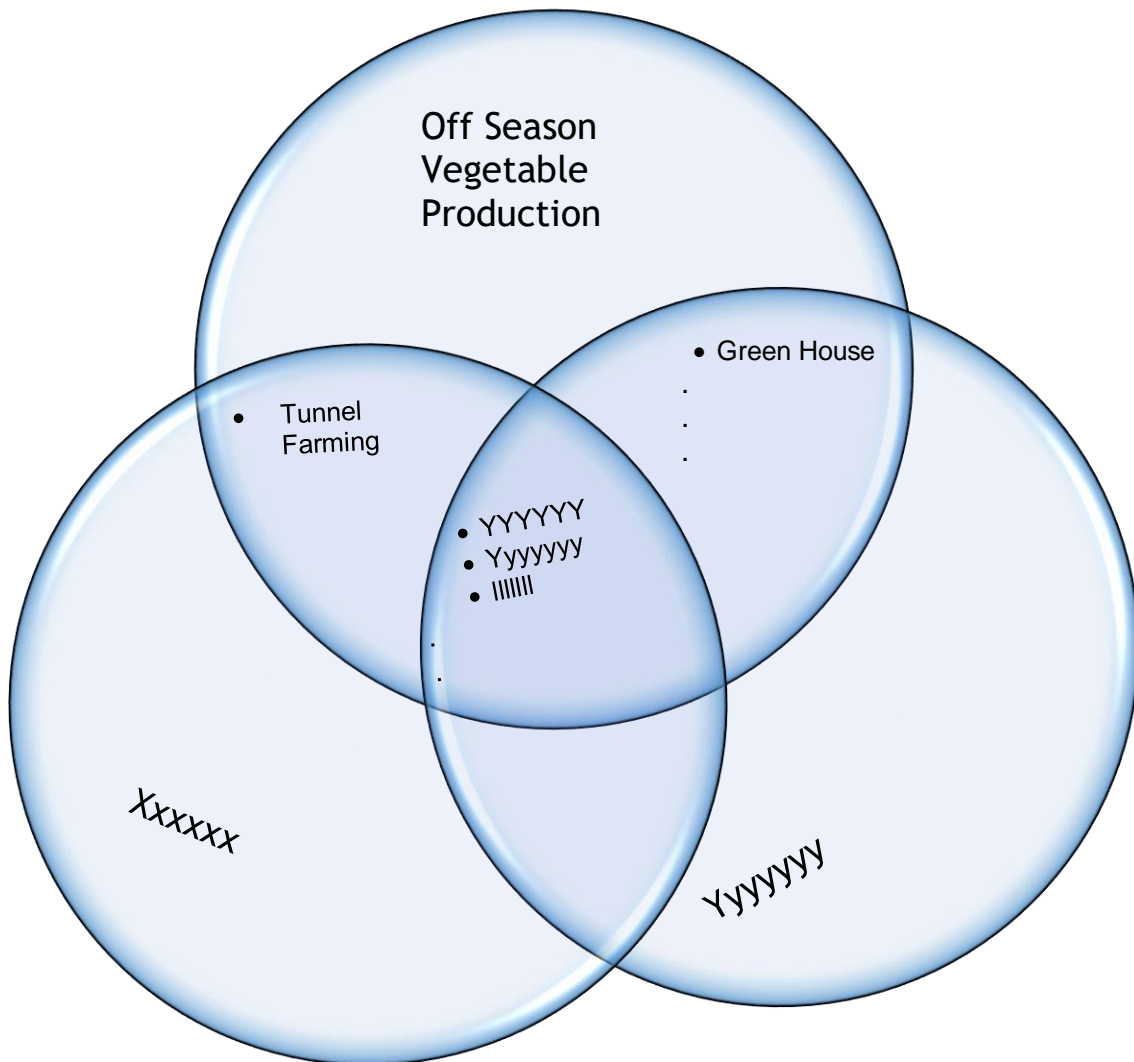






## 5. Mapping of the Qualification

# Mapping of the Qualifications





## 6. Date of Validation

This qualification has been validated on DD – DD MM YYYY at PITAC, Lahore.

## 7. Date of Review

This qualification has been validated on DD – DD MM YYYY at PITAC, Lahore

## 8. Codes of Qualifications

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

ISCED Classification	
Code	Description



## 9. Members of Qualification Development Committee

The following members participated in the qualification development process at PITAC, Lahore.

**Date:** 23<sup>rd</sup> to 27<sup>th</sup> November'2020

S#	Name	Designation
1.	<b>Dr. M. Nasir Subhani</b>	Associate Professor – PU, Lahore
2.	<b>Dr. Sumaira Maqsood</b>	Assistant Professor – IAS, PU, Lahore
3.	<b>Dr. Waheed Akram</b>	Post Doc. Scholar, Vegetable Research Institute, Academy of Agricultural Sciences Guangzhou China
4.	<b>Dr. Yousaf Noor</b>	Senior Research Officer, Directorate of Soil and Plant Nutrition, ARI, Tarnab Peshawar
5.	<b>Mr. Malik Fiaz Hussain Ferdosi</b>	Assistant Professor – IAS, PU, Lahore
6.	<b>Mr. Adnan Zahid</b>	Lecturer – IAS, PU, Lahore
7.	<b>Ms. Hina Ashraf</b>	PhD Scholar – IAS, PU, Lahore
8.	<b>Mr. Saeed Ahmed</b>	UVAS, Pattoki
9.	<b>Mr. Muhammad Asif</b>	Master Trainer(Off Season Vegetable Production), Lahore
10.	<b>Mr. Muzammil Usman Khan</b>	Consultant (Green House/Off Season Vegetable Production), Punjab
11.	<b>Mr Farhan Mahmood</b>	Parks & Horticulture Authority Rawalpindi
12.	<b>Muhammad Faheem</b>	Research Associate, Agriculture University Rawalpindi
13.	<b>Engr. Danish Khan</b>	DACUM Facilitator
14.	<b>Mr. Muhammad Ishaq</b>	Deputy Director/ Coordinator – (Skills Standards and Curricula) NAVTTC HQ



## 10. Qualification Validation Committee

The following members participated in the qualification validation process at PITAC, Lahore.

Date: DD – DD MM YYYY

S#	Name	Designation
1.		
2.		
3.		
4.		
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## 11. Entry Requirements

The entry requirement for this qualification would be SSC.

## 12. Qualification Levelling and Packaging

Code	Competency Standard	Category	Level	Credit
00000000	Maintaining clean and efficient workplace	Generic	1	
00000000	Adopt Safety Regulations, Labour Protection Laws, Environmental Protection Laws at the Workplace	Generic	1	
	Develop professionalism	Functional	1	
	Apply Basic Computer skills to create a variety of Document			
00000000	Perform Personal Health and Safety Guidelines	Functional	1	
00000000	Identify equipment/machinery used in off season vegetable production	Technical	1	
00000000	Identify Basic field operations for off season vegetable production	Technical	1	
00000000	Prepare for nursery raising and site selection	Technical	2	
00000000	Perform seed sowing (conventional)	Technical	2	
00000000	Perform seed sowing (modern technique)	Technical	2	
00000000	Perform nursery management practices	Technical	2	
00000000	Transport Nursery	Technical	2	



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	seedlings			
000000000	Perform nursery marketing	Technical	2	
000000000	Apply Work Health and Safety Practices (WHS)	Generic	2	
000000000	Contribute to Work Related Health and Safety (WHS) Initiatives	Generic	2	
000000000	Select a suitable site for crop production	Technical	3	
000000000	Prepare Layout plan for sowing	Technical	3	
000000000	Select and procure material required for poly-tunnel	Technical	3	
000000000	Installation of poly-tunnel structures	Technical	3	
000000000	Maintenance of poly-tunnel structures	Technical	3	
000000000	Perform soil sampling and check soil nutrients Composition	Technical	3	
000000000	Manage soil nutrient through manuring	Technical	3	
000000000	Prepare Land for crop production	Technical	3	
000000000	Prepare beds/ridges and furrows for sowing	Technical	3	
000000000	Transplant nursery seedlings or perform direct seeding	Technical	4	
000000000	Perform management practices for crop production	Technical	4	
000000000	Maintain required environment for healthy crop in poly-tunnel	Technical	4	



**National Competency Standards for “Tunnel Farming, Green House & Agri Business”**



00000000	Obey Workplace Policies and Procedures	Technical	4	
00000000	Identify produce maturity	Technical	4	
00000000	Perform harvesting	Technical	4	
00000000	Perform sorting and grading	Technical	4	
00000000	Perform safe disposal of waste	Technical	4	
00000000	Identify and layout irrigation system	Technical	4	
00000000	Install irrigation system	Technical	4	
00000000	Manage soil fertility	Technical	4	
00000000	Identify Integrated Pest Management(IPM)	Technical	4	
00000000	Eradicate weeds	Technical	4	
00000000	Implement Integrated Disease Management (IDM)	Technical	4	
00000000	Operate greenhouse components	Technical	5	
00000000	Perform greenhouse operations	Technical	5	
00000000	Perform IPM and IDM	Technical	5	
00000000	Handle harvested produce	Technical	5	
00000000	Perform packaging of produce	Technical	5	
00000000	Store harvested commodities	Technical	5	
00000000	Maintain records	Technical	5	
00000000	Perform value addition	Technical	5	
00000000	Market product and services	Technical	5	
00000000	Sale harvested produce	Technical	5	



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00000000	Perform workplace communication skills	Generic	5	
00000000	Manage workforce planning	Generic	5	
00000000	Undertake project work	Generic	5	
00000000	Apply interpersonal skills	Generic		
00000000	Maintain professionalism in workplace	Generic		
00000000	Develop entrepreneurial skills	Generic		
00000000	Apply management and communication techniques	Generic		
00000000	Create human resource management plan	Generic		
00000000	Develop project management plan	Generic		
00000000	Develop sales plan	Generic		
00000000	Manage finances	Generic		
00000000	Identify and resolve problems	Generic		
00000000	Operate digital media technology	Generic		
00000000	Create User documentation	Generic		
00000000	Create technical documentation	Generic		
00000000	Use social media tools for collaboration and engagement	Generic		
00000000	E-Commerce – SEO (Search Engine Optimization)	Generic		
00000000	E-Commerce – SCM (Supply Chain Management)	Generic		
00000000	E-Commerce – Social Media Marketing	Generic		
00000000	Manage Meetings	Generic		
00000000	Manage workforce planning	Generic		





**National Competency Standards for "Tunnel Farming, Green House & Agri Business"**



00000000	Undertake project work	Generic		
00000000	Apply interpersonal Skills	Generic		



### 13. Detail of Qualification and its Competency Standards

#### 1. Health and Safety Supervisor

#### Maintain Clean and efficient workplace

##### Overview

This competency standard will provide skills and knowledge related to standard technical lab safety rules. The trainee will be equipped with standard rules for working in off-season vegetable production.

Competency Units	Performance Criteria
CU.1 Ensure House -keeping Rules	<p><b>P1.</b> Ensure cleanliness of the workplace as per requirement.</p> <p><b>P2.</b> Ensure accessibility of all emergency points as per safety rules.</p> <p><b>P3.</b> Assort necessary materials according to need at the workstation.</p> <p><b>P4.</b> Store lightweight items on top and heavy items at the base of cabinets</p> <p><b>P5.</b> Maintain aeration of equipment to prevent overheating.</p> <p><b>P6.</b> Maintain environmental conditions as per given standards</p>
CU.2 Follow dress code safety Rules	<p><b>P1.</b> Wear hair covering cap if required.</p> <p><b>P2.</b> Ensure the safety of loose clothing or jewelry first.</p> <p><b>P3.</b> Use completely covering footwear.</p> <p><b>P4.</b> Wear Full coverage Clothes.</p>
CU.3 Adhere to Chemical Safety Rules	<p><b>P1.</b> Treat all Chemicals as per Material Safety Data Sheet (MSDS).</p> <p><b>P2.</b> Use chemical resistant gloves while handling chemicals.</p> <p><b>P3.</b> Label chemicals as per safety standards.</p> <p><b>P4.</b> Ensure disposal of chemicals as per set safety rules.</p> <p><b>P5.</b> Ensure proper selection of chemicals for your work.</p> <p><b>P6.</b> Clean spillage according to protocols.</p> <p><b>P7.</b> Ensure storage of chemicals according to compatibility list</p>
CU.4 Ensure personal hygiene and Sanitation at workplace	<p><b>P1.</b> Ensure personal hygiene with clean clothing, gloves, face masks, goggles, etc.</p> <p><b>P2.</b> Refrain from eating, smoking &amp; drinking openly.</p> <p><b>P3.</b> Ensure Cleanliness of workplace</p> <p><b>P4.</b> Undertake fumigation as per given standards</p> <p><b>P5.</b> Ensure disposal of waste as per standard safety rules</p> <p><b>P6.</b> Wash hand properly before and after each task as per safety standard</p>



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	<p><b>P7.</b> Place all equipment at designated sites after use</p> <p><b>P8.</b> Maintain workplace environment in accordance with set standards.</p>
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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 the following critical evidence(s) to be competent in this competency standard:

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



## Adopt Safety Regulations, Labour Protection Laws, Environmental Protection Laws at Workplace

### Overview:

After this Competency Standard, the Trainee will be able to develop skill and competence required to maintain Occupational Safety, Health and Environment at the workplace according to the National and International Protection Agencies Standards and take remedial measures for Personal, Occupational and Environmental Protection. The Trainee will be able to deal with the emergencies in a professional manner, thus minimizing the losses and providing a safe and healthy working environment.

Competency Units	Performance Criteria
<b>CU1.</b> Implement International Safety Standards in your work environment	<p><b>P1.</b> Recognize Electrical Safety hazards as per International Electro-Technical Commission (IEC) Standards</p> <p><b>P2.</b> Determine Environmental Pollution risk factors as per Protection Agency (EPA) standards</p> <p><b>P3.</b> Identify Electrical Safety Hazards as per Institute of Electrical and Electronics Engineers (IEE) standards</p> <p><b>P4.</b> Categorize the Electrical Safety Hazards as per Electrical Safety Foundation International (ESFI) standards</p> <p><b>P5.</b> Identify Labor Protection Laws as per International Labor Organization (ILO) rules</p> <p><b>P6.</b> Identify the steps to minimize the Electrical hazards and Environmental Pollution.</p> <p><b>P7.</b> Prepare a report for all the above activities.</p>
<b>CU2.</b> Implement National Safety Standards in your work environment	<p><b>P1.</b> Identify Factory associated hazard as per Chapter 3 of Factories Act, 1934</p> <p><b>P2.</b> Determine Environmental Pollution factors as per Pakistan Environmental Protection Act, 1997</p> <p><b>P3.</b> Recognize the Labor protection laws as per Labor Protection Policy 2006</p> <p><b>P4.</b> Identify the workplace hazards as per Occupational health and safety (OHS) standards</p> <p><b>P5.</b> Identify the steps to minimize the Electrical hazards, Environmental Pollution and Labor Safety</p> <p><b>P6.</b> Prepare a report for all the above activity.</p>
<b>CU3.</b> Implement International and National Labor Protection Laws	<p><b>P1.</b> Identify Labor Protection Laws as per International Labor Organization (ILO) rules</p> <p><b>P2.</b> Recognize the Labor protection laws as per Labor Protection Policy 2006</p> <p><b>P3.</b> Identify the Bonded Labor and Child Labor policy.</p>



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	<p><b>P4.</b> Determine the leaves policy and compensation policy for the Labor.</p> <p><b>P5.</b> Recognize the minimum wage for the Labor</p> <p><b>P6.</b> Identify the remedial steps for the protection and prosperity of Labor.</p> <p>Prepare a report for all the above activity.</p>
<p><b>CU4.</b> Implement National and International Environmental protection laws</p>	<p><b>P1.</b> Determine Environmental Pollution risk factors as per Protection Agency (EPA) standards</p> <p><b>P2.</b> Identify the steps to minimize the Electrical hazards and Environmental Pollution.</p> <p><b>P3.</b> Determine Environmental Pollution factors as per Pakistan Environmental Protection Act, 1997</p> <p><b>P4.</b> Identify the requirements for Initial Environmental Examination (IEE)</p> <p><b>P5.</b> Identify the requirements for Environmental Impact Assessment (EIA)</p> <p><b>P6.</b> Prepare a report for all the above activity.</p>
<p><b>CU5.</b> Prepare for emergencies</p>	<p><b>P1.</b> Take emergency response training</p> <p><b>P2.</b> Ensure practice of emergency exercises</p> <p><b>P3.</b> Ensure the availability of first aid box and fire extinguisher</p> <p><b>P4.</b> Check the expiry of medicines and fire extinguishers</p> <p><b>P5.</b> Check the emergency alarms</p> <p><b>P6.</b> Ensure regular practice of gathering the workers in assembly area during the emergency.</p>
<p><b>CU6.</b> Respond to emergencies</p>	<p><b>P1.</b> Follow the emergency plan</p> <p><b>P2.</b> Communicate instructions to co workers</p> <p><b>P3.</b> Assess risk and determine the course of action</p> <p><b>P4.</b> Operate emergency equipment and supplies</p> <p><b>P5.</b> Ensure that the ambulance and fire brigade is at stand by (for major emergency)</p>
<p><b>CU7.</b> Adopt company policies and procedures</p>	<p><b>P1.</b> Ensure company’s safety policy</p> <p><b>P2.</b> Adopt company safety procedure</p> <p><b>P3.</b> Advocate worker with company safety policy</p> <p><b>P4.</b> Implement Safety sign board as per standard</p>



### **Knowledge & 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

- Company policies and procedures
- Emergency equipment, supplies and their operation
- Factories Act 1934
- Factors affecting Health & Safety in the workplace.
- First-Aid-Box.
- Hazardous chemical control procedures
- IEC/EPA/IEE/ESFI Standards
- Labor Protection Policy 2006
- Methods of communication during emergency
- Methods of first aid cardio respiratory Procedure
- Methods of treatment against electric shock
- Methods of treatment against minor injuries
- Occupational health and safety (OHS) standards
- Pakistan Environmental Protection Act, 1997
- Personal Protective Equipment (PPE)
- Response various types of emergencies
- Safety measures
- Types of emergencies
- Types of work site Hazards
- Understand various safe guards
- Uses of Fire Extinguisher
- Work permit/no objection certificate(NOC)

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Emergency Alarm/Bell
2.	Protection suite
3.	Emergency response Plan
4.	Fall Protection Plan
5.	Fire Buckets



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6.	Fire Extinguisher
7.	First Aid Box
8.	Hearing protection
9.	International Safety Standards Manual
10.	National Safety Standards Manual
11.	Respiratory mask
12.	Safety goggles
13.	Safety shoes
14.	Stretcher
15.	WHMIS Handbook

**Critical Evidence(s) Required**

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

Handle and set Lightening for Current affair program:

- Types of hazards that are most likely to cause harm to health and safety
- Health and safety precautions
- Health and safety signs and symbols
- Techniques and methods to identify the risks of hazards at the workplace
- Dealing with hazards to avoid any accident or injury
- Safety reporting procedures and documentation
- . firefighting methods
- Demonstrate use of appropriate Personal Protective Equipment (PPE)



## Competency Standard: Develop Professionalism

### Overview:

This competency standard covers the skills and knowledge required to Demonstrate work ethic, Aware of factors affecting personal health, resolve problems or disagreements with others, participate in professional development, Work with others, work independently, Speak and listen effectively, interpret documentation, communicate using signals, and communicate Using electronic equipment.

