

National Certificate- Production Technology

NQF 2 (58781) – 125 Credits

Overview: This qualification recognizes the skills, knowledge and values acquired by learners.

Unit standard 14445: Frame and implement an individual action plan to improve productivity within an organisational unit – 3 credits.

Outcomes

- Demonstrate understanding how individual actions affect the productivity of an organisational unit.
- Identify opportunities to optimise productivity improvement in my unit.
- Frame an individual activity plan to improve productivity.

Unit standard 13162: Identify and describe inputs, outputs, stages and quality indicators of the manufacturing, assembly or engineering process – 10 credits

Outcomes

- Explain the role of my company within its supply chain.
- Identify and describe the various stages of the manufacturing, assembly or engineering process.
- Describe each phase of the process.
- Identify and describe the inputs and outputs of each phase of the process.
- Identify and describe the power sources, control systems and services required by the process.
- Define quality in terms of customer requirements and product specifications.
- Describe the implications for the workers, internal and external customers and the company.

Unit standard 13167: Identify potential hazards and critical safety issues in the workplace -2 credits

Outcomes

- Explain safety rules related to the specific workplace.
- Recognise and interpret safety signs and colour codes.
- Identify and describe personal protective clothing and equipment for different situations.

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- Identify potential hazards in the workplace and describe how to prevent or avoid them.
- Describe my role in maintaining a safe environment.
- Respond appropriately to injuries.

Unit standard 9964: Apply health and safety to a work area -3 credits

Outcomes

- Identify potential hazards in the work area.
- Limit damage to persons or property in the case of an emergency.
- Follow procedures that apply to illness or injury in the work area.

Unit standard 114891: Count stock for a stock-take -5 credits

Outcomes

- Prepare for stock count.
- Count stock.
- Perform post stock count housekeeping functions.

Unit standard 13220: Keep the work area safe and productive -8 credits

Outcomes

- Discuss and explain the purpose of safety equipment.
- Identify and explain the purpose of demarcated areas, emergency stops, exits and first aid stations.
- Use personal protective equipment.
- Perform housekeeping duties in work area.
- Identify and respond to unsafe or potentially unsafe conditions, incidents or acts that may occur.

Unit standard 119139: Monitor the quality of the input materials and the manufactured plastic product - 12 credits

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Outcomes

- Conduct visual checks on incoming materials and components and the manufactured product.
- Measure products, components and materials and conduct operational on-line tests.
- Recognise defects and mark or remove defective materials, products or components.
- Record production and defects and report incidents.
- Receive and respond to instructions, information or communications.
- Respond to 'what', 'what if' and 'why' questions related to monitoring the quality of the input materials and the manufactured product.

Unit standard 12036: Orientate self in the workplace – 6 credits

Outcomes

- Explain the health and safety procedures relating to own job.
- Explain reporting procedures at own works.
- Explain security procedures.
- Explain organisational structure for own works.
- Explain layout of own works.
- Explain key performance areas of own job.
- Explain work policies and procedures relating to own job.

Unit standard 13221: Perform routine maintenance – 8 credits

Outcomes

- Plan and prepare for routine maintenance.
- Monitor the condition of machinery and equipment.
- Perform routine maintenance.
- Apply quality checks on completed work.
- Care for and store routine maintenance tools and equipment.
- Report on machine and equipment condition.

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Unit standard 12667: Supply raw and processed material to production line – 3 credits

Outcomes

- Identify the main ideas in different text types.
- Determine material sources.
- Supply material to various points in the process

Unit standard 12463: Understand and deal with HIV/AIDS - 3 credits

Outcomes

- Explain and discuss HIV/AIDS facts and figures.
- Identify behaviours that may create a risk of HIV transmission.
- Explain the rights and responsibilities of employees in the workplace with regard to HIV/AIDS.
- Identify and apply relevant policies and procedures for dealing with HIV/AIDS in the workplace

Unit standard 12456: Explain and use organisational procedures – 6 credits

Outcomes

- Discuss the purpose of organisational policies and procedures.
- Identify, select and apply organisational policies and procedures.
- Discuss the purpose of an organisation's vision, mission and values.
- Reflect on the role of organisational policies and procedures in the work life of the individual.