Competency Units	Performance Criteria
<b>CU1</b> Demonstrate work ethic	<b>P1.</b> Follow principles of work ethics in all situations <b>P2.</b> Adopt professional behavior
<b>CU2</b> Select factors affecting personal health	<b>P1.</b> Follow factors affecting personal health <b>P2.</b> Aware about the situations/conditions that cause stress in professional and personal life
<b>CU3</b> Resolve problems or disagreements with others	<b>P1.</b> Communicate effectively <b>P2.</b> Adopt peaceful approach <b>P3.</b> Regulate cause of problem or disagreement <b>P4.</b> Resolve issues
<b>CU4</b> Participate in professional development	<b>P1.</b> Assess own knowledge and skills <b>P2.</b> Acquire information about training opportunities <b>P3.</b> Adopt to Learn through various methods, such as on job training, reading, courses and co-workers
<b>CU5</b> Work with others	<b>P1.</b> Work as a team member to achieve common goals <b>P2.</b> Keep mind open. <b>P3.</b> Participate in workplace meetings <b>P4.</b> Communicate accurately and clearly <b>P5.</b> Co-ordinate job related activities <b>P6.</b> Cooperate with others
<b>CU6</b> Work independently	<b>P1.</b> Confirm and clarify assignment <b>P2.</b> Take initiative, anticipate and prepare for next steps in job <b>P3.</b> Identify and resolve potential and actual problems <b>P4.</b> Communicate with other site personnel <b>P5.</b> Complete assignment
<b>CU7</b> Speak and listen effectively	<b>P1.</b> Listen carefully to describe said <b>P2.</b> Confirm understanding, such as repeat instructions <b>P3.</b> Communicate message clearly and accurately to others





	<b>P4.</b> Exchange information with others, such as supervisor, signaler, general public, inspectors, other operators and trade people
<b>CU8</b> Interpret documentation	<b>P1.</b> Access and maintain documents <b>P2.</b> Provide complete, legible and accurate information in documents <b>P3.</b> Interpret equipment inspection documentation from previous shifts before conducting pre-operational inspection
<b>CU9</b> Communicate with signals	<b>P1.</b> Identify and work with signals <b>P2.</b> Communicate with audible signals, such as back-up alarm, and site emergency horn <b>P3.</b> Communicate with hand signals
<b>CU10</b> Communicate with electronic equipment	<b>P1.</b> Check communication devices to verify operating condition, such as complete radio checks <b>P2.</b> Deliver and receive messages using communication equipment <b>P3.</b> Follow communication protocol

### **Knowledge & 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:

- Applicable legislation, such as harassment
- Audible and warning signals used on job site
- Conflict resolution techniques.
- . Principles of work ethic and expectations.
- Factors/situations/conditions that cause stress in professional and personal life
- Impact of fatigue on job performance.
- Importance of complete, legible, and accurate documentation
- Importance of effective communication
- Own role and responsibilities
- Role and responsibilities of signalers
- Roles of individuals on job site, such as supervisor, inspector, other trades people
- Types of communication equipment used on job site



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- Types of documentation required, such as log books, safety reports, maintenance reports, inspection reports, time cards
- Work assignment, location, and working conditions

### **Critical Evidence(s) Required**

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

- Handle and set Lightening for Current affair program Own current mental, emotional, and physical state.
- Working conditions on construction site.
- Effective communication.
- Maintain log books, safety reports, maintenance reports, inspection reports, time cards
- Signalers on job site
- Audible and warning signals used on job site
- Communication equipment used on job site



## Apply Basic Computer skills to create a variety of Document

### Overview:

After completing this competency, the student will be able to apply computing fundamentals and concepts & key critical thinking skills and will be hands on experienced in practicing ethical and appropriate behavior required for the responsible use of technology.

Competency Units	Performance Criteria
<b>CU1.</b> Determination of computer requirements and assemble procedures	<p><b>P1.</b> Classify the hardware components of Computer.</p> <p><b>P2.</b> Assemble the motherboard and other peripherals in casing.</p> <p><b>P3.</b> Install the computer software for operations of peripherals.</p>
<b>CU2.</b> Installation, Testing and inspection of operating system and applications.	<p><b>P1.</b> Install the required operating System with Device drivers.</p> <p><b>P2.</b> Install and execute test of required Application Software</p> <p><b>P3.</b> Install the necessary plug-ins and other software's and Making the Ghost of Hard Disk and data recovery</p> <p><b>P4.</b> Check the appropriate operation and execution of system as per standard and demonstrate the test results for the (system requirements) customer satisfaction.</p>
<b>CU3.</b> Apply Input Methods and Execute Basic Computer Operations	<p><b>P1.</b> Record the speed, accuracy via utilizing keyboarding techniques.</p> <p><b>P2.</b> Use system tools and program interface</p> <p><b>P3.</b> Utilize resources to obtain assistance</p> <p><b>P4.</b> Implement proper network user I.D and procedures, protocol</p> <p><b>P5.</b> Identify the file formats and extensions.</p> <p><b>P6.</b> Copy, Paste and send to data from various sources or storage devices</p> <p><b>P7.</b> Design a (requirement) paperwork to purchase a computer using hardware and software specifications</p> <p><b>P8.</b> Installation of drivers according to system requirement.</p>
<b>CU4.</b> Prepare/Construct Documents using Spreadsheet Applications	<p><b>P1.</b> Create, design, Format and edit spreadsheets, charts and graphs</p> <p><b>P2.</b> Create basic functions/formulas</p> <p><b>P3.</b> Manipulate multiple worksheets in a workbook</p> <p><b>P4.</b> Apply advanced functions/formulas</p>
<b>CU5.</b> Construct (prepare) Documents using power point presentation/ Applications	<p><b>P1.</b> Demonstrate oral presentation Using a specified slide number, duration and a selected theme and back ground</p> <p><b>P2.</b> Design, create, and deliver a self-running electronic slideshow</p> <p><b>P3.</b> Design &amp; create Effective Power Point Presentation</p>



	using advance features.
<b>CU6.</b> Construct (prepare) Documents using Database Applications	<b>P1.</b> Create and manipulate a database <b>P2.</b> Modify database using queries <b>P3.</b> Use import/export features <b>P4.</b> Construct Business Documents using Presentation Applications <b>P5.</b> Apply design and layout principles to presentations
<b>CU7.</b> Use the Communication Networks	<b>P1.</b> Integrate input from software applications <b>P2.</b> Design the Online Classroom Portals <b>P3.</b> Exercise internet surfing. <b>P4.</b> Identify copyright principles before accepting <b>P5.</b> Utilize online productivity tools <b>P6.</b> Apply the security applications.

### **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:

- Basic input and out devices and their use.
- Basics of PDF reports, Web publishing and Ribbon interface.
- Client-server databases.
- Facts of internet applications and usages of online communication.
- Basic hardware configuration required for operating software.
- Basics of creating documents in Spreadsheet in Excel, word and PDF Applications.
- Concepts of public domain, copy protection, licensing etc.
- Database import/export to other Office apps.
- Safe internet browsing.
- Understand computer requirements.
- Understand the installation and configuration procedures of computer hardware and operating system
- Uses and functions/formulas, charts and graphs
- Understand, creating the PowerPoint presentations, Formatting and editing, adding, subtracting slide text etc.

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

<b>S. No.</b>	<b>Items</b>
16.	Videos/ Demos
17.	Computer Accessories
18.	Presentations



### Critical Evidence(s) Required

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

Evidence of the following is essential:

- Generate Spreadsheet
- Prepare presentation on Power point
- Perform Internet Browsing

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



	completion of work
<b>CU4.</b> Dispose of hazardous Waste/materials from the designated area.	<b>P1:</b> Identify hazardous waste materials which needs to be disposed off <b>P2:</b> Segregate hazardous or non-hazardous waste carefully from the designated area as per approved procedure <b>P3:</b> Use proper disposal hazardous containers for dispose-off hazardous waste as per procedure <b>P4:</b> 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.



## 2. Basics of Agriculture

### Identify equipment/machinery used in off season vegetable production

**Overview:** This competency standard covers the skills and knowledge required to identify different equipment/machinery used to perform various field operation in off season vegetable production.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Perform tillage operation using different implements	P1. Identify and arrange tools for required task P2. Perform operation of chisel plough according to SOP P3. Identify standard operation of disc plough P4. Perform process of bar harrow according to SOP P5. Identify standard process of Rotavator P6. Adhere to required safety standards
<b>CU2.</b> Operate farm machinery	P1. Identify standard working of tractor engine P2. Identify process involved in different power tools P3. Perform different operation using tractor (ploughing, planking, spraying etc.) P4. Ensure safety standards involved in processing
<b>CU3.</b> Identify and operate equipment used for IPM and nutrition management	P1. Identify equipment used for insect pest management P2. Identify equipment used for nutrition management P3. Operate insect pest management equipment according to defined method P4. Operate nutrition management equipment according to defined method P5. Ensure required health and safety standards
<b>CU4.</b> Perform operations using land and media preparation implements	P1. Identify implements involved in land preparation P2. Identify implements involved in media preparation P3. Perform standard operation through Laser Land leveler P4. Operate Bed shaper as per standard method P5. Perform standard operation through media preparation equipment P6. Ensure health and safety standards





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<b>CU5.</b> Operate management and maintenance tools	<p>P1. Identify management and maintenance tools for off season vegetables</p> <p>P2. Operate management and maintenance tools as per standard method</p> <p>P3. Ensure health and safety standards</p>
<b>CU6.</b> Identify and understand process of harvesting equipment	<p>P1. Identify harvesting equipment</p> <p>P2. Operate harvesting tools</p> <p>P3. Ensure health and safety standards</p>
<b>CU7.</b> Maintain health and safety at workplace	<p>P1. Operate management and maintenance tools as per standard method</p> <p>P2. Ensure health and safety standards</p>

**Knowledge & 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. Basic Agriculture Practices
- K2. Understand operation of agriculture implements involved in off season vegetable production
- K3. Basic SOPs for each implement mentioned in booklet or defined manual
- K4. Health and safety principles involved in operations

**Critical Evidence(s) Required**

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

- Understand basic function of implements
- Perform basic operations involved in off season vegetable production
- Adhere to safety standard involved in process

**TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
19.	Laptops
20.	Projector
21.	Tractor





22.	Tillage implements
23.	Land preparation implements
24.	Power tools
25.	Sprayer
26.	Weeders
27.	Management and maintenance tools
28.	Harvesting tools
29.	First Aid kits
30.	PPEs

### Identify Basic field operations for off season vegetable production

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic field operation in off season vegetable production using different tools and implements.

Competency Units	Performance Criteria
<b>CU1.</b> Perform ploughing	<ul style="list-style-type: none"> <li>P1. Select implements for ploughing</li> <li>P2. Arrange/ fix implements for ploughing according to SOP</li> <li>P3. Ensure standard safety checks before and after use of machinery</li> <li>P4. Ensure pre and post-handling measures</li> <li>P5. Adhere to required safety standards</li> </ul>
<b>CU2.</b> Perform Planking	<ul style="list-style-type: none"> <li>P1. Identify and arrange tools for planking</li> <li>P2. Ensure standard safety checks before and after use of machinery</li> <li>P3. Fix implements for planking according to SOP</li> <li>P4. Ensure cleanliness before and after use</li> <li>P5. Ensure safety standards involved in processing</li> </ul>
<b>CU3.</b> Perform operation through laser leveling	<ul style="list-style-type: none"> <li>P1. Calibrate implement as per standard method</li> <li>P2. Ensure safety checks before and after use of machinery</li> <li>P3. Fix laser leveler unit according to standard method</li> <li>P4. Operate laser leveler according to standard method</li> <li>P5. Ensure health and safety standards</li> </ul>



<b>CU4. Perform management operations</b>	P1. Perform mechanical weeding as per standard operation method P2. Perform spraying as per standard method P3. Ensure safety checks for required operation P4. Ensure health and safety standards
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### **Knowledge & 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. Basic Agriculture operation procedures
- K2. Understand operation of agriculture implements involved in off season vegetable production
- K3. Standard operating procedures for required task
- K4. Health and safety principles involved in operations

### **Critical Evidence(s) Required**

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

- Understand basic SOP for each function
- Perform basic operations involved in off season vegetable production
- Adhere to safety standard involved in process

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
31.	Tractor
32.	Tillage implements
33.	Land preparation implements
34.	Power tools
35.	Sprayer
36.	Weeders
37.	Management and maintenance tools
38.	Harvesting tools
39.	First Aid kits
40.	PPEs



### 3. Nursery Grower

#### Prepare for Nursery Raising and site Selection

**Overview:** This competency standard covers the skills and knowledge required to enable the student to be able to select suitable site and choose suitable seeds for nursery sowing by following safety measures.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare work for Nursery Raising	<p><b>P1.</b> Prepare plan of concerned task</p> <p><b>P2.</b> Arrange Implements of required tasks.</p> <p><b>P3.</b> Ensure Safety measures and Hygienic conditions.</p>
<b>CU2.</b> Select site for Nursery growing.	<p><b>P1.</b> Perform Site visit to check suitable portion of land.</p> <p><b>P2.</b> Take permission from respected authority.</p> <p><b>P3.</b> Cordon off the area as per standard procedure.</p>
<b>CU3.</b> Select seeds for Nursery raising	<p><b>P1.</b> Collect and Study Weather, soil, and water analysis Reports</p> <p><b>P2.</b> Collect required Label information for selection as per your microclimate.</p> <p><b>P3.</b> Collect Data for past performance on prescribed Performa.</p> <p><b>P4.</b> Perform Economic Analysis according to selection criteria</p>
<b>CU4.</b> Carry out seed viability test by following standard procedures.	<p><b>P1.</b> Perform seed sorting for the experiment.</p> <p><b>P2.</b> Perform required germination test as per standard testing method</p> <p><b>P3.</b> Maintain growth conditions for that seeds.</p> <p><b>P4.</b> Calculation for the germination%</p> <p><b>P5.</b> Calculation for required seedling requirement.</p>

#### **Knowledge & 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:



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- K1. Types of different soil types and their effect on seed germination.
- K2. Different types of seeds
- K3. Measures to select a suitable site
- K4. Steps to carry out a germination test

### **Critical Evidence(s) Required**

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

- Knowledge about seeds germinating time
- Can be able to use basic agricultural Implements.
- Consistent and patience about agriculture.

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
41.	Pencil,
42.	Eraser,
43.	Sharpner,
44.	Calculator,
45.	Measuring scale,
46.	Drawing sheet,
47.	Measuring Tape,
48.	Compass,
49.	Spade,
50.	Germination chamber
51.	First Aid Kit.



### Competency Standard: Perform Seed Sowing (Conventional)

**Overview:** This competency standard covers the skills and knowledge required for enabling the student to select Site for nursery sowing to make beds as per standard methode.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare work for Nursery Raising	<b>P1.</b> Prepare plan of concerned task <b>P2.</b> Arrange Implements of required tasks. <b>P3.</b> Ensure Safety measures and Hygienic conditions.
<b>CU2.</b> Prepare Media for seed bed.	<b>P1.</b> Identify and arrange mixing materials and its Storage. <b>P2.</b> Calculate the quantity of materials according to requirement. <b>P3.</b> Preparation of media as per standard method and conditions <b>P4.</b> Ensure the required Safety measures
<b>CU3.</b> Prepare seedbeds.	<b>P1.</b> Prepare a layout plan for sowing. <b>P2.</b> Implement layout plan <b>P4.</b> Perform Tagging and Fencing of area according to requirement
<b>CU4.</b> Perform Seed Treatment	<b>P1.</b> Identify soil borne diseases of seed <b>P2.</b> Identify and arrange respected pesticides <b>P3.</b> Perform Seed Treatment process as per SOPs.
<b>CU5.</b> Perform Seed Sowing	<b>P1.</b> Identify and arrange the required material for sowing. <b>P2.</b> Perform sowing as per Standard method. <b>P3.</b> Perform top-dressing according to standard requirements. <b>P4.</b> Ensure Hygiene at workplace according to set standard.

#### Knowledge & 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. Knowledge about seed bed shapes and its directions



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- K2. Explains the Seed types and bed formation.  
K3. Explain cross staff with its types.

### Critical Evidence(s) Required

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

- Knowledge about seeds germinating time
- Knowledge about growing medias mixing
- Can be able to use basic agricultural Implements.
- Consistent and patience about agriculture.

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
52.	Pencil,
53.	Eraser,
54.	Sharpner,
55.	Calculator,
56.	Measuring scale,
57.	Drawing sheet,
58.	Measuring Tape,
59.	Compass,
60.	Spade,
61.	String,



## Perform Seed Sowing (Modern technique)

**Overview:** This competency standard covers the skills and knowledge required to perform Seed sowing for offseason Vegetables & fruit production at standard Method.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare work for Seed Sowing	<b>P1.</b> Prepare plan for a concerned task <b>P2.</b> Arrange Implements of required tasks. <b>P3.</b> Ensure Safety measures and Hygienic conditions.
<b>CU2.</b> Prepare media for sowing	<b>P1.</b> Identify and arrange potting material as per standard requirement. <b>P2.</b> Identify and arrange rooting Media according to standard requirement. <b>P3.</b> Prepare media according to standard requirement. <b>P4.</b> Perform Media Filling and compressing as per standard requirement. <b>P5.</b> Ensure Health and safety standard.
<b>CU3.</b> Perform Seed Treatment	<b>P1.</b> Identify Dormancy and soil borne diseases according to set standard. <b>P2.</b> Perform seed Priming according to standard method. <b>P3.</b> Identify and arrange required pesticides for treatment of soil borne Diseases. <b>P4.</b> Perform Seed Treatment for soil borne diseases as per standard method <b>P5.</b> Maintain hygiene conditions and maintain records
<b>CU4.</b> Perform Seed Sowing and Top Dressing	<b>P1.</b> Prepare and implement Layout <b>P2.</b> Perform seed sowing as per standard method <b>P3.</b> Perform top dressing according to set standard <b>P4.</b> Ensure placing in the Germination Chamber with favorable Environmental Conditions <b>P5.</b> Perform post Management and Care.

### Knowledge & 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. Types of Dormancy and its cures.



Knowledge about seed types, soil born fungal Diseases and required moisture to germinate.  
K2. Knowledge about Cheap and efficient materials readily available in the market for sowing

### Critical Evidence(s) Required

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

- Prepare layout directions
- Seed depth as per standard
- Maintaining Temperature and humidity 24/7 during the germination.

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
62.	Pencil,
63.	Eraser,
64.	Sharpner,
65.	Calculator,
66.	Measuring scale,
67.	Drawing sheet,
68.	Measuring Tape,
69.	Compass,
70.	White Chalk
71.	Tags
72.	Tray (78, 128, 200)
73.	Peat moss
74.	Vermiculite
75.	Coconut coir.

### Perform Nursery Management practices.

**Overview:** This competency standard covers the skills and knowledge required to germinate, raise, and protect from diseases, insects and abiotic factors leading towards the successful nursery raising

Competency Units	Performance Criteria
CU1. Prepare work for	P1.Prepare plan of concerned task





nursery management	<b>P2.</b> Arrange Implements of required tasks. <b>P3.</b> Ensure Safety measures and Hygienic conditions.
<b>CU2.</b> Perform nursery management practices	<b>P1.</b> Perform data collection (Record Keeping) of Relative-Humidity and Temperature from Thermo hydrometers. <b>P2.</b> Perform Counting on daily basis <b>P4.</b> Ensure Nutrient supply (as per schedule and symptoms) <b>P5.</b> Perform irrigation after intervals. <b>P6.</b> Identify weeds and their eradication <b>P7.</b> Perform thinning of plants <b>P8.</b> Maintain suitable environment at nursery.
<b>CU3.</b> Perform Pest and diseases control	<b>P1.</b> Perform Identification of pest and diseases of Nursery <b>P2.</b> Identify and arrange required pesticides <b>P3.</b> Perform required pesticide application according to SOPs. <b>P4.</b> Perform post pesticide application care.

### **Knowledge & Understanding.**

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

- Knowledge of Diseases
- Knowledge about pest attack.
- Knowledge about Biotic and Abiotic stress factors

### **Critical Evidence(s) Required**

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

- Weeds identification
- Knowledge about Crop requirements and season

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
76.	Pencil,



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77.	Eraser,
78.	Sharpner,
79.	Calculator,
80.	Measuring scale,
81.	Drawing sheet,
82.	Measuring Tape,
83.	Compass,
84.	Scotch Tape
85.	Pesticides
86.	Spray mechine with different nozzles.
87.	Watering cane
88.	Covering sheet.

### Transport Nursery seedlings

**Overview:** This competency standard covers the skills and knowledge required to perform the task of nersery transportation that covers nursery hardening process, its packing to safe delivery to concerned field of transplantation.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare work for Nursery Transportation.	<b>P1</b> Prepare plan of concerned task <b>P2</b> Arrange Implements of required tasks. <b>P3</b> Ensure Safety measures and Hygienic conditions.
<b>CU2.</b> Perform conventional nursery transportation.	<b>P1.</b> Perform order management as per customer’s demand. <b>P2.</b> Perform hardening method as per requirement. <b>P3.</b> Perform required procedure before uprooting <b>P4.</b> Perform Packaging, staking, and covering of vehicle (to protect from weather harshness).
<b>CU3.</b> Perform standard nursery transportation.	<b>P1.</b> Perform order management as per customer’s demand <b>P2.</b> Perform hardening process as per set method. <b>P4.</b> Perform Packaging, staking, and covering of vehicle (to protect from weather harshness).



### **Knowledge & 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:

- Transportation Types
- Transportation strategy

### **Critical Evidence(s) Required**

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

- Knowledge about Physical Maturity.
- Knowledge about the rooting system of different vegetables
- Knowledge about wilting points and tenderness

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
89.	Pencil,
90.	Eraser,
91.	Sharpner,
92.	Calculator,
93.	Measuring scale,
94.	Drawing sheet,
95.	Measuring Tape,
96.	Compass,
97.	White Chalk
98.	Scotch Tape
99.	Vehicles
100.	Cartons
101.	Jute Bags
102.	Jute Rope

### **Perform nursery Marketing**

**Overview:** This competency standard covers the skills and knowledge required to market the produce at commercial level, aiming to extend the business via both conventional and Digital Marketing opportunities.



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Competency Units	Performance Criteria
<b>CU1</b> Prepare for Nursery transplantation	<b>P1.</b> Follow required safety standards <b>P2.</b> Arrange Implements for required tasks. <b>P3.</b> Prepare plan for transportation <b>P4.</b> Ensure Safety measures and Hygienic conditions.
<b>CU2</b> Conventional Marketing	<b>P1.</b> Perform identification of conventional Marketing units <b>P2.</b> Perform advertisement strategy and follow-ups <b>P3.</b> Calculate its potential via sale and expenses
<b>CU3</b> Digital Marketing	<b>P1.</b> Identify Digital marketing sources <b>P2.</b> Advertisement on Digital Media as per standard and Perform Follow-ups <b>P3.</b> Calculate its potential

### Knowledge & 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:

- Knowledge about nearby markets and its requirements.
- Knowledge about customer requirements

### Critical Evidence(s) Required

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

- English language understating
- Know about computer usage

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
103.	Pencil,
104.	Eraser,
105.	Sharpner,
106.	Calculator,
107.	Computer Unit & Internet



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



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- Outline the WHS rights and responsibilities that apply to own role
- Explain the term duty of care
- Describe typical health and safety roles in the workplace
- List and describe common safety signs and symbols
- Explain procedures for reporting hazards, risks, incidents and accidents
- Identify and describe common hazards and major causes of accidents relevant to the workplace
- Explain what the term risk control means
- 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.

### 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
<b>CU1.</b> Contribute to initiate work-related health and safety measures	<b>P1.</b> compile database on work-related health and safety <b>P2.</b> Identify measures that address legal obligations. <b>P3.</b> Consult with individuals/ parties to formulate measures and initiatives <b>P4.</b> Consult with individuals/parties to identify factors impacting on work-related health and safety <b>P5.</b> Participate in consultative meetings.
<b>CU2.</b> Contribute to establish work-related health and safety measures	<b>P1.</b> Assist in planning of work-related health and safety measures <b>P2.</b> Contribute to the development of work-related health and safety measures <b>P3.</b> Identify to implement work-related health and safety measures i.e. <ul style="list-style-type: none"><li>• resourcing requirements,</li><li>• timelines</li><li>• responsibilities</li></ul> <b>P4.</b> Assist to implement work-related health and safety measures and initiatives i.e.



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	<ul style="list-style-type: none"> <li>• scheduling</li> <li>• liaison</li> <li>• administering resources</li> <li>• communication</li> </ul>
<b>CU3.</b> Contribute to ensure legal requirements of WHS measures	<p><b>P1.</b> Identify WHS legal requirements</p> <p><b>P2.</b> Apply knowledge of all aspects of WHS measures to</p> <ul style="list-style-type: none"> <li>• Consultation</li> <li>• workplace policies</li> <li>• participation processes</li> </ul> <p><b>P3.</b> Ensure, WHS measures are in accordance with legal requirements</p>
<b>CU4.</b> Contribute to review WHS measures	<p><b>P1.</b> Develop effective practices to review work-related health and safety measures</p> <p><b>P2.</b> Assist individuals and parties related to WHS measures in following activities</p> <ul style="list-style-type: none"> <li>• preparing reports</li> <li>• communicating review</li> <li>• evaluating outcomes</li> </ul>
<b>CU5.</b> Evaluate the organization’s WHS system	<p><b>P1.</b> Assess ongoing compliance with OHS (Occupational Health and safety)</p> <p><b>P2.</b> Take feedback from concerned persons regarding WHS measures.</p> <p><b>P3.</b> Assess the overall effectiveness of WHS management practices</p> <p><b>P4.</b> Assist the development process of WHS measures in following ways</p> <ul style="list-style-type: none"> <li>• Suggest amendments</li> <li>• Document amendments</li> <li>• Implement amendments</li> </ul> <p><b>P5.</b> Take feedback from concerned persons regarding WHS measures.</p> <p><b>P6.</b> 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:



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- Explain the application of relevant mandatory health monitoring, including biological monitoring, to help secure work health and safety
- 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
- List factors that impact on work-related health and safety and their potential effects
- Identify internal and external sources of WHS information and data, and how to access them
- Outline organizational WHS and other relevant policies, procedures, processes and systems, including human resources
- 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
- 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.

#### 4. Off season vegetable producer

##### Select suitable site for crop production

**Overview:** This competency standard covers the skills and knowledge related to the information of site selection and selection of suitable site for crop production.

Competency Units	Performance Criteria
CU1. Prepare for site selection	P1. Prepare visit plan of the proposed site as per requirements





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	<p>P2. Formulate Performa for collection of the site information</p> <p>P3. Identify and arrange tools according to visit plan</p> <p>P4. Ensure safety standards as per the job requirements</p>
<b>CU2.</b> Collect site information for selection	<p>P1. Implement site visit plan</p> <p>P2. Calibrate the required instruments as per prescribed standards</p> <p>P3. Collect site data on prescribed format</p> <p>P4. Maintain record according to required format</p> <p>P5. Ensure safety standards as per the job requirements</p>
<b>CU3.</b> Select the Site	<p><b>P1.</b> Ensure prescribed method is used for data collection and analysis</p> <p><b>P2.</b> Ensure required standard for quality of soil and water recommended for vegetable production</p> <p><b>P3.</b> Ensure favourable geographical conditions for tunnel farming</p> <p><b>P4.</b> Evaluate collected information</p> <p><b>P5.</b> Maintains records according to set standards</p> <p><b>P6.</b> Ensure health and safety standards</p>
<b>CU4.</b> Prepare report	<p><b>P1.</b> Compile analysed information according to prescribed format</p> <p><b>P2.</b> Prepare report as per particular format</p> <p><b>P3.</b> Manage records according to required standards</p> <p><b>P4.</b> Submit report to concerned head/department</p>

**Knowledge & 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:

- Principles and practices involved in site selection
- Health and safety protocols involved
- General rules and regulation for agriculture/crop production



## K1. Operating procedure for required tools

### Critical Evidence(s) Required

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

- Perform Site selection procedure
- Ensure Health and safety measures

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
108.	Pencil,
109.	Eraser,
110.	Sharpner,
111.	Calculator,
112.	Measuring scale,
113.	Drawing sheet,
114.	Measuring Tape,
115.	Compass,
116.	Scotch Tape,
117.	First Aid kits

### Prepare layout plan for sowing

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic principles and procedure involved in lay out planning for sowing.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare for layout work	P1. Arrange tools for layout planning P2. Prepare work plan for layout P3. Ensure required safety standards
<b>CU2.</b> Prepare layout for sowing	P1. Select standard dimensions and direction for furrows P2. Calculate number of beds/ridges as per standard dimensions P3. Identify irrigation and drainage according to



	<p>available irrigation method</p> <p>P4. Ensure safety standards involved in processing</p>
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### **Knowledge & 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:

- Basic principles and procedures involved in layout planning
- Understand working of tools used in layout planning
- Health and safety principles involved in operations

### **Critical Evidence(s) Required**

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

- Understand basic SOP for layout
- Adhere to safety standard involved in process

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
118.	Measuring tape
119.	Compass
120.	navigator
121.	First Aid kits
122.	PPEs

### **Perform soil sampling and check soil nutrient composition**

**Overview:** This competency standard covers the skills and knowledge regarding soil sample collection, analysis and evaluation of nutrient requirements for off season vegetable production.

Competency Units	Performance Criteria
CU.1 Prepare for soil sampling	<p>P1. Identify and arrange required sampling tools</p> <p>P2. Ensure personal safety measures as per Job requirement</p> <p>P3. Maintain phytosanitary conditions at site as per standard.</p>



<b>CU.2</b> Collect soil Sample	<p><b>P1.</b> Arrange tools for sampling as per requirements.</p> <p><b>P2.</b> Collect sub-samples of given site as per random sampling techniques</p> <p><b>P3.</b> Collect sub-samples of given site as per Zone based sampling techniques</p> <p><b>P4.</b> Collect sub-samples of given site as per Grid sampling techniques</p> <p><b>P5.</b> Collect sub-samples of given site as per stratified sampling techniques</p> <p><b>P6.</b> Make composite sample according to standard method</p> <p><b>P7.</b> Draw representative sample for laboratory testing</p> <p><b>P8.</b> Transport sample to laboratory as per SOP</p>
<b>CU.3</b> Evaluate and implement recommendations	<p><b>P1.</b> Collect report</p> <p><b>P2.</b> Identify deficient and excess nutrients as per prescribed standard</p> <p><b>P3.</b> Adopt appropriate measures according to the report recommendations as per standard requirements</p> <p><b>P4.</b> Monitor/Evaluate the results</p> <p><b>P5.</b> Ensure health and safety standards</p>

### **Knowledge & 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:

- . Basic knowledge of agriculture soil and nutrients
- . Sampling techniques required under different conditions for soil sample collection
- . Safety and generals' rules regarding field visits
- . Tools and equipment required for sampling
- . Precautions required during sampling
- . Importance of sampling protocols

### **Critical Evidence(s) Required**



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

- Arrange tools for sampling as per requirements.
- Apply Sampling Techniques
- Handling of collected samples
- Follow health and safety rules

**TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
123.	Buckets
124.	Cardboard box
125.	First Aid Kit
126.	Flow meter
127.	GPS device
128.	Thermo-Hygrometer
129.	Ice box
130.	Marker
131.	Measuring tape
132.	Metal ring
133.	Personal protective equipment (PPE)
134.	Plastic bags
135.	Preservatives
136.	Sacks
137.	Sampling bottles
138.	Shovel
139.	Stainless steel Auger
140.	Sterilized containers
141.	Stop watch
142.	Tags for labelling
143.	Thermometer
144.	Thread
145.	Spade
146.	Sample Probe
147.	Sampling Stick



## Manage soil nutrient through manuring

**Overview:** This competency standard covers the skills and knowledge related to soil nutrients managements for off season vegetable production.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare for soil nutrient management	<p>P1. Identify and arrange tools required for manuring</p> <p>P2. Adopt Precautionary measures regarding personnel health and safety as per standard</p> <p>P3. Prepare work plan for required task</p>
<b>CU2.</b> Organic Manuring	<p>P1. Select required organic fertilizers for manuring</p> <p>P2. Calculate the requirement of selected fertilizer as per standard</p> <p>P3. Perform application of organic fertilizers as per standard</p> <p>P4. Perform green manuring operation as per standard method</p> <p>P5. Ensure health and safety standards involved in manuring</p>
<b>CU3.</b> In-Organic manuring	<p><b>P1.</b> Identify and enlist the In-organic fertilizers</p> <p><b>P2.</b> Calculate the amount and type of fertilizer as per recommendation in soil analysis report</p> <p><b>P3.</b> Perform the application of fertilizer as per standard requirements</p> <p><b>P4.</b> Ensure health and safety standards involved in manuring</p>

### **Knowledge & 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:



### Critical Evidence(s) Required

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

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
148.	Pencil,
149.	Eraser,
150.	Sharpner,
151.	Calculator,
152.	Measuring scale,
153.	Drawing sheet,
154.	Measuring Tape,
155.	Compass,
156.	Chain (Engineering, Gunter & Metric)
157.	Cross Staff
158.	Tripod
159.	Ranging Rods
160.	Pegs
161.	Arrows
162.	White Chalk
163.	Scotch Tape

### Prepare land for crop production

**Overview:** This competency standard covers the skills and knowledge related to the land preparation, mechanical operation, manual operation and implement soil conditioning measures for off-season vegetable production.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare for Land preparation.	P1. Identify and arrange required tools and equipment for land preparation. P2. Ensure availability of required Personal Protective equipment (PPE) as per the job requirements. P3. Prepare plan for required tasks



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<p><b>CU2.</b> Perform mechanical operation for land preparation.</p>	<p>P1. Identify and arrange required mechanical tillage implements</p> <p>P2. Perform pre checks of required machinery</p> <p>P3. Perform required mechanical operation for land preparation as per standard method</p> <p>P4. Ensure health and safety standards as per the SOPs</p>
<p><b>CU3.</b> Perform manual operation for land preparation</p>	<p><b>P1.</b> Identify and arrange required appropriate hand tools</p> <p><b>P2.</b> Perform manual operations for land preparation as per standard method</p> <p><b>P3.</b> Ensure health and safety standards involved in required task</p>
<p><b>CU4.</b> Implement soil conditioning measures</p>	<p><b>P1.</b> Recognise ideal soil types for vegetable production</p> <p><b>P2.</b> Maintain standard soil organic matter ratio according to standard procedure</p> <p><b>P3.</b> Ensure soil aeration and water holding capacity as standard requirements</p> <p><b>P4.</b> Ensure soil is well drained</p> <p><b>P5.</b> Ensure record keeping</p> <p><b>P6.</b> Ensure health and safety standards</p>
<p><b>CU5.</b> Perform post land preparation operations</p>	<p><b>P1.</b> Dispose of non-toxic waste and works debris as per farm policy and environmental standards.</p> <p><b>P2.</b> Remove stones, sticks and debris as per standard criteria</p> <p><b>P3.</b> Ensure health and safety standards</p>

**Knowledge & 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:

- Basic principles and procedures involved in the land/soil preparation.
- Understand protocols of various implements used in land/soil preparation.
- Health and safety principles involved in operations.





### Critical Evidence(s) Required

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

- Understand basic SOP for each required implement
- Understand maintenance and performance checks for required machinery
- Ensure health and safety standard involved in process

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
164.	Tillage implements
165.	Tractor
166.	Jandra
167.	Planker
168.	Rope
169.	First aid box
170.	PPEs

### Prepare beds/ridges and furrows for sowing

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic principles and procedure involved in bed/ridge making process for seed sowing or nursery transplantation.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare for work	P1. Identify and arrange required tools for bed/ridge making P2. Perform checks for quality work P3. Ensure required safety standards
<b>CU2.</b> Prepare beds for sowing	P1. Select required implements for bed making P2. Adjust implement according to required bed dimensions P3. Implement layout plan for beds P4. Ensure safety standards involved in process



<b>CU3.</b> Prepare ridges for sowing	P1. Select required implements for ridge making P2. Adjust implement according to required ridge dimensions P3. Implement layout plan for ridges P4. Ensure safety standards involved in processing
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### **Knowledge & 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:

- Basic principles and procedures involved in operating required implements
- Understanding regarding maintenance of required tools
- Health and safety principles involved in operations

### **Critical Evidence(s) Required**

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

- Understand basic SOP for each required implement
- Understand maintenance and performance checks for required machinery
- Adhere to safety standard involved in process

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
171.	Tractor
172.	Bed shaper
173.	Ridger
174.	Jandra
175.	First Aid Box
176.	PPEs

### **Transplant Nursery seedlings or perform direct seeding**

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic principles and procedure involved in nursery transplantation and direct sowing of different vegetables.



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<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare for transplantation	<p>P1. Identify and arrange required materials for transplantation of seedlings</p> <p>P2. Identify and arrange required materials for direct sowing</p> <p>P3. Prepare plan for required task</p> <p>P4. Ensure required safety standards</p>
<b>CU2.</b> Transplant Nursery seedlings of required crop	<p>P1. Identify and arrange required tools for transplantation</p> <p>P2. Perform mulching according to standard requirement</p> <p>P3. Ensure hardening of nursery seedling according to set standards</p> <p>P4. Prepare holes in mulch according to standard method</p> <p>P5. Ensure required environmental conditions for transplantation</p> <p>P6. Perform transplantation of nursery seedling according to standard procedure</p> <p>P7. Maintain records as per defined format</p> <p>P8. Ensure safety standards involved in transplantation</p>
<b>CU3.</b> Perform direct sowing of required crop	<p>P1. Perform mulching according to standard requirement</p> <p>P2. Ensure required seed treatment according to set standards</p> <p>P3. Prepare holes in mulch according to standard method</p> <p>P4. Ensure required environmental conditions for sowing of required crop</p> <p>P5. Perform sowing operation of required crop according to standard procedure</p> <p>P6. Maintain records as pr defined format</p> <p>P7. Ensure safety standards involved in sowing</p>

**Knowledge & Understanding.**



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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. Basic principles and procedures involved in nursery transplantation of different crops
- K2. Basic principles and procedures involved in sowing of different vegetables
- K3. Understand protocols of various implements used in transplantation and seeding
- K4. Health and safety principles involved in operations

**Critical Evidence(s) Required**

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

- Understand basic SOP for each required implement
- Understand maintenance and performance checks for required machinery
- Adhere to safety standard involved in process

**TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
177.	Mulching materials
178.	Cylinder
179.	Puncher
180.	Transportation tools
181.	augar
182.	First Aid Box
183.	PPEs

**Perform management practices for crop production**

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic principles and procedure involved in nursery transplantation and direct sowing of different vegetables.

Competency Units	Performance Criteria
CU1. Prepare for work	P1. Identify and arrange tools for required management practices P2. Prepare plan for required task P3. Ensure required safety standards



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<b>CU2.</b> Perform earthing up	<p>P1. Identify and arrange tools for earthing up  P2. Perform earthing up activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU3.</b> Perform thinning	<p>P1. Identify and arrange tools for thinning activity  P2. Perform Thinning activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU4.</b> Demonstrate training activity	<p>P1. Identify and arrange tools for training of required vegetable  P2. Perform training on required crop activity according to standard procedure  P3. Ensure required safety standards  P5. Maintain records</p>
<b>CU5.</b> Perform pruning to maintain healthy plant	<p>P1. Identify and arrange tools for pruning  P2. Perform pruning activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU6.</b> Demonstrate staking process	<p>P1. Identify and arrange tools for staking  P2. Perform staking process according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU7.</b> Perform emasculation	<p>P1. Identify and arrange tools for emasculation  P2. Perform emasculation activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU8.</b> Perform pinching	<p>P1. Identify and arrange tools for pinching  P2. Perform pinching activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU9.</b> Demonstrate deflowering process	<p>P1. Identify and arrange tools for deflowering  P2. Perform deflowering activity according to standard procedure  P3. Ensure required safety standards  P4. Maintain records</p>
<b>CU10.</b> Maintain phytosanitary conditions	<p>P1. Maintain phytosanitary conditions according to standard procedure  P2. Perform safe disposal of plant waste according to SOP</p>



	<p>P3. Ensure required safety standards P4. Maintain records</p>
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### **Knowledge & 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. Basic principles and procedures for required management practices
- K2. Understand protocols of various implements used management practices
- K3. Understanding of international standards for phytosanitary conditions
- K4. Health and safety principles involved in operations

### **Critical Evidence(s) Required**

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

- Understand SOP for each required management practice
- Identify tools for required activity
- Adhere to safety standard involved in process

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Gardening tool kit
2.	Spray machine
3.	Weather measuring equipment
4.	First Aid Box
5.	PPEs

### **Maintain required environment for healthy crop in poly-tunnel**

**Overview:** This competency standard covers the skills and knowledge required to understand and identify basic principles and procedure involved in nursery transplantation and direct sowing of different vegetables.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare for work	<p>P1. Identify and arrange required tools for measuring environmental conditions P2. Perform calibration of instruments if required</p>



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	<p>P3. Perform quality checks  P4. Prepare plan for required task  P5. Ensure required safety standards</p>
<p><b>CU2.</b> Maintain required humidity level in poly-house</p>	<p>P1. Identify and arrange tools required to maintain humidity  P2. Perform calibration of required equipment  P3. Measure humidity level in required poly-house according to standard method  P4. Maintain required humidity level using standard procedure  P5. Ensure healthy environment for crop production  P6. Maintain records  P7. Ensure safety standards involved in process</p>
<p><b>CU3.</b> Maintain required temperature in poly-house</p>	<p>P1. Identify and arrange tools and equipment required to maintain temperature  P2. Perform calibration of required equipment  P3. Measure temperature in required poly-house according to standard method  P4. Maintain required temperature using standard procedure  P5. Ensure healthy environment for crop production  P6. Maintain records  P7. Ensure safety standards involved in process</p>
<p><b>CU4.</b> Maintain daylength in poly-house</p>	<p>P1. Measure day-length in required poly-house according to standard method  P2. Maintain required day-length using standard procedure  P3. Maintain records  P4. Ensure safety standards involved in process</p>