Unit standard 119463: Access and use information from texts – 5 credits

Outcomes

- Identify the main ideas in different text types.
- Read and respond to texts for a variety of purposes.
- Use a range of reading and viewing strategies to make meaning of texts.
- Identify and discuss how language structures and features may influence a reader.

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Unit standard 9009: Apply basic knowledge of statistics and probability to influence the use of data and procedures to investigate life related problems - 3 credits

Outcomes

- Apply various techniques to organise and represent data in order to model situations.
- Give opinions on the implications of the modelled data for the required purpose.

Unit standard 7480: Demonstrate understanding of rational and irrational numbers and number systems – 3 credits

Outcomes

- Use and analyse computational tools and strategies and make estimates and approximations.
- Demonstrate understanding of numbers and relationships among numbers and number systems.

Unit standard 119454: Maintain and adapt oral communication – 5 credits

Outcomes

- Use a variety of speaking and listening/signing strategies to maintain communication.
- Adapt speech/signing to accommodate socio-cultural sensitivities without losing own intention.
- Use knowledge of language structures and conventions to shape or decode meaning of unfamiliar vocabulary or constructions.
- Organise and present information in a focused and coherent manner.
- Identify and explain how speakers/signers influence audiences.

Unit standard (s)12444: Measure, estimate and calculate physical quantities and explore, describe and represent geometrical relationships in 2-dimensions in different life or workplace contexts – 3 credits

Outcomes

- Estimate, measure and calculate physical quantities to solve problems in practical situations.
- Explore transformations of two-dimensional geometric figures.

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Unit standard 119460: Use language and communication in occupational learning programmes – 5 credits

Outcomes

- Find and use available learning resources.
- Use learning strategies.
- Manage occupational learning materials.
- Plan and gather relevant information for a given context and purpose.
- Function in a team.
- Reflect on how characteristics of the workplace and occupational context affect learning.

Unit standard (s)7469: Use mathematics to investigate and monitor the financial aspects of personal and community life – 2 credits

Outcomes

- Use mathematics to plan and control personal and/or household budgets and income and expenditure.
- Use simple and compound interest to make sense of and define a variety of situations.

Unit standard 9007: Work with a range of patterns and functions and solve problems – 5 credits

Outcomes

- Convert flexibly between and within various representations of functions.
- Compare, analyse and describe the behaviour of patterns and functions.
- Represent situations mathematically in order to interpret and solve problems.

Unit standard 119456: Write for a defined context – 5 credits

Outcomes

- Write for a specific audience and purpose.
- Use grammatical structures and writing conventions.
- Adapt language to suit context.

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- Draft and edit own writing.

Unit standard 14444: Demonstrate an understanding of a general business plan and adapt it to a selected business idea -credits

Outcomes

- Explain and discuss the purpose of a business plan.
- Outline and analyse the components of a business plan.
- Design and present a business plan relevant to the selected business idea.

Unit standard 110076: Prepare for freight storage 2 credits

Outcomes

- Unpack items.
- Select/pick and sort goods.
- Determine the appropriate method of storage with regard to the type of product.

Unit standard 9877: Assemble components – 12 credits

Outcomes

- Prepare for work activity.
- Assemble components.
- Perform finishing activities on assembled product.
- Apply quality checks on materials, components and product.
- Report out of compliance or unsafe conditions while working.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.
- Work and participate in team processes.

Unit standard 265000: Complete post-production and finishing operations – 6 credits

Outcomes

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- Prepare for post-production and finishing activities.
- Apply finishing procedures to product.
- Carry out post-production/assembly operations.

Unit standard 9878: Complete post-production and finishing operations -credits 12

Outcomes

- Prepare for work activity.
- Apply finishing procedures to product.
- Carry out post-production operations.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.
- Report all occurrences on shift.
- Dispatch product to customer or downline process.
- Work and participate in team processes.

Unit standard 117416: Comply with Good Housekeeping Practices – 4 Credits

Outcomes

- Carry out good housekeeping routines.
- Prepare workstation for safe and effective production.
- Comply with relevant housekeeping policies and procedures.
- Maintain effective working conditions.

Unit standard 7106: Conduct minor routine and breakdown maintenance on equipment and machines – 6 Credits

Outcomes

- Complete documents
- Recognise need for maintenance action.
- Implement a maintenance plan.
- Make adjustments to machine and equipment.
- Change minor components.