**Knowledge & 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:



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- Basic principles and procedures involved in nursery transplantation of different crops
- Basic principles and procedures involved in sowing of different vegetables
- Understand protocols of various implements used in transplantation and seeding
- Health and safety principles involved in operations

**Critical Evidence(s) Required**

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

- Understand basic SOP for each required implement
- Understand maintenance and performance checks for required machinery
- Adhere to safety standard involved in process

**TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
184.	Mulching materials
185.	Cylinder
186.	Puncher
187.	Transportaion tools
188.	Augar
189.	First Aid Box
190.	PPEs

**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**





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



## 5. Poly-tunnel structure fitter/fabricator

### Select and procure material required for poly-tunnel

**Overview:** This competency standard covers the skills and knowledge required to select suitable material to build different types of poly-tunnels and how to procure the suitable materials.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Select foundation material	<b>P1.</b> Collect data of climate and site conditions <b>P1.</b> Select durable and corrosion resistant material <b>P2.</b> Select strong material to provide rigidity <b>P3.</b> Select tubes capable to provide strong anchorage
<b>CU2.</b> Select poly-tunnel structure material	<b>P1.</b> Select support bars capable to support for climbing plants <b>P2.</b> Select material suitable to walk underneath <b>P3.</b> Select suitable structure of side vents <b>P4.</b> Select recommended gauge of polyethylene sheet
<b>CU3.</b> Perform market survey for procurement of material	<b>P1.</b> Make preparations for market survey according to prescribed standard <b>P2.</b> Collect data of material required for poly-tunnel building on prescribed format <b>P3.</b> Ensure health and safety standards
<b>CU4.</b> Select purchasing points	<b>P1.</b> Collect data of different purchasing points <b>P2.</b> Select suitable and economically feasible material <b>P3.</b> Manage for labour to load and unload materials <b>P4.</b> Plan safe route of material transportation
<b>CU5.</b> Quality analysis	<b>P1.</b> Identify the grades of different materials <b>P2.</b> Check the gauge of polyethylene sheet <b>P3.</b> Check quality of pipes or foundation material
<b>CU6.</b> Adhere to safety standards	<b>P1.</b> Wear protection gear <b>P2.</b> Wear gloves to avoid injuries <b>P3.</b> Use suitable tool to lift or transport material

### Knowledge & Understanding.

The candidate must be able to demonstrate underpinning knowledge and understanding required to select material for construction of poly-tunnel. This includes the knowledge of:

- K1. Different materials required for construction of poly-tunnel, their specifications and uses.
- K2. Learn about different materials used for installation of irrigation and ventilation systems.
- K3. Learn about different types of poly-tunnels
- K4. Understand about labor hiring and work allocation
- K5. Understand requirements of different crops
- K6. Understand weather and climate conditions of an area

### Critical Evidence(s) Required

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



- Knowledge of different materials required for construction of poly-tunnel.
- Capable to identify and select required material
- Decision about suitability of different poly-tunnels for specific crops and area

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
191.	Drawing sheet
192.	Pencil
193.	Rubber
194.	Sharpner
195.	Muasuring tape
196.	Foundation bars
197.	Support bars
198.	Ventilation Fans
199.	Door accessories
200.	Iron bars of different quality
201.	Polyethylene sheets of differetn guages

### **Installation of Poly-tunnel structures**

**Overview:** This competency standard covers the skills and knowledge required to install different materials to build a poly-tunnel.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Select poly-tunnel type	<b>P1.</b> Identify and arrange the tools required for collection of data <b>P2.</b> Collect data about desired crop/s <b>P3.</b> Collect data about climate of the area <b>P4.</b> Collect geographical data of the selected site <b>P5.</b> Prepare a datasheet of different types of poly-tunnels <b>P6.</b> Select poly-tunnel types according to desired crop <b>P7.</b> Analyze data and prepare a report <b>P8.</b> Purpose the most suitable type of tunnel based on the gathered data <b>P9.</b> Maintain record
<b>CU2.</b> Prepare for installation of poly-tunnel	<b>P1.</b> Ensure safety equipment as per standard SOPs <b>P2.</b> Identify and arrange required tools for installation <b>P3.</b> Prepare construction site as per standard requirements



	<p><b>P5.</b> Ensure performance check of required instruments</p> <p><b>P6.</b> Prepare layout for required poly-tunnel as per standard criteria</p>
<b>CU3.</b> Perform Installation of low tunnel	<p><b>P1.</b> Ensure availability of required installation tools and materials</p> <p><b>P2.</b> Implement layout plan as per design</p> <p><b>P3.</b> Perform installation of low-tunnel of bamboo structure</p> <p><b>P4.</b> Perform installation of low-tunnel of iron structure</p> <p><b>P5.</b> Perform post installation practices as per standards</p> <p><b>P6.</b> Ensure health and safety standards required for installation process</p>
<b>CU4.</b> Perform Installation of walk-in tunnel	<p><b>P1.</b> Ensure availability of required installation tools and materials</p> <p><b>P2.</b> Implement layout plan as per design</p> <p><b>P3.</b> Perform installation of walk-in tunnel of bamboo structure</p> <p><b>P4.</b> Perform installation of walk-in tunnel of iron structure</p> <p><b>P5.</b> Perform post installation practices as per standards</p> <p><b>P6.</b> Ensure health and safety standards required for installation process</p>
<b>CU5.</b> Perform Installation of High tunnel	<p><b>P1.</b> Ensure availability of required installation tools and materials</p> <p><b>P2.</b> Implement layout plan as per design</p> <p><b>P3.</b> Perform installation of high tunnel</p> <p><b>P3.</b> Perform installation of high tunnel of bamboo structure</p> <p><b>P4.</b> Perform installation of high tunnel of iron structure</p> <p><b>P5.</b> Perform post installation practices as per standards</p> <p><b>P6.</b> Ensure health and safety standards required for installation process</p> <p>Set the foundations</p> <p>Assemble structural units as per requirements</p>

### **Knowledge & Understanding.**

The candidate must be able to demonstrate construction of different structures of poly-tunnel.

This includes the knowledge of:

K1. Safety measures required to start work.

K2. General requirements of poly-tunnel construction.

K3. Development of working environment such as availability of electric power cord, cleaning of working space.

K4. Standard procedures for installation of poly-tunnel according to provided design.

### **Critical Evidence(s) Required**

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

- Proper planning of poly-tunnel construction
- Preparation of working space



- Follow safety instruction required to operate tools
- Assemble the structure according to the planned design

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
202.	Tools
203.	Foundation bars
204.	Structure bars
205.	Different parts of poly-tunnel
206.	Polyethylene sheet
207.	Marker
208.	Measuring scale
209.	Measuring tape

### **Maintenance of poly-tunnel structure**

**Overview:** This competency standard covers the skills and knowledge required to effectively maintain the poly-tunnel.

Competency Units	Performance Criteria
<b>CU1.</b> Observe damages of poly-tunnel	<b>P1.</b> Perform periodic surveys of the poly-tunnel <b>P2.</b> Identify structural damages on visit sheet <b>P3.</b> Report the structural damages as per standard format <b>P4.</b> Arrange required material and tools for repairing
<b>CU2.</b> Maintain poly-tunnel structure	<b>P1.</b> Repair the required damages of poly-tunnel structures <b>P2.</b> Tight polyethylene sheet <b>P3.</b> Clean polyethylene sheet <b>P4.</b> Maintain record of repairing in a service manual as per standard procedure <b>P5.</b> Follow health and safety procedures

### **Knowledge & Understanding.**

The candidate must be able to identify the possible damages of poly-tunnel and apply fix to eliminate observed damages. This includes the knowledge of:

- K1. Performing survey to denote poly-tunnel structural damages
- K2. Understanding about proper growing conditions of different crops
- K3. Maintaining repairing record and manuals
- K4. Application of appropriate fixes to repair damages

### **Critical Evidence(s) Required**



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

- Conduct poly-tunnel survey to identify damages
- Arrange material required for possible fixes
- Maintain growing conditions of a specific crop
- Maintain and repairing of irrigation system

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
210.	Ladder
211.	Notebook
212.	Pencil
213.	Marker
214.	Eraser
215.	Sharpner
216.	Measuring tape
217.	Polyethylene sheet
218.	Tools

## **6. Produce Harvester**

### **Identify produce maturity**

**Overview:** This competency standard covers the skill and knowledge required to identify produce maturity and maturity indices. The competency units consist of terminal performance objective and related technical knowledge necessary to carry out the task in a competent manner

Competency Units	Performance Criteria
<b>CU1.</b> Prepare materials to Identify produce maturity	<p><b>P1.</b> Select appropriate time for identification of produced maturity as per recommendation</p> <p><b>P2.</b> Identify and arrange requisite tools and equipment as per the job requirements</p> <p><b>P3.</b> Prepare a plan for the required task</p> <p><b>P4.</b> Select and use required Personal Protective Equipment (PPE) as per the recommendation.</p>
<b>CU2.</b> Identify Maturity indices	<p><b>P1.</b> Identify the indices that can be used to determine the produce maturity as per the Crop and recommended standards.</p> <p><b>P2.</b> Identify the appropriate stage of maturation and ripening to avoid possible disorders to the produce as per the set criteria</p> <p><b>P3.</b> Identify proper harvesting time for attaining longest postharvest life of the produce as per the crop requirement</p>



	<p><b>P4.</b> Check visual/ optical indicators (size, shape, colour, appearances, texture, lenticel number as per the requirements to determine maturity of the produce</p> <p><b>P5.</b> Check chemical indicators (specific gravity, starch content, total soluble solids, sugar to acid ratio and oil content) as per the requirements to determine maturity of the produce</p> <p><b>P6.</b> Perform Organoleptic check for maturity as per the recommendation</p>
CU3 Identify physiological maturity	<p><b>P1.</b> Identify the appropriate stage for recording physiological maturity of each crop as per the recommendation</p> <p><b>P2.</b> Identify the indices that can be used to determine the physiological maturity as per the Crop and recommended standards.</p> <p><b>P3.</b> Distinguish the physiological maturity of climacteric and non-climacteric fruits and vegetables as per the criteria</p> <p><b>P4.</b> Maintain the data record as per the recommendation</p> <p><b>P5.</b> Follow health and safety rules</p>
CU4 Identify Commercial maturity	<p><b>P1.</b> Identify the appropriate time/stage for recording commercial maturity as per the Crop and recommended standards.</p> <p><b>P2.</b> Identify the indices that can be used to determine the commercial maturity as per the Crop recommended standards and identified market standards.</p> <p><b>P3.</b> Distinguish the commercial maturity of climacteric and non-climacteric fruits and vegetables as per the criteria</p> <p><b>P4.</b> Maintain the data record as per the recommendation</p> <p><b>P5.</b> Follow health and safety rules</p>

### **Knowledge and Understanding**

This competency standard will provide knowledge related to:

- The harvest index, physiological maturity, commercial maturity
- Visual, chemical and organoleptic method of maturity checking
- Understand the different physiological stages of crop life cycle
- Apply the principle of plastic tunnel farming
- Utilization of diverse agro-climatic conditions for fruit and vegetable production

### **Critical Evidence(s) Required**

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

- Need to know about the life cycle of the grown vegetables
- Need to know about the maturity and harvest indices, physiological maturity and commercial maturity
- Arrange tools for maturity indices, physiological maturity and commercial maturity checking
- Follow health and safety rules

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
219.	Note book





220.	Pencil
221.	Gardening tool kit
222.	Refractometer
223.	Sampling and labelling tools
224.	PPEs
225.	First aid kit

## Perform harvesting

**Overview:** This competency standard covers the skill and knowledge required to know pre-harvesting steps, perform harvesting of the mature crop and post harvesting activities. Each task consists of terminal performance objective and related technical knowledge necessary to carry out the task in a professional manner.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare materials for harvesting work	<p><b>P1.</b> Select appropriate time for harvesting of produce at its maturity as per recommendation</p> <p><b>P2.</b> Identify and arrange required tools and equipment as per the job requirements</p> <p><b>P3.</b> Prepare a plan for required task as per the job requirement</p> <p><b>P4.</b> Select and use required Personal Protective equipment (PPE) as per the recommendation.</p>
<b>CU2.</b> Record harvest index	<p><b>P1.</b> Identify the appropriate time/stage for recording harvest index as per the Crop and recommended standards.</p> <p><b>P2.</b> Identify the indices that can be used to determine the harvest index as per the Crop recommended standards and identified market standards.</p> <p><b>P3.</b> Maintain the data record as per the recommendation</p> <p><b>P4.</b> Follow health and safety rules</p>
<b>CU3.</b> Perform pre-harvesting steps	<p><b>P1.</b> Identify the pre-harvesting factors (environmental, cultural practices and physiological components) affecting post-harvest quality as per market requirement</p> <p><b>P2.</b> Prepare for harvesting work as per standard requirements</p> <p><b>P3.</b> Shift the required tools and equipment for harvesting to the site</p> <p><b>P4.</b> Ensure harvesting machinery is working</p> <p><b>P5.</b> Monitor the pesticide residue intervals (PRI) before the harvesting time as per the standards of F&amp;V</p> <p><b>P6.</b> Arrange required transport for shifting of harvested produce to the market</p>





<b>CU4. Perform harvesting</b>	<p><b>P1.</b> Arrange the tools and equipment required for the harvesting</p> <p><b>P2.</b> Harvest the desired economic part of the crop as per the established criteria</p> <p><b>P3.</b> Manage the harvested produce to avoid post-harvest losses, as per the requirement</p> <p><b>P4.</b> Transfer the harvested crop to the collection site as per the requirements</p> <p><b>P5.</b> Clean the tools and equipment and shift to the store as per the SOPs.</p> <p><b>P6.</b> Ensure health and safety standards throughout the harvesting process</p> <p><b>P7.</b> Dispose undesired, Diseased Plants and Weeds from the tunnels/fields after harvesting as per the recommendation</p> <p><b>P8.</b> Clean and store the tools after use as per the recommendation</p>
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### **Knowledge and Understanding**

This competency standard will provide knowledge related to:

- The harvest index, physiological maturity, commercial maturity
- Visual, chemical and organoleptic method of maturity checking
- Understand the different physiological stages of crop life cycle
- Apply the principle of plastic tunnel farming
- Utilization of diverse agro-climatic conditions for fruit and vegetable production
- Understand the methods of off season vegetable production, harvesting techniques, grading and sorting
- Supervise the activities of farm to market supply of the harvested produce

### **Critical Evidence(s) Required**

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

- Need to know about the life cycle of the grown vegetables
- Need to know about the maturity and harvest indices, physiological maturity and commercial maturity
- Arrange tools for maturity indices, physiological maturity, commercial maturity and harvesting operation
- Supervise the activities of farm to market supply of the harvested produce
- Follow health and safety rules

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
226.	Note book and Pencil
227.	Gardening tool kit



228.	Harvesting tools and employments
229.	PPEs
230.	First add kit

### Perform Sorting and Grading

**Overview:** This competency standard covers the skill and knowledge required to perform Sorting and Grading activities. Each task consists of terminal performance objective and related technical knowledge necessary to carry out the task in a professional manner.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare materials for sorting and grading work	<p><b>P1.</b> Identify the ideal time and space for sorting and grading as per job requirements</p> <p><b>P2.</b> Identify and arrange required tools and equipment as per the job requirements</p> <p><b>P3.</b> Prepare a plan for required tasks as per the job requirement</p> <p><b>P4.</b> Select and use the required Personal Protective equipment (PPE) as per the job requirements.</p>
<b>CU2.</b> Perform sorting at field	<p><b>P1.</b> Arrange the tools used in the sorting process as per the requirement.</p> <p><b>P2.</b> follow the process of manual produce sorting as per the requirement at farm</p> <p><b>P3.</b> Sort out the produce according to required parameters (diameter, length and shape)</p> <p><b>P4.</b> Remove the damaged, diseased, immature, over-ripened, and deformed produce as per the recommendation for sorting</p> <p><b>P5.</b> Dispose-off the undesirable/sorted out produce as per the SOP</p> <p><b>P6.</b> Clean and store the tools and equipment as per the recommendation</p> <p><b>P7.</b> Ensure health and safety standards throughout the sorting process</p>
<b>CU3.</b> Perform Grading activities	<p><b>P1.</b> Identify and arrange the tools and equipment required for grading</p> <p><b>P2.</b> Perform grading of the produce, manually, on the basis of visual characteristics (size, colour and shape) as per established criteria</p> <p><b>P3.</b> Perform mechanical grading of required produce according to the set criteria</p> <p><b>P5.</b> Clean the tools and equipment used after grading as per the SOP</p> <p><b>P6.</b> Ensure health and safety standards throughout the grading process</p>

### Knowledge & Understanding

This competency standard will provide knowledge related to:

- The methods of off season vegetable production, its harvesting and sorting and grading
- The grading on the basis factors (consistency, absence of defects, character, uniformity, flavor and odor), as specified in the grading standards criteria.



- Understand the descriptive terminologies of grading (fancy, extra fancy, No. 1 grade, Combination, No. 2, and No.3 and commercial grade) as per the SOP
- Disposal of unwanted produce wherever required
- Supervise the activities of farm to market supply of the harvested produce

### Critical Evidence(s) Required

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

- Need to know about the life cycle of the grown vegetables
- Need to know about the maturity and harvest indices, physiological maturity and commercial maturity
- Arrange tools for sorting and grading purpose and harvesting operation
- Supervise the activities of farm to market supply of the harvested produce
- Follow health and safety rules

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
231.	Notebook
232.	Pencil
233.	Gardening tool kit
234.	Sorting tools
235.	Grading tools and equipment
236.	PPEs
237.	First aid kit

## 7. Fertigation and irrigation operator

### Identify and layout of irrigation System

**Overview:** This competency standard covers the skills and knowledge required to Plan for identification and layout of irrigation system, Prepare layout for Irrigation system and Cost Estimation.

Competency Units	Performance Criteria
CU1. Plan for identification and layout of irrigation system	<p><b>P1.</b> Identify source of irrigation water</p> <p><b>P2.</b> Prepare layout plan for use of selected source</p> <p><b>P3.</b> Identify and arrange tools according to selected source</p> <p><b>P4.</b> Maintain Records</p> <p><b>P5.</b> Ensure required safety standards</p>



<b>CU2.</b> Prepare layout for Irrigation system	<b>P1.</b> Identify available resource <b>P2.</b> Select Irrigation method <b>P3.</b> Draw proper design for selected irrigation method <b>P4.</b> Maintain Records <b>P5.</b> Ensure required safety standards
<b>CU3.</b> Cost Estimation	<b>P1.</b> Conduct market survey for cost estimation of required irrigation system as per recommendation <b>P2.</b> Select suitable material as per requirements <b>P3.</b> Procure selected material as per SOPs <b>P4.</b> Maintain Records as per prescribed format <b>P5.</b> Ensure required safety standards

### **Knowledge & 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. Different water sources.
- K2. Different irrigation layouts for tunnel.
- K3. How to prepare sowing plan according to irrigation layout
- K4. Water deficiency symptoms and their identification in field
- K4. Use of hygrometer to determine water deficiency in soil.
- K5. Use of different irrigation equipment
- K6. Survey Techniques for cost analysis
- K7. Selection of materials according to special farm requirements

### **Critical Evidence(s) Required**

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

- Irrigation sources
- Sowing plan according to irrigation layout
- Survey market to conduct cost analysis
- Select materials

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
238.	White Chart,
239.	Pencil,
240.	Writing pad,
241.	Eraser,



242.	Sharpner,
243.	Calculator,
244.	File covers

### Install irrigation system

**Overview:** This competency standard covers the skills and knowledge required to required Plan for installation, Perform Installation of Flood irrigation system, Perform Installation of Drip irrigation system and Perform Installation of Sprinkler irrigation system.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Plan for installation	<p><b>P1.</b> Arrange materials according to irrigation method</p> <p><b>P2.</b> Prepare work plan for installation</p> <p><b>P3.</b> Arrange required transport</p> <p><b>P4.</b> Ensure required safety standards</p>
<b>CU2.</b> Perform Installation of Flood irrigation system	<p><b>P1.</b> Identify and arrange materials for flood irrigation system installation</p> <p><b>P2.</b> Arrange Labor for flood irrigation system installation</p> <p><b>P3.</b> Perform installation according to layout plan</p> <p><b>P4.</b> Ensure Commissioning of installed system</p> <p><b>P5.</b> Prepare evaluation report according to the set standards</p> <p><b>P6.</b> Maintain Records</p> <p><b>P7.</b> Ensure required safety standards</p>
<b>CU3.</b> Perform Installation of Drip irrigation system	<p><b>P1.</b> Identify and arrange materials for Drip installation</p> <p><b>P2.</b> Arrange Labor for Drip installation</p> <p><b>P3.</b> Perform installation according to layout plan</p> <p><b>P4.</b> Ensure Commissioning of installed system</p> <p><b>P5.</b> Prepare evaluation report according to the set standards</p> <p><b>P6.</b> Maintain Records</p> <p><b>P7.</b> Ensure required safety standards</p>
<b>CU4.</b> Perform Installation of Sprinkler irrigation system	<p><b>P1.</b> Identify and arrange materials for Sprinkler installation</p> <p><b>P2.</b> Arrange Labor for sprinkler installation</p> <p><b>P3.</b> Perform installation according to layout plan</p> <p><b>P4.</b> Ensure Commissioning of installed system</p> <p><b>P5.</b> Prepare evaluation report according to the set standards</p> <p><b>P6.</b> Maintain Records</p> <p><b>P7.</b> Ensure required safety standards</p>

### Knowledge & Understanding



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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. Procurement criterias.
- K2. Work plan for irrigation installation.

### **Critical Evidence(s) Required**

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

- Prepare soil samples
- Identify water and nutrient deficiency
- Identify the sources of nutrients
- Prepare sowing & irrigation layouts
- Apply irrigation

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
245.	Kassi,
246.	Spade,
247.	Drawing sheet,
248.	Lead pencil,
249.	Eraser,
250.	Sharpner,
251.	White lime powder,
252.	Plastic bags,
253.	Permannet marker,
254.	Scotch Tape
255.	Irrigation pipes
256.	Generators
257.	Welding plant

### **Manage soil fertility**

**Overview:** This competency standard covers the skills and knowledge required to Prepare soil samples for soil analysis, Prepare water samples for water analysis, Collect Reports, Select proper fertilizers/ manures.

Competency Units	Performance Criteria
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<p><b>CU1.</b> Prepare soil samples for soil analysis</p>	<p><b>P1.</b> Identify and arrange tools for soil samples  <b>P2.</b> Collect the soil samples according to the set procedures,  <b>P3.</b> Dispatch samples for analysis according to set standards  <b>P4.</b> Maintain Records  <b>P5.</b> Ensure required safety standards</p>
<p><b>CU2.</b> Prepare water samples for water analysis</p>	<p><b>P1.</b> Identify and arrange tools for water samples  <b>P2.</b> Collect the water samples according to the set procedures ,  <b>P3.</b> Dispatch samples for analysis according to set standards  <b>P4.</b> Maintain Records  <b>P5.</b> Ensure required safety standards</p>
<p><b>CU3.</b> Collect Reports</p>	<p><b>P1.</b> Collect reports  <b>P2.</b> Identify the deficient Nutrients according to standard range  <b>P3.</b> Identify the excess Nutrients according to standard range  <b>P4.</b> Maintain record of the collected reports on prescribed format</p>
<p><b>CU4.</b> Select proper fertilizers/manures</p>	<p><b>P1.</b> Select proper fertilizer/manure as per recommendation  <b>P2.</b> Select method for fertilizer application  <b>P3.</b> Identify and arrange application equipment according to application method  <b>P4.</b> Apply selected fertilizer/manure as per SOP  <b>P5.</b> Ensure required safety standards</p>

**Knowledge & 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. Soil and water sampling methods
- K2. Soil and water sample preparation technique
- K3. Soil and water sample storage
- K4. Dispatch samples to soil testing laboratory



- K5. Nutrient sources and fertilizers/manures and their application techniques

### Critical Evidence(s) Required

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

- Prepare soil and water samples
- Prepare soil and water samples for storage
- Identify water and nutrient deficiency
- Identify the sources of nutrients fertilizers/manures

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Fertilizers or manures
2.	Gardening tool kit
3.	PPEs
4.	First Aid Box

## 8. PPM supervisor for off season vegetables

### Identify Integrated Pest Management(IPM)

**Overview:** This competency standard covers the skills and knowledge required to Identify pest and Disease invasion, Schedule the Implementation of control strategies by IPM, Perform control measures and Inspection of Control measures.

Competency Units	Performance Criteria
<b>CU1.</b> Identify pest invasion	P1. Identify plant pest and disorders according to prescribed IPM standards. P2. Identify the beneficial organisms according to insect orders. P3. Assess Scope and size of the damage according to economic threshold level (ETL)





	P4. Follow health and safety standards required
<b>CU2.</b> Schedule the Implementation of control strategies by IPM	P1. Select required control activities according to damage. P2. Identify and arrange tools, equipment's and machinery and biological cards for required activity. P3. Ensure Risks and hazards management according to safety standards. P4. Ensure Personal Protective Equipment (PPE) according to required operations. P5. Ensure Eco-friendly procedures according to standards.
<b>CU3.</b> Perform pest control measures	P1. Identify and arrange required tools and chemicals required to perform IPM activity P2. Implement IPM standards. P3. Maintain work place after completion of each activity. P4. Prepare performance report according to format. P5. Maintain record according to legislative guidelines.
<b>CU4.</b> Inspect Control measures	P1. Check side effects of control measures on plants and external environment. P2. Measure efficiency of applied control activity with reference to standard protocols. P3. Regulate IPM control methods to meet organizational requisites.

### **Knowledge & 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. Recognition of pests and Diseases.
- K2. Understand IPM standards or Industry code of conduct.
- K3. Environmental legislative requirements including toxic substances regulations.
- K4. Efficient use and maintenance of PP (personal Protective) equipment's.
- K5. Side effects and control measures of pesticides.

### **Critical Evidence(s) Required**

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

- Identification of pests, Diseases and beneficial organisms
- Assess damage to plants
- Monitor effectiveness of control methods.

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
258.	Sprayers,



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259.	Masks,
260.	Googols,
261.	Tank,
262.	Measuring scale,
263.	Automizers,
264.	Measuring Tape,
265.	Gloves,
266.	Shoes
267.	lens
268.	Nets
269.	Microscope
270.	Notebook

### **Eradicate weeds**

**Overview:** This competency standard covers the skills and knowledge required to Evaluate weed infestation, Schedule weed control measures, Weed Control operations and Inspection of weed control practices.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Evaluate weed infestation	P1. Identify and arrange tools required P2. Identify and record weeds population and types in target area according to standards. P2. Evaluate the size, stage and span of weed infestation in target area on prescribed format. P3. Assess ETL of weed in target area P4. Select control measures in accordance with health, safety and environmental requisites. P5. Ensure personal health and safety standard
<b>CU2.</b> Prepare schedule for weed control measures	P1. Ensure favorable environmental conditions according to required method. P2. Prepare plan for required activity. P3. Ensure availability of required resources. P4. Ensure Eco-friendly procedures. P5. Plan execution according to regulatory requirements. P6. Ensure personal health and safety standard
<b>CU3.</b> Perform Manual Weeding	P1. Identify and arrange implements for required process. P2. Perform manual weeding process as per standard requirement. P3. Ensure PPEs for required task. P4. Manage records of the control practices according to procedures and monitoring authorities.



<b>CU4. Apply weedicides</b>	P1. Identify and arrange implements for required process. P2. Apply weedicides as per required dosage. P3. Ensure use of PPEs according to standards. P4. Manage records of the control practices according to procedures and monitoring authorities.
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### **Knowledge & 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. Identification of weeds and their impact on target site.
- K2. Impact of weeds infestation on plant health and growth.
- K3. Ensured control practices had minimal impact on non-target species and environment
- K4. Observed, recorded, and reported the efficiency of control procedures.

### **Critical Evidence(s) Required**

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

- Identification of weeds and non-target species.
- Assess plant health conditions
- Keep records of control methods
- Monitor the effectiveness of control methods.

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Sprayers,
2.	Masks,
3.	Googols,
4.	Tanks
5.	Measuring scale,
6.	Gloves,
7.	Shoes
8.	lens
9.	Notebook
10.	weeder
11.	Shovel



12. Spade

**Implement Integrated Disease Management (IDM)**

**Overview:** This competency standard covers the skills and knowledge required for Inspection of plant diseases, Plan the management of diseases, Implementation of plant disease operations and Monitor disease management.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Inspect plant diseases	P1. Identify and arrange tools required for inspection process P2. Identify and record plant diseases and pathogen in target area according to standards. P3. Assess the symptoms on target plant according to required disease. P4. Assess the rate of infection of disease by specific pathogen according to ETL.
<b>CU2.</b> Prepare plan for the management of diseases	P1. Select appropriate control method according to field conditions and legislative measure. P2. Prepare plan for selected activity according to environmental conditions. P3. Arrange tools according to required method. P4. Ensure availability of personal Protective Equipment (PPE) according to health and safety procedures.
<b>CU3.</b> Implement plant disease management operations	<b>P1.</b> Ensure availability of required material for selected method. <b>P2.</b> Perform required control strategy according to standard procedure. <b>P3.</b> Manage records of the control practices according to procedures. <b>P4.</b> Ensure health and safety standards involved in selected activity.

**Knowledge & 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. Identification of diseases and their disorders on target site.
- K2. Impact of disease infection on plant health and growth.
- K3. Control practices with minimal impact on non-target species and environment



- K4. International standards guidelines for required disease management protocols
- K5. Legislation regarding pesticides usage

### Critical Evidence(s) Required

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

- Identification of pathogens, disorders and non-target species.
- Assess plant health conditions
- Keep records of control methods
- Monitor the effectiveness of control methods.

### TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
13.	Sprayers,
14.	Masks,
15.	Googols,
16.	Tanks
17.	Measuring scale,
18.	Gloves,
19.	Shoes
20.	lens
21.	Notebook
22.	Petriplates
23.	Media
24.	Autoclave
25.	Microscopes

## 9. Green House Operator

### Operate green house components

**Overview:** This competency standard covers the skills and knowledge required to understand the working of different components of green house for appropriate maintainace of required environment.

Competency Units	Performance Criteria
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<b>CU1.</b> Understand working of various Green House Components	P1 Identify different types of green house. P2 Identify suitability as per crop requirement. P3 Identify and arrange power source to fulfill energy requirements.
<b>CU2.</b> Operate environmental controlling components	P1 Perform understanding of different equipment used for controlling micro climate. P2 perform measures to control Humidity in green house P3 Perform measures to control Temperature in the green house. P4 Ensure Hygienic conditions at the work place.
<b>CU3.</b> Operate Processing Component	<b>P1</b> Perform identification of processing components of green house <b>P2</b> Perform operation of processing of components of green houses. <b>P3</b> Ensure PPEs and maintain hygienic conditions at workplace.
<b>CU4.</b> Operate irrigation systems.	<b>P1</b> Perform Identification irrigation systems as per conditions <b>P2</b> Perform operation of irrigation types as per standard. <b>P3</b> Ensure PPEs and maintain hygienic conditions at workplace.

**Knowledge and Understanding.**

The candidate must be able to demonstrate underpinning knowledge and understanding to operate and manage various green house components required to carry out daily tasks covered in this competency standard. This includes the knowledge of:

- Explain Green House components including Frame work, covering sheets, Cool pad system and Drip Irrigation System
- Explain the standard procedures to operate the green house
- Explain Ideal environment required for crop growth

**Critical Evidence(s) Required**



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

- Monitor and maintain the conditions of tools and equipment
- maintaining and running the green house
- Monitor the environment inside green house

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
26.	Fans,
27.	Exhaust,
28.	Pads,
29.	Humidifier/fogger,
30.	Heater,
31.	Frame work,
32.	Plythene sheets,
33.	Motors
34.	Water reservoir
35.	Pumps
36.	Fertilizer Mixer
37.	Pipes including the main and laterals
38.	Drips
39.	Shading nets
40.	Glass sheet

### **Perform green House Operations**

**Overview:** This competency standard covers the skills and knowledge required to understand the working of different components of green house for appropriate maintainace of required environment.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Collect planting	<b>P1</b> Identify the planting material as per requirement and



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material	maintain its record. <b>P2</b> Ensure collection of concerned plant material on time. <b>P3</b> Perform labeling as per required format. <b>P4</b> Ensure personnel hygiene and work place sanitation according to required set standard.
<b>CU2.</b> Prepare media for plantation	<b>P1</b> Perform identification of different types of media <b>P2</b> Ensure suitable selection of growing media as per requirement. <b>P3</b> Perform labeling as per required format. <b>P4</b> Ensure personnel hygiene and work place sanitation according to required set standard
<b>CU3.</b> Perform management operations.	P1 Identification of management operations as per requirement P2 Implementation of management practices as per standards P3 Ensure personnel hygiene and work place sanitation according to required set standard
<b>CU4.</b> Maintain Records.	P1 Prepare stock control system of equipment as per requirements P2 Identify ordering system and process as per standard P3 Ensure stock level as per requirement P4 Ensure safe placement of records

**Knowledge and Understanding.**

The candidate must be able to demonstrate underpinning knowledge and understanding to operate and manage various green house components required to carry out daily tasks covered in this competency standard. This includes the knowledge of:

- Explain Green House components including Frame work, covering sheets, Cool pad system and Drip Irrigation System
- Explain the standard procedures to operate the green house
- Explain Ideal environment required for crop growth.

**Critical Evidence(s) Required**

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





- Monitor and maintain the conditions of tools and equipment
- maintaining and running the green house
- Monitor the environment inside green house

## **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
41.	Fans,
42.	Exhaust,
43.	Pads,
44.	Humidifier/fogger,
45.	Heater,
46.	Frame work,
47.	Plythene sheets,
48.	Motors
49.	Water reservoir
50.	Pumps
51.	Fertilizer Mixer
52.	Pipes including the main and laterals
53.	Drips
54.	Shading nets
55.	Glass sheet

## **Perform IPM and IDM**

**Overview:** This competency standard covers the skills and knowledge required to understand the working of different components of green house for appropriate maintainance of required environment.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1. Identify pest invasion</b>	P1. Identify plant pest and disorders according to prescribed IPM standards. P2. Identify the beneficial organisms according to insect orders. P3. Assess Scope and size of the damage according to economic threshold level (ETL)



	P4. Follow health and safety standards required
<b>CU2.</b> Schedule the Implementation of control strategies by IPM	P1. Select required control activities according to damage. P2. Identify and arrange tools, equipment's and machinery and biological cards for required activity. P3. Ensure Risks and hazards management according to safety standards. P4. Ensure Personal Protective Equipment (PPE) according to required operations. P5. Ensure Eco-friendly procedures according to standards.
<b>CU3.</b> Perform pest control measures	P1. Identify and arrange required tools and chemicals required to perform IPM activity P2. Implement IPM standards. P3. Maintain work place after completion of each activity. P4. Prepare performance report according to format. P5. Maintain record according to legislative guidelines.
<b>CU4.</b> Inspect Control measures	P1. Check side effects of control measures on plants and external environment. P2. Measure efficiency of applied control activity with reference to standard protocols. P3. Regulate IPM control methods to meet organizational requisites.

### **Knowledge and Understanding.**

The candidate must be able to demonstrate underpinning knowledge and understanding to operate and manage various green house components required to carry out daily tasks covered in this competency standard. This includes the knowledge of:

- Explain Green House components including Frame work, covering sheets, Cool pad system and Drip Irrigation System
- Explain the standard procedures to operate the green house
- Explain Ideal environment required for crop growth

### **Critical Evidence(s) Required**

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

- Monitor and maintain the conditions of tools and equipment
- maintaining and running the green house
- Monitor the environment inside green house

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:



S. No.	Items
56.	Fans,
57.	Exhaust,
58.	Pads,
59.	Humidifier/fogger,
60.	Heater,
61.	Frame work,
62.	Plythene sheets,
63.	Motors
64.	Water reservoir
65.	Pumps
66.	Fertilizer Mixer
67.	Pipes including the main and laterals
68.	Drips
69.	Shading nets
70.	Glass sheets

## 10. Post harvest management supervisor

### Handle harvested produce

**Overview:** This competency standard covers the skills and knowledge required to Prepare plan for transport of the harvested produce, Perform Transportation of Farm produce, Ensure farm produce quality

Competency Units	Performance Criteria
<b>CU1.</b> Prepare plan for transport of the harvested produce	<p>P1 Identify and arrange transportation tools and equipment.</p> <p>P2. Prepare transportation schedule as per produce requirement.</p> <p>P3. Ensure and manage risks and hazards according to standard protocols.</p> <p>P4. Observe site environmental conditions according to standards.</p>
<b>CU2.</b> Perform Transportation of Farm produce	<p>P1. Identify and arrange transport as per produce requirement</p> <p>P2. Load farm produce according to vehicle capacity.</p> <p>P2. Ensure security of farm produce during load.</p> <p>P3. Ensure transport rules and routes.</p> <p>P4. Unload farm produce on proper spot by following the standard protocols.</p> <p>P5. Maintain records according to departmental</p>



	requirements. P6. Ensure required health and safety standards
<b>CU3.</b> Ensure farm produce quality	<p><b>P1.</b> Ensure standard hygiene conditions.</p> <p><b>P2.</b> Follow enterprise protocols for storage of farm produce.</p> <p><b>P3.</b> Perform quality checks before and after transportation of farm produce.</p> <p><b>P4.</b> Maintain Records</p>

### **Knowledge & 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:

- Follow the standards protocols for environment and road safety
- Ensure standard hygiene conditions.
- Maintenance of farm vehicles and equipment.
- Relevant biosecurity requirement.
- Use personal and protective equipment.

### **Critical Evidence(s) Required**

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

- Identification of weeds and non-target species.
- Assess plant health conditions
- Keep records of control methods
- Monitor the effectiveness of control methods.

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
71.	Sprayers,
72.	PPEs
73.	Tractors,
74.	Terrain vehicles (ATVs) and utility vehicles (UTV)
75.	Farm Truck



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76.	Wagon
77.	Mowers
78.	Backhoe
79.	Plastic Mulch layer
80.	Scythe
81.	Sickle
82.	Rackers
83.	balers
84.	Combine harvester
85.	Seed drills
86.	Cultivator
87.	Cultipacker
88.	Plows
89.	Harrows
90.	Transplanter

### Perform packaging of produce

**Overview:** This competency standard covers the skills and knowledge required to select the packaging materials, its requirement and its labeling.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Select packaging material	<p><b>P1.</b> Identify the packaging material as per given produce</p> <p><b>P2.</b> Identify capacity of the packaging material according to market requirement.</p> <p><b>P3.</b> Ensure Brand Reputation compliance global standards (BRCGS standard)</p>
<b>CU2.</b> Perform packaging	<p><b>P1.</b> Identify and arrange the materials and tools required for packaging</p> <p><b>P2.</b> Perform sorting according to prescribe standards</p> <p><b>P3.</b> Perform the grading according to industry standards</p> <p><b>P4.</b> Perform packaging of graded produce as per requirement</p> <p><b>P5.</b> Ensure the correct seal as per requirement</p> <p><b>P6.</b> Ensure personal hygiene and food safety in accordance with industry guidelines</p>



<b>CU3. Label packaged items</b>	<b>P1.</b> Arrange labels and stickers according to content of packaging <b>P2.</b> Paste Labels and stickers accurately according to product standards <b>P3.</b> Maintain the record according to legislative guidelines
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### **Knowledge & Understanding.**

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

- Importance of packaging material and its Packaging
- Demonstrate the impact of packaging material on quality of farm product
- Describe the importance of sorting
- Understand the significance of grading
- The careful weights, measures and capacities

### **Critical Evidence(s) Required**

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

- Prepare the sorting and grading procedures
- Prepare layout to follow the packaging standards
- Layout the SOPs for hygiene and quality maintainance

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Packaging bags
2.	Packaging baskets
3.	Needles
4.	Gas cylinder
5.	Calculator
6.	Sealing machine
7.	Label material
8.	Grader



## Store Harvested Commodity

**Overview:** This competency standard covers the skills and knowledge required to perform storage of harvested commodity.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Prepare plan for requirements of storage system	P1. Schedule the storage plan according to the storage commodity. P2. Design the layout of storage area. P3. Perform disinfection of storage area according to standard protocol.
<b>CU2.</b> Identify storage requirements of produce	P1. Identify the storage requirements according to produce quantity P2. Ensure seasonal requirements for the harvested produce. P3. Ensure 24/7 electricity source for storage P4. Maintain Hygiene conditions according to defined standards P5. Maintain required temperature and humidity as per required standards
<b>CU3.</b> Ensure conditions for optimum storage of products	P1. Ensure maintain the requirements of storage product. P2. Ensure post-harvest treatments for storage commodity according to standard P3. Perform the appropriate preservation techniques for storage product. P4. Ensure preparation requirements for storage of product P5. Maintain records according to departmental requirements.

### Knowledge & 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:

- Follow the standards protocols for harvesting and storage of product.
- Ensure standard hygiene conditions.
- Maintenance of storage areas.
- Use personal and protective equipment.

### **Critical Evidence(s) Required**

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

- Identification of weeds and non-target species.
- Assess plant health conditions
- Keep records of control methods
- design systems for year-round supply of storage products



## TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
91.	Refrigerators,
92.	Masks,
93.	Googols,
94.	Tanks
95.	Measuring scale,
96.	Gloves,
97.	Shoes
98.	Tractors,
99.	Farm Truck
100.	Buildings such as sheds
101.	Cupboards
102.	Shelving and racks
103.	Work benches
104.	Storerooms
105.	Pantry
106.	Cool store
107.	Cellar
108.	Root cellar
109.	Bins and containers

## **Maintain Records**

**Overview:** This competency standard covers the skills and knowledge required to maintain stock register, Maintain Assets and Maintain catalogue.

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Maintain Inventory registers	P1. Maintain stock register as per standard format. P2. Maintain cash book on prescribed format. P3. Maintain fixed assets register as per prescribed format P4. Maintain crop registers according to standard format.





<b>CU2.</b> Prepare daily performance reports	P1. Maintain Repair and maintenance history sheets. P2. Maintain log books. P3. Maintain crop data sheets according to prescribed format. P4. Prepare and submit damage report according to company SOPs.
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### **Knowledge & 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:

- Follow standard protocols for record keeping.
- Compare and contrast ways of preparing original and copy cataloguing records.
- Procedure for maintain catalogue records.
- Numeracy skills sufficient to work with numerical record keeping systems.

### **Critical Evidence(s) Required**

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

- Typical policies and procedures for collection record keeping
- Information sources relevant to the collection
- Ethical and cultural issues that impact on collection record keeping
- Copyright, moral rights and intellectual property issues and legislation that impact on collection record keeping
- Literacy skills sufficient to interpret reference sources and documentation relating to specific objects and the collection

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Note books,
2.	catalogues,
3.	Pen,
4.	Pencil
5.	Measuring scale,
6.	Cupboards
7.	Shelving and racks
8.	Work benches
9.	Bins and containers
10.	CDs and Disks
11.	Kits



12. First aid box

**Perform Value additions**

**Overview:** This competency standard covers the skills and knowledge required to determine value addition method and value addition with quality assurance. .

<b>Competency Units</b>	<b>Performance Criteria</b>
<b>CU1.</b> Identify Value addition methods	<p><b>P1.</b>Determine the require product for value addition</p> <p><b>P2.</b> Identify the value addition methods according to requirements.</p> <p><b>P3.</b> Prepare cost estimation for required product.</p>
<b>CU2.</b> Perform the sorting and grading for value addition	<p><b>P1.</b> Identify and Arrange tools required for sorting and grading.</p> <p><b>P2.</b> Perform sorting according to prescribe standards</p> <p><b>P3.</b> Perform grading according to required industry standards</p> <p><b>P4.</b>Ensure personal hygiene and food safety in accordance with industry guidelines</p>
<b>CU3.</b> Perform value addition	<p><b>P1.</b> Identify the required equipment’s, tools and materials as per selected value addition method.</p> <p><b>P2.</b> Perform required value addition methods according to set standards</p> <p><b>P3.</b> Ensure personal hygiene and food safety in accordance with industry guidelines</p> <p><b>P4.</b> Maintain the record as per standard</p>
<b>CU4.</b> Perform the Preservation	<p><b>P1.</b> Identify and arrange tools and material required for preservation</p> <p><b>P2.</b> Prepare preservatives according to standard protocol</p> <p><b>P3.</b> Perform preservation method according to standard protocol.</p> <p><b>P4.</b> Ensure the personal safety and work place hygiene according to HACCP standards.</p> <p><b>P5.</b>Ensure food safety in accordance with industry guidelines</p>



<b>CU5. Maintain record</b>	P1. Identify and arrange the tools for labelling as per requirement. P2. Perform labelling according to standard protocols. P3. Maintain records on required format.
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### **Knowledge & Understanding.**

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

- K1. Understand the Industry standards methods
- K2. Understand the significance of sorting and grading
- K3. Understand the value addition methods
- K3. Ensure understanding of preservation methods by temperature, sugar and chemicals.

### **Critical Evidence(s) Required**

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

- Identify Value addition methods
- Perform sorting and grading procedures
- Select appropriate preservative methods
- Ensure health and safety guidelines

### **TOOLS AND EQUIPMENT**

The tools and equipment required for this competency standard are given below:

S. No.	Items
9.	Mini Solar Drier
10.	Blanching unit
11.	Tray Drier
12.	Vacuum Drier
13.	Needles
14.	Canning unit
15.	Cool Chamber
16.	Utensils

## **11. Marketing Supervisor**

### **Market products and services**



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**Overview:** This competency standard covers the skills and knowledge required to market products and services.

Competency Unit	Performance Criteria
<b>CU1.</b> Analyse market information	<p><b>P1.</b> Identify, research and analyse existing or new markets for existing or new products or services using techniques to ensure reliable data</p> <p><b>P2.</b> Analyse past trends and developments to determine market variability and associated risks</p> <p><b>P3.</b> Develop gross margin budgets to account for market variability</p> <p><b>P4.</b> Identify and evaluate competing products to determine strengths and weaknesses of own products</p> <p><b>P5.</b> Monitor market environment to ensure information is current and reliable</p> <p><b>P6.</b> Identify the legal, ethical and environmental constraints of the markets and their effect on the enterprise</p> <p><b>P7.</b> Identify product specifications that suit market requirements and price advantage at the time</p> <p><b>P8.</b> Present clear and concise information to the enterprise management team.</p>
<b>CU2.</b> Identify and evaluate factors to include in a marketing plan	<p><b>P1.</b> Identify and evaluate production processes to ensure required product specifications are met</p> <p><b>P2.</b> Identify and assess alternative selling strategies and techniques to identify marketing targets and methods</p> <p><b>P3.</b> Identify and assess distribution channels and their role in your marketing strategies</p> <p><b>P4.</b> Ensure the data used is reliable and the market environment and trends are substantiated</p> <p><b>P5.</b> Evaluate the role of marketing professionals in providing advice</p>
<b>CU3.</b> Develop a marketing plan for your products and services	<p><b>P1.</b> Establish marketing objectives based on current and potential product specifications</p> <p><b>P2.</b> Select appropriate production processes to ensure product specifications are met</p> <p><b>P3.</b> Select selling strategies to ensure required prices are achieved</p> <p><b>P4.</b> Select appropriate distribution channel options to ensure access to target markets is achieved efficiently and appropriately</p> <p><b>P5.</b> Establish timeframes for production, distribution and selling activities</p> <p><b>P6.</b> Develop a gross margin budget to demonstrate the cost effectiveness of the marketing plan</p> <p><b>P7.</b> Develop partial gross margin budgets to account for market variability</p>
<b>CU4.</b> Determine	<p><b>P1.</b> Prepare and record detailed plans for promotional activities</p>



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promotional strategies	<p><b>P2.</b> Outline objectives, level of exposure and available markets</p> <p><b>P3.</b> Ensure strategies take account of time management and scheduling issues, and resource constraints</p> <p><b>P4.</b> Create promotional materials that enhance the product and commercial presentation</p> <p><b>P5.</b> Record and communicate priorities, responsibilities, timelines and budgets for promotional activities.</p>
<b>CU5.</b> Implement marketing activities	<p><b>P1.</b> Schedule planned marketing activities within appropriate timeframes</p> <p><b>P2.</b> Develop measurable performance targets that meet business plan objectives</p> <p><b>P3.</b> Organise distribution channels and ensure product and service information is accurate and readily available to clients</p> <p><b>P4.</b> Implement marketing activities within budgetary constraints to meet legal, ethical and enterprise requirements</p>
<b>CU6.</b> Evaluate marketing performance.	<p><b>P1.</b> Review the established marketing objectives to ensure they remain viable</p> <p><b>P2.</b> Make an objective assessment of the marketing plan and its implementation by a comparison of valid and reliable data against the established objectives</p> <p><b>P3.</b> Assess product, pricing and distribution policies in relation to market changes, marketing objectives and enterprise requirements</p> <p><b>P4.</b> Identify areas of positive marketing performance and take corrective action to remedy poor marketing performance areas</p> <p><b>P5.</b> Document and distribute information for continual analysis and effective planning management</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:

- Describe the life cycle of product
- Identify the various ways of selecting suppliers,
- Explain the inventory management of stock, raw material and finished goods etc.
- Appreciate the importance of financial record keeping in a small business
- Explain techniques to keep cost as low as possible
- Develop balance sheet for a small enterprise
- Explain the operating cycle concept
- Explain the income tax computation procedure for a small business
- Explain the basic scheme of sales tax
- Explain the assessment procedure for returns and filling of returns.

**Critical Evidence(s) Required**



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The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all the requirements of the performance criteria and required skills and knowledge and include achievement of the following:

- Marketable features of the product and potential markets
- Range of marketing alternatives
- Data to assess alternatives in a marketing plan
- Performance targets and recommend modifications or improvements
- Implement and evaluate a marketing plan
- Plan to manage promotional activities



## Sale harvested produce

**Overview:** This competency standard covers the skills and knowledge required to select the suitable market for sale of produce and ways to market.

Competency Units	Performance Criteria
<b>CU1.</b> Prepare for Sale of produce	<b>P1.</b> Identify and arrange required material for sale <b>P2.</b> Prepare work plan for selling of required produce <b>P3.</b> Perform checks for required tools and machinery <b>P4.</b> Ensure health and safety guidelines for required task
<b>CU2.</b> Manage sale	<b>P1.</b> Arrange required material <b>P2.</b> Load commodities according to required order <b>P3.</b> Ensure loading standards <b>P4.</b> Transport produce to required place following company's SOPs <b>P5.</b> Deliver produce according to decided orders
<b>CU3.</b> Manage Finance	<b>P1.</b> Maintain sales record on required format <b>P2.</b> Prepare triplicates for each delivery <b>P3.</b> Collect cash according to set SOPs <b>P4.</b> Maintain Cash Book according to required format <b>P5.</b> Maintain ledgers according to prescribed formats

### Knowledge & Understanding.

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

- Marketing skills
- How to perform sales
- Maintenance of records
- Principles and procedures related to sales and marketing

### Critical Evidence(s) Required

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

- Manage sales
- Maintain records
- Understand sales and marketing principles



## TOOLS AND EQUIPMENT

The tools and equipment required for this competency standard are given below:

S. No.	Items
1.	Boards
2.	Laptop
3.	Ledgers
4.	Cash books
5.	Receipt books
6.	Pencils
7.	Charts
8.	PPEs

## 12. Communication Skills

### Perform workplace communication skills

**Overview:** This unit describes the skills and knowledge required to manage a range of meetings including overseeing the meeting preparation processes, chairing meetings, organizing the minutes and reporting meeting outcomes.

Competency Unit	Performance Criteria
<b>CU1.</b> Demonstrate professional skills	<p><b>P1.</b> Use different modes of communication to communicate</p> <ul style="list-style-type: none"><li>• Speaking</li><li>• Reading</li><li>• Writing</li><li>• Listening</li><li>• Presentation</li><li>• visual representation etc</li></ul> <p><b>P2.</b> Develop CV Skills according requirements</p> <p><b>P3.</b> Upgrade professional skills by attending trainings, webinars, conferences etc.</p> <p><b>P4.</b> Perform Continuous professional development as required at workplace</p> <p><b>P5.</b> Develop interview skills</p>





<b>CU2.</b> Plan and Organize work	<b>P1.</b> Identify and plan steps to complete task <b>P2.</b> Implement planned steps to complete task <b>P3.</b> Evaluate planning and organizing process <b>P4.</b> Identify hurdles and seek solutions to complete task
<b>CU3.</b> Conduct trainings at workplace	<b>P1.</b> Conduct training need assessment <b>P2.</b> Organize training session <b>P3.</b> Support trainees in managing their learning by facilitating them <b>P4.</b> Provide feedback on progress of trainees

### **Knowledge & Understanding**

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

- Explaining the training skills
- Identification of professional skills
- Describing advanced language skills
- Understanding the assessment and trainee's feedback methods
- Direct and indirect communication methods
- Explaining the need for the training type at the workplace

### **Tools and Equipment**

The tools and equipment required for this competency standard are given below:

S. No.	Items
1	Printer
2	Projector
3	LED screen
4	Computer

### **Critical Evidence(s) Required**

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:



## Manage workforce planning

**Overview:** This unit describes the skills and knowledge required to manage planning in relation to an organization’s workforce including researching requirements, developing objectives and strategies, implementing initiatives and monitoring and evaluating trends.

Competency Unit	Performance Criteria
<b>CU1.</b> Identify workforce	<p><b>P1.</b> Review current data on staff turnover and demographics</p> <p><b>P2.</b> Assess factors that may affect workforce supply</p> <p><b>P3.</b> Develop organization’s requirement for skilled workforce</p>
<b>CU2.</b> Develop workforce objectives and strategies	<p><b>P1.</b> Review organizational strategy and establish aligned objectives for modification</p> <p><b>P2.</b> Prepare strategies to address unacceptable staff turnover, if required</p> <p><b>P3.</b> Define objectives to retain required skilled labor</p> <p><b>P4.</b> Define objectives for workforce diversity and cross-cultural management</p> <p><b>P5.</b> Obtain agreement and endorsement for objectives and establish targets</p> <p><b>P6.</b> Develop contingency plans to cope with extreme situations</p>
<b>CU3.</b> Implement initiatives to support workforce planning objectives	<p><b>P1.</b> Implement action to support agreed objectives for recruitment, training, redeployment and redundancy</p> <p><b>P2.</b> Develop and implement strategies to assist workforce to deal with organizational dynamics</p> <p><b>P4.</b> Implement succession planning model to ensure desirable workers are developed and retained</p> <p><b>P5.</b> Implement programs to ensure workplace is an employer of choice</p>
<b>CU4.</b> Monitor and evaluate workforce trends	<p><b>P1.</b> Evaluate workforce plan against patterns in exiting employee and workforce changes</p> <p><b>P2.</b> Monitor labor supply trends for areas of high turnover in external environment</p> <p><b>P3.</b> Monitor effects of labor trends on demand for labor</p> <p><b>P4.</b> Survey organizational climate to gauge worker satisfaction</p> <p><b>P5.</b> Refine objectives and strategies in response to national and international changes and make recommendations in response to global trends.</p> <p><b>P6.</b> Regularly review government policy on labor jobs according to labor rights.</p> <p><b>P7.</b> Evaluate effectiveness of change processes against agreed objectives</p>



## Knowledge & Understanding

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

- Explain current information about external labor supply relevant to the specific industry or skill requirements of the organization
- Outline industrial relations relevant to the specific industry
- Describe labor force analysis and forecasting skills

## Critical Evidence(s) Required

The candidate needs to produce the following **Critical Evidence(s)** in order to be competent in this competency standard:

- Review relevant trends and supply and demand factors that will impact on an organization’s workforce
- Develop a workforce plan that includes relevant research and specific strategies to ensure access to a skilled and diverse workforce.

## Undertake project work

**Overview:** This unit describes the skills and knowledge required to undertake a straightforward project or a section of a larger project. It covers developing a project plan, administering and monitoring the project, finalizing the project and reviewing the project to identify lessons learned for application to future projects. This unit applies to individuals who play a significant role in ensuring a project meets timelines, quality standards, budgetary limits and other requirements set for the project.

Competency Unit	Performance Criteria
<b>CU1.</b> Define project	<p><b>P1.</b> Assess project scope and other relevant documentation</p> <p><b>P2.</b> Identify project stakeholders</p> <p><b>P3.</b> Seek clarification of discrepancies from delegating authority related to project and project parameters</p> <p><b>P4.</b> Determine and access available resources to undertake project</p>
<b>CU2.</b> Develop project plan	<p><b>P1.</b> Develop project feasibility report</p> <p><b>P2.</b> Develop project plan in line with the project parameters</p> <p><b>P3.</b> Develop and approve project budget</p> <p><b>P4.</b> Formulate risk management plan for project, including Workplace Health and Safety (WHS)</p>
<b>CU3.</b> Control and monitor project	<p><b>P1.</b> Ensure project team members are clear about their responsibilities and the project requirements</p> <p><b>P2.</b> Ensure outcomes and documented time lines of the project are</p>



	met <b>P3.</b> Maintain required recordkeeping systems throughout the project <b>P4.</b> Implement and monitor plans of project finances and resources <b>P5.</b> Prepare project progress reports as required to stakeholders <b>P6.</b> Monitor risk management as required to ensure project outcomes are met
<b>CU4.</b> Finalize the project	<b>P1.</b> Assess project scope and other relevant documentation <b>P2.</b> Identify project stakeholders <b>P3.</b> Seek clarification of discrepancies from delegating authority related to project and project parameters <b>P4.</b> Determine and access available resources to undertake project

### Knowledge & Understanding

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

- Give examples of project management tools and how they contribute to a project
- Outline types of documents and other sources of information commonly used in defining the parameters of a project
  - Explain processes for identifying and managing risk in a project
  - Explain the organization’s procedures and processes that are relevant to managing a project including:
    - a) lines of authority and approvals
    - b) quality assurance
    - c) human resources
    - d) budgets and finance
    - e) recordkeeping
    - f) reporting
- Outline the legislative and regulatory context of the organization in relation to project work, including workplace health and safety (WHS) requirements

### **Critical Evidence(s) Required**

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

Use project management tools to develop and implement a project plan including:

- deliverables
- work breakdown
- budget and allocation of resources
- timelines
- risk management
- recordkeeping and reporting



## Apply interpersonal skills

**Overview:** This unit describes the skills and knowledge required to use advanced and specialized communication skills in the client-counselor relationship.

Competency Unit	Performance Criteria
1. Communicate effectively	<p><b>P1.</b> Identify communication barriers and use strategies to overcome these barriers in the client-counselor relationship</p> <p><b>P2.</b> Facilitate the client-counselor relationship through selection and use of micro skills</p> <p><b>P3.</b> Observe and respond to non-verbal communication cues</p> <p><b>P4.</b> Integrate case note taking with minimum distraction</p>
2. Use specialized counseling interviewing skills	<p><b>P1.</b> Select and use communication skills according to the sequence of a counseling interview</p> <p><b>P2.</b> Identify points at which specialized counseling interviewing skills are appropriate for inclusion</p> <p><b>P3.</b> Use specialized counseling communication techniques based on their impacts and potential to enhance client development and growth</p> <p><b>P4.</b> Identify and respond appropriately to strong client emotional reactions</p>
3. Evaluate own communication	<p><b>P1.</b> Reflect on and evaluate own communication with clients</p> <p><b>P2.</b> Recognize the effect of own values and beliefs on communication with clients</p> <p><b>P3.</b> Identify and respond to the need for development of own skills and knowledge</p>

## Knowledge & Understanding

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

- Legal and ethical considerations for communication in counseling practice, and how these are applied in individual practice:
  - codes of conduct/practice
  - discrimination
  - human rights
  - practitioner/client boundaries
  - privacy, confidentiality and disclosure
  - rights and responsibilities of workers, employers and clients
  - work role boundaries responsibilities and limitations of the counselor role
  - workplace health and safety
- **Communication techniques and micro-skills including:**
  - attending behaviors active listening, reflection of content feeling, summarizing
  - questioning skills open, closed, simple and compound questions
  - client observation skills



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- noting and reflecting skills
- providing client feedback
- **Components of the communication process including:**
  - encoder
  - decoder
  - **Primary factors that impact on the communication process including:**
    - context
    - participants
    - rules
    - messages
    - channels
    - noise
    - feedback
- **Communication barriers and resolution strategies, including:**
  - environmental
  - physical
  - individual perceptions
  - cultural issues
  - language
  - age issues
  - disability
- **Observational techniques including:**
  - facial expressions
  - non-verbal behavior
  - posture
  - silence
- **Ways including:**
  - visual in which different people absorb information
  - auditory
  - kinesthetic
- **Impacts of trauma and stress on the communication process, including on:**
  - concentration and attention
  - memory
  - Intelligence
  - use of verbal and written language
  - use of body language
  - challenging within the counseling session
- **Self-evaluation practices, including:**
  - how to recognize own biases
  - Impact of own values on the counseling relationship



## Maintain professionalism in workplace

**Overview:** This unit describes the skills and knowledge required to use advanced and specialized communication skills in the client-counselor relationship.

Competency Unit	Performance Criteria
<b>CU1.</b> Respect work timeframes	<b>P1.</b> Demonstrate punctuality in meeting, set working hours and times. <b>P2.</b> Utilize working hours only for working and follow company regulations. <b>P3.</b> Complete work tasks within deadlines according to order of priority <b>P4.</b> Perform extra ordinary during working hours
<b>CU2.</b> Maintain personal appearance and hygiene	<b>P1.</b> Clean hair, body and nails regularly. <b>P2.</b> Wear suitable cloths for the workplace, and respect local and cultural contexts <b>P3.</b> Meet specific company dress code requirements <b>P4.</b> Keep smiling and have positive body language during working hours
<b>CU3.</b> Maintain adequate distance with colleagues and clients	<b>P1.</b> Respect personal space of colleagues and clients with reference to local customs and cultural contexts. <b>P2.</b> Avoid cross transmission of infections (especially through respiration).
<b>CU4.</b> Work in an ethical manner	<b>P1.</b> Follow company values/ethics codes of ethics and/or conduct, policies and guidelines. <b>P2.</b> Use company resources in accordance with company ethical standards. <b>P4.</b> Undertake work practices in compliance with company ethical standards, organizational policy and guidelines. <b>P5.</b> Instruct co-workers on ethical, lawful and reasonable directives. <b>P6.</b> Share company values/practices with co-workers using appropriate behavior and language. <b>P7.</b> Report work incidents/situations and/or resolved in accordance with company protocol/guidelines.

### Knowledge & Understanding

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

- Application of good manners and right conduct
- Basic practices for oral and personal hygiene
- Common products used for oral and personal hygiene
- Outline the company code of conduct/values
- Outline the Company regulations, performance and ethical standards
- Work responsibilities/job functions
- Communication skills
- Workplace hygiene standards





### 13. Entrepreneurial Skills

#### Develop entrepreneurial skills

**Overview:** This Competency Standard identifies the competencies required to develop entrepreneurial skills by Hotel manager, in accordance with the organization's approved guidelines and procedures. You will be expected to develop a business plan, collect information regarding revenue generation, 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 Unit	Performance Criteria
<b>CU1.</b> Develop a business plan	<b>P1.</b> Conduct a market survey to collect following information <ul style="list-style-type: none"><li>• Business Model</li><li>• Financials</li><li>• Equipment Estimation</li><li>• Revenue Generation Sources</li><li>• Marketing strategy</li><li>• Market Trends</li><li>• Overall Expenses</li></ul> <b>P2.</b> Select the best option in terms of cost, service, quality, sales, operational expenses <b>P3.</b> Compile the information collected through the market survey, in the business plan format
<b>CU2.</b> Develop a marketing plan	<b>P1.</b> Make a marketing plan for the service products, price, placement, promotion, people, packaging and positioning <b>P2.</b> Include the information of marketing plan in the business plan
<b>CU3.</b> Develop basic business communication skills	<b>P1.</b> Communicate with guests using effective communication skills <b>P2.</b> Use different modes of communication to communicate effectively e.g.: presentation, speaking, writing, listening, visual representation, reading etc. <b>P3.</b> Use specific business terms used in the market

#### Knowledge & Understanding

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

- 7Ps of marketing including product, price, placement, promotion, people, packaging and positioning
- 7Cs of business communication
- Different modes of communication and their application in the industry
- Specific business terms used in the industry
- Available funding sources
- Low interest loans to start a new business
- Market survey and its tools e.g: questionnaire, interview, observation etc
- Market trends for specific product offering
- State the main elements of business plan





- Business plan format

### Critical Evidence(s) Required

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

- List 7Ps
- List 7Cs

### Apply management and communication techniques

**Overview:** This unit describes the skills and knowledge required to provide a critical link between people, ideas and information at all stages in the project life cycle. It involves assisting the project team to plan communications, communicating information related to the project, and reviewing communications. It applies to individuals who are project practitioners working in a project support role.

Competency Unit	Performance Criteria
<b>CU1.</b> Contribute to communications planning	<b>P1.</b> Identify, source and contribute relevant information requirements to initial project documentation <b>P2.</b> Contribute to developing and implementing the project communications plan and communications networks
<b>CU2.</b> Conduct information-management activities	<b>P1.</b> Act on and process project information according to agreed procedures as directed, to aid decision-making processes throughout project life cycle <b>P2.</b> Maintain information to ensure data is secure and auditable
<b>CU3.</b> Communicate project information	<b>P1.</b> Communicate with clients and other stakeholders during project using agreed networks, processes and procedures to ensure flow of necessary information <b>P2.</b> Ensure reports are prepared and released according to authorization, or produced for release by others <b>P3.</b> Seek information and advice from appropriate project authorities as required
<b>CU4.</b> Contribute to assessing effectiveness of communication	<b>P1.</b> Assist in ongoing review of project outcomes to determine effectiveness of communications-management activities <b>P2.</b> Report communications-management issues and responses to higher project authorities for application of lessons learned to future projects

### Knowledge & Understanding

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



- Summarize models and methods of communications management in context of project life cycle and other project management functions
- Importance of managing risk by treating information securely
- Methods of reviewing outcomes
- Organizational policies and procedures relevant to this role in a specific context.

### 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 apply project information management and communications techniques. 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.

### Create human resource management plan

**Overview:** This unit describes the skills and knowledge required to assist with aspects of human resources management of a project. It involves establishing human resource requirements, identifying the learning and development needs of people working on the project, facilitating these needs being met, and resolving conflict in the team. It applies to individuals who are project practitioners working in a project support role.

Competency Unit	Performance Criteria
<b>CU1.</b> Assist in determining human resource requirements	<p><b>P1.</b> Analyze work breakdown structure to determine human resource requirements</p> <p><b>P2.</b> Prepare a skills analysis of project personnel against project task requirements</p> <p><b>P3.</b> Assist in assigning responsibilities for achieving project deliverables</p>
<b>CU2.</b> Contribute to establishing and maintaining productive team relationships	<p><b>P1.</b> Actively seek views and opinions of team members during task planning and implementation</p> <p><b>P2.</b> Promote cooperation and effective activities, goals and relationships within team</p> <p><b>P3.</b> Communicate with others using styles and methods appropriate to organizational standards, group expectations and desired outcomes</p> <p><b>P4.</b> Communicate information and ideas to others in a logical, concise and understandable manner</p> <p><b>P5.</b> Regularly seek feedback on nature and quality of work relationships, and use feedback as basis for own improvement and development</p>
<b>CU3.</b> Assist with human resource monitoring	<p><b>P1.</b> Monitor work of project personnel against assigned roles and responsibilities within delegated authority levels</p> <p><b>P2.</b> Monitor and control actual effort against project plan</p> <p><b>P3.</b> Review skill levels against allocated tasks and recommend</p>



	<p>solutions, where required, to others</p> <p><b>P4.</b> Advise others within delegated authority when assigned responsibilities are not met by project personnel</p> <p><b>P5.</b> Undertake work in a multi-disciplinary environment according to established human resource management practices, plans, guidelines and procedures</p> <p><b>P6.</b> Resolve conflict within delegated authority according to agreed dispute-resolution processes</p> <p><b>P7.</b> Assist in offering human resource development opportunities to individuals with skill gaps</p>
<b>CU4.</b> Contribute to evaluating human resource practices	<p><b>P1.</b> Contribute to assessing effectiveness of project human resources management</p> <p><b>P2.</b> Document lessons learned to support continuous improvement processes</p>

### **Knowledge & Understanding**

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

- Alternative project personnel engagement options
- Job design principles and work breakdown structures
- Learning and development approaches that can be incorporated into project life cycle
- Methods for skills analysis
- Project roles, responsibilities and reporting requirements for human resources.

### **Critical Evidence(s) Required**

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

- A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to apply project human resources management approaches. 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.



## Develop project management plan

**Overview:** This unit describes the skills and knowledge to develop a plan for a hotel management plan, including assessing project requirements and planning for all stages to completion and final documentation.

Competency Unit	Performance Criteria
<b>CU1.</b> Prepare project management plan	<b>P1.</b> Evaluate and assess project brief and related documents <b>P2.</b> Produce document on project tasks and associated timelines, including installation processes and test requirements <b>P3.</b> Assess and produce document on resource requirements to assist allocation of appropriate resources <b>P4.</b> Produce training plan assessing training needs and associated timelines for efficient project implementation <b>P5.</b> Determine and document budgetary requirements <b>P6.</b> Discuss roles of all identified parties associated with project to ensure their involvement <b>P7.</b> Produce project verification document, including monitoring and control processes, and review processes such as quality audits <b>P8.</b> Consult with all relevant parties prior to finalizing draft plan and make changes as appropriate
<b>CU2.</b> Develop and evaluate management plan	<b>P1.</b> Produce preliminary plan for consultation, including identified factors that may impact on realization of project and observance of relevant legislation, codes, regulation and standards <b>P2.</b> Consult with client and clarify any amendments <b>P3.</b> Develop final plan with recommendations
<b>CU3.</b> Communicate project information	<b>P1.</b> Produce and document final plan to include implementation details and training needs <b>P2.</b> Present plan to client and obtain sign off
<b>CU4.</b> Contribute to assessing effectiveness of communication	<b>P1.</b> Assist in ongoing review of project outcomes to determine effectiveness of communications-management activities <b>P2.</b> Report communications-management issues and responses to higher project authorities for application of lessons learned to future projects

### Knowledge & Understanding

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

- Key attributes of common telecommunications applications and related equipment



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- Evaluate the connections to carrier infrastructure or equipment
- Current legislation relating to the design of installation of telecommunications equipment and connection to carrier services
- Advantages of leasing and purchase options to assist in delivering cost effective solutions
- Evaluate network and transmission equipment
- Network topologies, and interface and interconnect solutions
- Workplace health and safety (WHS) issues that need to be built into a plan, with consideration of:
  - electrical safety
  - materials handling
  - physical hazards
  - confined spaces
  - heights
  - lifting
- Evaluate the power requirements and electrical safety aspects of the installation plan
- Performance parameters and typical faults that may be encountered in client equipment and related connection and transmission media
- Various test equipment types suitable for tests to be made
- Warranty information for equipment supplies and contractor work guarantees.

**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 a project management plan. 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.

- determine the project attributes and specifications
- prepare a coherent draft project management plan
- consult on and revise a project management plan
- document final project management plan and obtain sign off

**Develop sales plan**

**Overview:** This unit describes the skills and knowledge required to develop a sales plan for a product or service for a team covering a specified sales territory based on strategic objectives and in accordance with established performance targets. It applies to individuals working in a supervisory or managerial sales role who develop a sales plan for a product or service.

Competency Unit	Performance Criteria
CU1. Identify organizational strategic direction	<b>P1.</b> Obtain and analyze assessment of market needs and strategic planning documents <b>P2.</b> Review previous sales performance and successful approaches to identify factors affecting performance <b>P3.</b> Analyze information on market needs, new opportunities,



	customer profiles and requirements as a basis for decision making <b>P4.</b> Carry out competitor analysis for rate structure
<b>CU2.</b> Establish performance targets	<b>P1.</b> Determine practical and achievable sales targets <b>P2.</b> Establish realistic timelines for achieving targets <b>P3.</b> Determine measures to allow for monitoring of performance <b>P4.</b> Ensure objectives of the sales plan and style of the campaign are consistent with organizational strategic objectives and corporate image
<b>CU3.</b> Develop a sales plan for a product	<b>P1.</b> Determine approaches to be used to meet sales objectives <b>P2.</b> Identify additional expertise requirements and allocate budgetary resources accordingly <b>P3.</b> Identify risks and develop risk controls <b>P4.</b> Develop advertising and promotional strategy for product <b>P5.</b> Identify appropriate distribution channels for product <b>P6.</b> Prepare a budget for the sales plan <b>P7.</b> Present documented sales plan to appropriate personnel for approval
<b>CU4.</b> Identify support requirements	<b>P1.</b> Identify and acquire staff resources to implement sales plan <b>P2.</b> Develop an appropriate selling approach <b>P3.</b> Train staff in the selling approach selected <b>P4.</b> Develop and assess staff knowledge of product to be sold
<b>CU5.</b> Monitor and review sales plan	<b>P1.</b> Monitor implementation of the sales plan <b>P2.</b> Record data measuring performance versus sales targets <b>P3.</b> Make adjustments to sales plan as required to ensure required results are obtained

### Knowledge & Understanding

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

- Outline principles and techniques for selling
- Outline methods for monitoring sales outcomes
- Statistical techniques for analyzing sales and market trends
- Internal and external sources of information that are relevant to identifying organizational strategic direction and developing a product sales plan.
- Competitors intelligence

### **Critical Evidence(s) Required**





The candidate needs to produce following **Critical Evidence(s)** in order 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 a sales plan. 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.

- analyze information from a range of sources to develop a sales plan for a product and sales territory that meets organizational strategic direction including:
  - resource requirements and budget
  - achievable sales targets
  - performance measures
  - approaches to be used to meet objectives
  - risk management
  - advertising and promotional strategy
  - product distribution channels
- acquire staff, develop selling approach and provide training support on product knowledge and sales approach
- Monitor and evaluate performance and adjust the plan as appropriate

### Manage finances

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

Competency Unit	Performance Criteria
<b>CU1.</b> Develop a personal budget	<b>P1.</b> Calculate current living expenses using available information to prepare a personal budget. <b>P2.</b> Keep a record of all income and expenses for a short period of time to help estimate ongoing expenses. <b>P3.</b> Subtract total expenses from total income to determine a surplus or deficit budget for the specified period. <b>P4.</b> Find reasons for a deficit budget and ways to reduce expenditure identified. <b>P5.</b> Identify ways to increase income, if possible
<b>CU2.</b> Develop longer term personal budget	<b>P1.</b> Analyze income and expenditure and set longer term personal, work and financial goals. <b>P2.</b> Develop a longer-term budget based on the outcomes of short-term budgeting, and adjust to meet living, work and future career requirements. <b>P3.</b> Identify obstacles that might affect finances such as job loss, sickness or unexpected expenses contingency savings <b>P4.</b> Formulate a regular savings plan based on budget, using secure savings products and services. <b>P5.</b> Monitor expenditure against budget and identify areas of possible expenditure saving



**CU3.** Identify ways to maximize future finances

**P1.** Determine sources and ways to maximize personal income, including from work, investments or available government payments/allowances.

**P2.** Get further education or training to maintain or improve future income.

**P3.** Identify the need for debt to finance living and other expenses, and determine the appropriate levels of debt and repayment.

**P4.** Consolidate existing debt, where possible, to minimize interest costs and fees.

**P5.** Seek professional money management services, where available, to ensure financial plans are effective and achievable

### **Knowledge & Understanding**

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

- Abilities to plan and organize to keep records and monitor a personal budget
- Abilities to set and review goals
- Basic financial management and record keeping to enable development and management of a personal budget
- Benefits of financial goal setting and personal budgeting to enable effective management of personal finances
- Numeracy skills to compare income and expenditure

### **Critical Evidence(s) Required**

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able 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.

Demonstrated evidence is required of the ability to:

- develop a personal budget based on analysis of expenditure and income;
- formulate goals and identify financial contingency plans; and
- Monitor expenditure for a period of up to 2 weeks.





## Identify and resolve problems

### Overview:

This unit is focus on negotiation in critical incidents and the development of strategic responses designed to resolve threatening incidents.

Competency Unit	Performance Criteria
<b>CU1.</b> Identify a problem	<p><b>P1.</b> Form a problem statement and analyze root cause.</p> <p><b>P2.</b> Take initiative in tackling problems rather than relying solely on directives</p> <p><b>P3.</b> Follow logic steps in understanding root cause and analyzing potential solutions.</p>
<b>CU2.</b> Determine strategies for a required solution	<p><b>P1.</b> Analyze all aspects of the incident for degree of hazard, priorities, optional outcomes and appropriate strategies</p> <p><b>P2.</b> Analyze and determine strategies and priorities on the incident sought from a range of sources</p> <p><b>P3.</b> Assess long term objectives against resources and priorities</p> <p><b>P4.</b> Apply a range of communication techniques to make and maintain contact with the key people</p> <p><b>P5.</b> Provide clear and factual information to enable an honest and realistic assessment of the interests of the key people and their positions</p> <p><b>P6.</b> Resolve the conflict and express their likely consequences clearly and do an analysis of the benefits</p> <p><b>P7.</b> Reassess points of disagreements for common positive Positions</p>
<b>CU3.</b> Coordinate support Services	<p><b>P1.</b> Assess the need for support services in terms of the determined strategies and priorities</p> <p><b>P2.</b> Negotiate the resources of support services according to established procedures and availability</p> <p><b>P3.</b> Provide information on strategies to support services and maintain the communication</p> <p><b>P4.</b> .Delegate roles and responsibilities according to expertise and resources</p>
<b>CU4.</b> Restore order	<p><b>P1.</b> .Assess the incidents for degree of risk and take appropriate action to reduce and remove the impact of the incident and restore order</p> <p><b>P2.</b> .Take action designed to minimize risk and the preserve the safety and security of all involved</p> <p><b>P3.</b> .Take action to prevent the escalation of the incident appropriate to the circumstances and agreed procedures.</p> <p><b>P4.</b> .Carry out the use of force for the restoration of control and the maintenance of security in the least restrictive manner.</p> <p><b>P5.</b> .Complete reports accurately and clearly provided to the</p>



	appropriate authority promptly <b>P6</b> .Review, evaluate and analyze the incident and the organizational response to it and report it promptly and accurately.
<b>CU5.</b> Provide leadership. direction and guidance to the work group	<b>P1.</b> Link between the function of the group and the goals of the organization <b>P2</b> .Participate in decision making routinely to develop, implement and review work of the group and to allocate responsibilities where appropriate <b>P3</b> .Give opportunities and encouragement to others to develop new and innovative work practices and strategies <b>P4.</b> Identify conflict and resolve with minimum disruption to work group function <b>P5.</b> Provide staff with the support and supervision necessary to perform work safely and without risk to health <b>P6</b> .Allocate tasks within the competence of staff and support with appropriate authority, autonomy and training <b>P7</b> .Supervise appropriately the changing priorities and situations and takes into account the different needs of individuals and the requirements of the task

### **Knowledge & Understanding**

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

- Organization's policies, guidelines and procedures related to control and surveillance, safety and preventing and responding to incidents and breaches of orders covered in the range of variables.
- Organization's management and accountability systems
- Teamwork principles and strategies
- Principles of effective communication
- Guidelines for use of equipment and technology
- Code of conduct

### **Critical Evidence(s) Required**

The candidate needs to produce following **Critical Evidence(s)** in order to be competent in this competency standard:

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to resolve problems which jeopardize safety and security. 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.



## 14. Digital Skills

### Operate digital media technology

#### Overview:

This unit describes the performance outcomes, skills and knowledge required to identify, select and use a digital media package and supporting technologies.

Unit of Competency	Performance Criteria
<b>CU1.</b> Use appropriate OHS office work practices	<b>P1.</b> Use safe work practices to ensure ergonomic, work organization, energy and resource conservation requirements are addressed <b>P2.</b> Use wrist rests and document holders where appropriate <b>P3.</b> Use monitor anti-glare and radiation reduction screens where appropriate
<b>CU2.</b> Identify and select appropriate digital media package	<b>P1.</b> Identify the basic requirements of a design brief, including user environment <b>P2.</b> Research and review suitable available digital media packages <b>P3.</b> Select an appropriate digital media package to meet design brief requirements
<b>CU3.</b> Use digital media package	<b>P1.</b> Procure or create suitable data to meet requirements of the brief <b>P2.</b> Manipulate data using digital media package tools <b>P3.</b> Ensure naming and storing of documents in appropriate file format in directories or folders
<b>CU4.</b> Review digital media design	<b>P1.</b> Evaluate design for creative, dramatic and technical quality, file size, and suitability to meet the brief <b>P2.</b> Test and run any incorporated graphics, video or sound as part of a digital media presentation and present designs in the appropriate format <b>P3.</b> Review final product against design brief

#### 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:

- Basic principles of visual design
- Functions and features of digital media packages and technologies
- Graphic design and stylistic language conventions
- OHS principles and responsibilities for ergonomics, such as work periods and breaks
- Principles of digital imaging and file formats, video and sound file formats, file management and transfer systems



- Vendor product directions in digital media hardware and software
- Visualization and interpreting creative information, scripts (text) and images

### Critical Evidence(s) Required

A person who demonstrates competency in this unit must be able to provide evidence of the ability to identify, select and use a digital media package and supporting technologies. 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.

Demonstrated evidence of the ability to:

- Identify basic requirements of a design brief
- Use digital media package to meet organizational requirements
- Use OHS principles and responsibilities for ergonomics, such as work periods and breaks
- Use help manuals and online help when appropriate
- Use digital media technologies to support design brief requirements.

### Create user documentation

#### Overview:

This unit describes the performance outcomes, skills and knowledge required to create user documentation that is clear to the target audience and easy to navigate.

Unit of Competency	Performance Criteria
<b>CU1.</b> Determine documentation standards and requirements	<p><b>P1.</b> Determine documentation requirements</p> <p><b>P2.</b> Investigate documentation and industry standards for requirements and determine appropriate application to user documentation</p> <p><b>P3.</b> Design documentation templates using appropriate software and obtain approval from appropriate person</p>
<b>CU2.</b> Produce user documentation	<p><b>P1.</b> Conduct a review of the subject system, program, network or application in order to understand its functionality</p> <p><b>P2.</b> Gather existing technical, design or user specifications and supporting documentation</p> <p><b>P3.</b> Create user documentation based on template to record the operation of the subject system, program, network or application</p>
<b>CU3.</b> Review and obtain sign-off	<p><b>P1.</b> Submit user documentation to target audience for review</p> <p><b>P2.</b> Gather and analyze feedback</p> <p><b>P3.</b> Make changes to user documentation</p> <p><b>P4.</b> Submit user documentation to appropriate person for approval</p>

### Knowledge and Understanding



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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:

- Content features, including clarity and readability
- Document design, web design and usability
- Functions and features of templates and style guides
- Instructional design principles

**Critical Evidence(s) Required**

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create user documentation that is clear to the target audience and easy to navigate. 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.

Demonstrated evidence is required of the ability to create user documentation that:

- Meets business requirements
- Caters for a diverse readership
- Is clear to the target audience
- Is easy to navigate.

**Create technical documentation**

**Overview:**

This unit describes the performance outcomes, skills and knowledge required to create technical documentation that is clear to the target audience and easy to navigate.

Unit of Competency	Performance Criteria
<b>CU1.</b> Identify and analyze documentation requirements and client needs	<p><b>P1.</b> Consult with client to identify documentation requirements</p> <p><b>P2.</b> Interpret and evaluate documentation requirements and confirm details with client</p> <p><b>P3.</b> Investigate industry and documentation standards for requirements</p> <p><b>P4.</b> Define and document the scope of work to be produced</p> <p><b>P5.</b> Consult with client to validate and confirm the scope of work</p>
<b>CU2.</b> Design documentation	<p><b>P1.</b> Identify information requirements with reference to layout and document structure</p> <p><b>P2.</b> Create document templates and style guides consistent with information requirements</p> <p><b>P3.</b> Conduct a review of the system in order to understand its functionality</p> <p><b>P4.</b> Extract content that meets information requirements according to copyright restrictions</p> <p><b>P5.</b> Develop the structure of the technical documentation giving focus to the flow of information, style, tone and content format</p> <p><b>P6.</b> Validate the technical documentation structure with the client</p>



<b>CU3.</b> Develop documentation	<b>P1.</b> Write technical documentation based on the template and scope of work using the information gathered <b>P2.</b> Translate technical terminology into plain English where appropriate <b>P3.</b> Apply content format and style according to documentation standards and templates
<b>CU4.</b> Evaluate and edit documentation	<b>P1.</b> Submit technical documentation to appropriate person for review <b>P2.</b> Gather and analyze feedback <b>P3.</b> Incorporate alterations into the technical documentation <b>P4.</b> Edit the technical documentation for technical and grammatical accuracy
<b>CU5.</b> Prepare documentation for publication	<b>P1.</b> Check that the completed technical documentation meets client requirements and scope of work <b>P2.</b> Submit the technical documentation to appropriate person for approval <b>P3.</b> Prepare the technical documentation for publication and distribution using appropriate channels

### **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:

- Content features, such as clarity and readability
- Document design, web design and usability
- Functions and features of templates and style guides
- Instructional design principles
- Organizational policies, procedures and standards that cover document design.

### **Critical Evidence(s) Required**

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create technical documentation that is clear to the target audience and easy to navigate. 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.

Demonstrated evidence is required of the ability to:

- Establish customer needs
- Design and develop technical documentation, such as system, procedures, training material and user guides, incorporating appropriate standards
- Update document with client feedback
- Prepare documentation for publication.

### **Use social media tools for collaboration and engagement**

**Overview:**





This unit describes the performance outcomes, skills and knowledge required to establish a social networking presence using social media tools and applications. The unit specifically identifies the requirement to review, compare and use different types of social networking tools and applications.

Unit of Competency	Performance Criteria
<b>CU1.</b> Describe different types of social media tools and applications	<b>P1.</b> Explain characteristics of the term social media <b>P2.</b> Identify different types of social-media tools and applications <b>P3.</b> Illustrate some of the issues associated with the use of social media tools and applications
<b>CU2.</b> Compare different types of social media tools and applications	<b>P1.</b> Select one social media type for review <b>P2.</b> Review most popular tools and applications within that social media type <b>P3.</b> Itemize benefits across a range of the most popular tools and applications <b>P4.</b> Select most appropriate social media tool or application
<b>CU3.</b> Set up and use popular social media tools and applications	<b>P1.</b> Identify social media tools and applications for possible implementation <b>P2.</b> Initiate preferred social media tools and applications for use <b>P3.</b> Establish social media interface using text and file content <b>P4.</b> Initiate social networking interaction <b>P5.</b> Test and evaluate tools and applications for ease of use <b>P6.</b> Present findings

### 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:

- Basic technical terminology in relation to social networking and social media applications and tools
- Basic knowledge of uploading images, text files, pdf files, audio files, video files and link associated files
- Features and functions of social media applications
- Import and export software functions
- Linking documents
- OHS principles and responsibilities for ergonomics, including work periods and breaks
- Tagging to facilitate collaborative folksonomy
- Social media applications and procedures for connecting to social networking sites
- Use of input and output devices
- Use of RSS feeds to connect a social network.

### **Critical Evidence(s) Required**

A person who demonstrates competency in this unit must be able to provide evidence of the ability to create technical documentation that is clear to the target audience and easy to



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navigate. 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.

Demonstrated evidence is required of the ability to:

- Establish customer needs
- Design and develop technical documentation, such as system, procedures, training material and user guides, incorporating appropriate standards

## **E-Commerce – SEO (Search Engine Optimization)**

### **Overview:**

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

<b>Unit of Competency</b>	<b>Performance Criteria</b>
<b>CU1. SEO (Search Engine Optimization)</b>	<b>P1.</b> Apply SEO techniques <b>P2.</b> Employ SEO key words <b>P3.</b> Demonstrate SEO techniques to priorities their site or web application using automated tools

### **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:

- SEO Methods including but not limited to Getting Indexed, Preventing Crawling, and Increasing Prominence.
- White-hat, Black-hat SEO techniques for web application
- SEO key words for web pages' translation.

### **Critical Evidence(s) Required**

A person who demonstrates competency in this unit must be able to provide evidence of the ability to write and edit copy that is clear to the target audience and easy to navigate. 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.





## E-Commerce – SCM (Supply Chain Management)

### Overview:

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

Unit of Competency	Performance Criteria
CU1. SCM (Supply Chain Management)	<p>P1. Identity potential Suppliers</p> <p>P2. Select the appropriate supplier</p> <p>P3. Place order as per requirement/inventory</p> <p>P4. Inspect received order</p> <p>P5. Maintain Inventory as per Inventory Control / store keeping techniques</p> <p>P6. Identity different available transportation mode</p> <p>P7. Identify steps of reverse SCM i-e from consumer to organization</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:

- Procurement Cycle (Launch of RFP/RFQ, Tender, Bidding, Comparative Statement, Award of Contract, Maintenance)
- Different techniques to manage
- Product delivery and their traceability
- Incorporation of Outsourcing in logistics.
- Electronic Data Interchange methodologies and format

### Critical Evidence(s) Required

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to write and edit copy that is clear to the target audience and easy to navigate. 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.

## E-Commerce – Social Media Marketing

### Overview:

This competency unit covers to develop efficient E-Marketing strategies in accordance with the Vision and Mission statement of the organization driven by Electronic means.

Unit of Competency	Performance Criteria
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<b>CU1. Social Media Marketing</b>	<b>P1.</b> Identify different Social media marketing techniques <b>P2.</b> Apply suitable Classified Advertisement techniques on social media <b>P3.</b> Perform Electronic Mail Marketing <b>P4.</b> Create Blogs
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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:

Describe Knowledge of different social media sites that is Facebook, Twitter, LinkedIn, Google+ etc., Comparative Statement, Award of Contract, Maintenance)

- Brand pages' creation on social media sites.
- Familiarity of banner ads integration on different web sites like newspaper site in any demographic region.
- Skills to regularly update brand/product/service blogs.
- Electronic Data Interchange methodologies and format
- Direct marketing techniques e.g. Email, SMS (Mobile- Commerce) for the projection of company newsletters

### **Critical Evidence(s) Required**

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to implement e-marketing strategies that is clear to the target audience and easy to navigate. 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.

## **15. Soft Skills**

### **Manage meetings**

#### **Overview:**

This unit describes the skills and knowledge required to manage a range of meetings including overseeing the meeting preparation processes, chairing meetings, organizing the minutes and reporting meeting outcomes. It applies to individuals employed in a range of work environments who are required to organize and manage meetings within their workplace, including conducting or managing administrative tasks in providing agendas and meeting material. They may work as senior administrative staff or may be individuals with responsibility for conducting and chairing meetings in the workplace.



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Unit of Competency	Performance Criteria
<b>CU1. Prepare for meetings</b>	<b>P1.</b> Develop agenda in line with stated meeting purpose <b>P2.</b> Ensure style and structure of meeting are appropriate to its purpose <b>P3.</b> Identify meeting participants and notify them in accordance with organizational procedures <b>P4.</b> Confirm meeting arrangements in accordance with requirements of meeting <b>P5.</b> Dispatch meeting working papers to participants within designated timelines
<b>CU2. Conduct meetings</b>	<b>P1.</b> Chair meetings in accordance with organizational requirements, agreed conventions for type of meeting and legal and ethical requirements <b>P2.</b> Conduct meetings to ensure they are focused, time efficient and achieve the required outcomes <b>P3.</b> Ensure meeting facilitation enables participation, discussion, problem-solving and resolution of issues <b>P4.</b> Brief minute-taker on method for recording meeting minutes in accordance with organizational requirements and conventions for type of meeting
<b>CU3. Follow up meetings</b>	<b>P1.</b> Check transcribed meeting notes to ensure they reflect a true and accurate record of the meeting and are formatted in accordance with organizational procedures and meeting conventions <b>P2.</b> Distribute and store minutes and other follow-up documentation within designated timelines, and according to organizational requirements <b>P3.</b> Report outcomes of meetings as required, within designated timelines

### **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:

- Outline meeting terminology, structures, arrangements
- Outline responsibilities of the chairperson and explain group dynamics in relation to managing meetings
- Describe options for meetings including In-person/physical, teleconferencing, web-conferencing and using webcams
- Identify the relevant organizational procedures and policies regarding meetings, chairing and minutes including identifying organizational formats for minutes and agendas.



### Critical Evidence(s) Required

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

A candidate who demonstrates competency in this unit must be able to provide evidence of the ability to manage meetings. 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.

Demonstrated evidence is required of the ability to:

- apply conventions and procedures for formal and informal meetings including:
  - developing and distributing agendas and working papers
  - identifying and inviting relevant meeting participants
  - organizing and confirming meeting arrangements
  - running the meeting and following up
- organize, take part in and chair a meeting
- record and store meeting documentation
- Follow organizational policies and procedures

### Manage workforce planning

#### Overview:

This unit describes the skills and knowledge required to manage planning in relation to an organization’s workforce including researching requirements, developing objectives and strategies, implementing initiatives, monitoring and evaluating trends. It applies to individuals who are human resource managers or staff members with a role in a policy or planning unit that focuses on workforce planning.

Unit of Competency	Performance Criteria
<b>CU1.</b> Identify workforce	<b>P1.</b> Review current data on staff turnover and demographics <b>P2.</b> Assess factors that may affect workforce supply <b>P3.</b> Develop organization’s requirement for skilled workforce
<b>CU2.</b> Develop workforce objectives and strategies	<b>P1.</b> Review organizational strategy and establish aligned objectives for modification <b>P2.</b> Prepare strategies to address unacceptable staff turnover, if required <b>P3.</b> Define objectives to retain required skilled labor <b>P4.</b> Define objectives for workforce diversity and cross-cultural management <b>P5.</b> Obtain agreement and endorsement for objectives and establish targets <b>P6.</b> Develop contingency plans to cope with extreme situations
<b>CU3.</b> Implement initiatives to support workforce	<b>P1.</b> Implement action to support agreed objectives for recruitment, training, redeployment and redundancy



planning objectives	<p><b>P2.</b> Develop and implement strategies to assist workforce to deal with organizational dynamics</p> <p><b>P4.</b> Implement succession planning model to ensure desirable workers are developed and retained</p> <p><b>P5.</b> Implement programs to ensure workplace is an employer of choice</p>
<b>CU4.</b> Monitor and evaluate workforce trends	<p><b>P1.</b> Evaluate workforce plan against patterns in exiting employee and workforce changes</p> <p><b>P2.</b> Monitor labor supply trends for areas of high turnover in external environment</p> <p><b>P3.</b> Monitor effects of labor trends on demand for labor</p> <p><b>P4.</b> Survey organizational climate to gauge worker satisfaction</p> <p><b>P5.</b> Refine objectives and strategies in response to national and international changes and make recommendations in response to global trends.</p> <p><b>P6.</b> Regularly review government policy on labor jobs according to labor rights.</p> <p><b>P7.</b> Evaluate effectiveness of change processes against agreed objectives</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:

- Explain current information about external labor supply relevant to the specific industry or skill requirements of the organization
- Outline industrial relations relevant to the specific industry
- Describe labor force analysis and forecasting skills

### **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 department must be able to provide evidence of the ability to manage workforce planning. 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.

Demonstrated evidence is required of the ability to:

- review and interpret information from a range of internal and external sources to identify:
  - current staff turnover and demographics
  - labor supply trends factors that may affect workforce supply
  - organization's workforce requirements objectives and strategies
- manage workforce planning including developing, implementing, monitoring and reviewing strategies to meet workforce needs
- review relevant trends and supply and demand factors that will impact on an organization's workforce



- Develop a workforce plan that includes relevant research and specific strategies to ensure access to a skilled and diverse workforce

## Undertake project work

### Overview:

This unit describes the skills and knowledge required to undertake a straightforward project or a section of a larger project. It covers developing a project plan, administering and monitoring the project, finalizing the project and reviewing the project to identify lessons learned for application to future projects. This unit applies to individuals who play a significant role in ensuring a project meets timelines, quality standards, budgetary limits and other requirements set for the project.

Unit of Competency	Performance Criteria
<b>CU1.</b> Define project	<p><b>P1.</b> Assess project scope and other relevant documentation</p> <p><b>P2.</b> Identify project stakeholders</p> <p><b>P3.</b> Seek clarification of discrepancies from delegating authority related to project and project parameters</p> <p><b>P4.</b> Determine and access available resources to undertake project</p>
<b>CU2.</b> Develop project plan	<p><b>P1.</b> Develop project feasibility report</p> <p><b>P2.</b> Develop project plan in line with the project parameters</p> <p><b>P3.</b> Develop and approve project budget</p> <p><b>P4.</b> Formulate risk management plan for project, including Workplace Health and Safety (WHS)</p>
<b>CU3.</b> Administer and monitor project	<p><b>P1.</b> Ensure project team members are clear about their responsibilities and the project requirements</p> <p><b>P2.</b> Ensure outcomes and documented time lines of the project are met</p> <p><b>P3.</b> Maintain required recordkeeping systems throughout the project</p> <p><b>P4.</b> Implement and monitor plans of project finances and resources</p> <p><b>P5.</b> Prepare project progress reports as required to stakeholders</p> <p><b>P6.</b> Monitor risk management as required to ensure project outcomes are met</p>
<b>CU4.</b> Finalize the project	<p><b>P1.</b> Complete financial recordkeeping associated with project for audit</p> <p><b>P2.</b> Maintain proper record of unused items during project</p> <p><b>P2.</b> Complete project documentation and obtain necessary sign-offs for concluding project</p>

### Knowledge and Understanding



**National Competency Standards for “Tunnel Farming, Green House & Agri Business”**



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:

- Give examples of project management tools and how they contribute to a project
- Outline types of documents and other sources of information commonly used in defining the parameters of a project
  - Explain processes for identifying and managing risk in a project
  - Explain the organization’s procedures and processes that are relevant to managing a project including:
    - lines of authority and approvals
    - quality assurance
    - human resources
    - budgets and finance
    - recordkeeping
    - reporting
- Outline the legislative and regulatory context of the organization in relation to project work, including workplace health and safety (WHS) requirements.

### **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 undertake project work. 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.

Demonstrated evidence is required of the ability to:

- define the parameters of the project including:
  - project scope
  - project stakeholders
  - relationship of project to organizational objectives
  - reporting requirements
  - resource requirements
- use project management tools to develop and implement a project plan including:
  - deliverables
  - work breakdown
  - budget and allocation of resources
  - timelines
  - risk management
  - recordkeeping and reporting
- consult and communicate with relevant stakeholders to generate input and engagement in planning, implementing and reviewing the project
- provide support to team members to enable them to achieve deliverables and to transition them as appropriate at completion of the project
- finalize the project including documentation and reporting
- review and document the project outcomes





## Apply interpersonal skills

### Overview:

This unit describes the skills and knowledge required to use advanced and specialized communication skills in client-counselor relationships. This unit applies to individuals whose job role involves working with clients on personal and psychological issues within established policies, procedures and guidelines.

Unit of Competency	Performance Criteria
<b>CU1.</b> Communicate effectively	<b>P1.</b> Identify communication barriers and use strategies to overcome these barriers in client-counselor relationships <b>P2.</b> Facilitate the client-counselor relationship through selection and use of micro skills <b>P3.</b> Observe and respond to non-verbal communication cues <b>P4.</b> Integrate case note taking with minimum distraction
<b>CU2.</b> Use specialized counseling interview skills	<b>P1.</b> Select and use communication skills according to the sequence of a counseling interview <b>P2.</b> Identify points at which specialized counseling interviewing skills are appropriate for inclusion <b>P3.</b> Use specialized counseling communication techniques based on their impacts and potential to enhance client development and growth <b>P4.</b> Identify and respond appropriately to strong client emotional reactions
<b>CU3.</b> Evaluate own communication	<b>P1.</b> Reflect on and evaluate own communication with clients <b>P2.</b> Recognize the effect of own values and beliefs on communication with clients <b>P3.</b> Identify and respond to the need for development of own skills and knowledge

### 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:

- Legal and ethical considerations for communication in counseling practice, and how these are applied in individual practice:
  - codes of conduct/practice
  - discrimination
  - human rights
  - practitioner/client boundaries
  - privacy, confidentiality and disclosure
  - rights and responsibilities of workers, employers and clients
  - work role boundaries responsibilities and limitations of the counselor role
  - workplace health and safety
- **Communication techniques and micro-skills including:**





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- attending behaviors active listening, reflection of content feeling, summarizing
- questioning skills open, closed, simple and compound questions
- client observation skills
- noting and reflecting skills
- providing client feedback
- **Components of the communication process including:**
  - encoder
  - decoder
  - **Primary factors that impact on the communication process including:**
    - context
    - participants
    - rules
    - messages
    - channels
    - noise
    - feedback
- **Communication barriers and resolution strategies, including:**
  - environmental
  - physical
  - individual perceptions
  - cultural issues
  - language
  - age issues
  - disability
- **Observational techniques including:**
  - facial expressions
  - non-verbal behavior
  - posture
  - silence
- **Ways including:**
  - visual in which different people absorb information
  - auditory
  - kinesthetic
- **Impacts of trauma and stress on the communication process, including on:**
  - concentration and attention
  - memory
  - Intelligence
  - use of verbal and written language
  - use of body language
  - challenging within the counseling session
- **Self-evaluation practices, including:**
  - how to recognize own biases
  - Impact of own values on the counseling relationship.

**Critical Evidence(s) Required**



**National Competency Standards for “Tunnel Farming, Green House & Agri Business”**



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 apply specialist interpersonal and counseling interview skills. 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.

Demonstrated evidence is required of the ability to:

- interviewed at least 3 different clients using specialized interpersonal communication and counseling interviewing skills, including:
- micro-skills and communication techniques, including:
  - attending behaviors active listening,
  - reflection of content, summarizing
  - questioning skills open, closed, simple and compound questions
  - client observation skills
  - noting and reflecting skills
  - providing client feedback
- specialized counseling interviewing skills, including:
  - challenging
  - reframing
  - focusing
- integrated clear case note taking into the interview process
- Completed a structured process of self-reflection and evaluation of own communication used during the 3 interviews.