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Unit standard 13222: Deal with safety, health and environmental emergencies in the workplace –4 Credits

Outcomes

- Discuss and explain procedures for dealing with safety, health and environmental emergencies.
- Identify the nature of an incident and the relevant emergency procedure.
- Follow emergency procedures.
- Record and report incidents

Unit standard 12465: Develop a learning plan and a portfolio for assessment – 6 credits

Outcomes

- Explain and discuss the learning and assessment system.
- Develop a learning plan.
- Prepare a portfolio for assessment.
- Reflect on the process of compiling a learning plan and preparing a portfolio for assessment.

Unit standard 119074: Erect and dismantle scaffolding- 4 credits

Outcomes

- Prepare to erect scaffolding.
- Erect scaffolding.
- Dismantle and store scaffolding.
- Demonstrate a knowledge of scaffolds and scaffold components.

Unit standard 260160: Maintain spray painting equipment – 4 credits

Outcomes

- Demonstrate knowledge of maintaining spray painting equipment.
- Prepare to maintain spray painting equipment.

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- Conduct maintenance of spray painting equipment.
- Apply safety procedures during the maintenance process.
- Restore work area, complete and process documentation.

Unit standard 265001: Maintain stock levels of equipment and consumables – 4 credits

Outcomes

- Explain stock control concepts.
- Maintain appropriate stock levels.
- Procure stock for a given period or specific contract.
- Count and evaluate materials stocked.

Unit standard 9881: Mark off basic regular engineering shapes – 4 credits

Outcomes

- Plan and prepare materials and equipment for marking off.
- Mark off materials using templates.
- Apply quality checks on completed work.
- Care for and store marking off equipment.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.

Unit standard 117898: Move, pack and maintain stock in a distribution centre/warehouse – 12 credits

Outcomes

- Identify appropriate areas for packing stock.
- Move stock to and pack stock in identified location.
- Prevent shrinkage and losses while moving, packing and maintaining stock.
- Maintain stock in the DC.

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Unit standard 244338: Operate a production process – 15 credits

Outcomes

- Prepare for start up.
- Start equipment and/or process.
- Operate manufacturing equipment and/or process.
- Shut down manufacturing equipment and/or process.
- Conduct post-operating processes.

Unit standard 12484: Perform basic fire fighting -4 credits

Outcomes

- Discuss and explain procedures for dealing with fires in the workplace.
- Identify the type of fire, its context and select the appropriate fire fighting procedure.
- Identify, select and check appropriate fire fighting and safety equipment.
- Fight containable/extinguishable fires.
- Retreat from fire site and hand over to appropriate personnel.
- Report/record status of fire and equipment.

Unit standard 12483: Perform basic first aid -4 credits

Outcomes

- Explain and discuss basic first aid concepts.
- Determine the nature of the injury/medical emergency, the context of the injury and basic first aid.
- Apply basic first aid.
- Hand over the injured/ill person to medical personnel
- Complete first aid report

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Unit standard 119737: Perform basic spray painting – 10 credits

Outcomes

- Prepare to apply a paint application on a part.
- Perform spray painting techniques on the part in a safe and aware manner.
- Interact with others to identify paint defects and understand their causes.
- Discuss, explain and demonstrate the cleaning and storing procedures of spray painting equipment.
- Deliver the sprayed part and restore the work area.

Unit standard 119753: Perform basic welding/joining of metals- 8 credits

Outcomes

- Prepare for work activity.
- Weld/join metals.
- Apply quality checks on completed weld/joint.
- Perform finishing activities.
- Report out of compliance or unsafe conditions while working.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.

Unit standard 114881: Prepare, use and operate equipment to support a manufacturing process – 32 credits

Outcomes

- Plan to perform support activities and functions.
- Prepare consumables and equipment for use.
- Operate manufacturing equipment.
- Liaise with process control personnel and maintenance specialist.

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- Work safely with due care for self, fellow workers, equipment, materials and the environment.
- Discuss and explain information related to work schedules.

Unit standard 9882: Read and interpret basic engineering drawings – 8 credits

Outcomes

- Demonstrate an understanding of basic engineering drawings, sketches and material lists.
- Interpret basic engineering drawings and sketches.
- Select components from engineering drawings.

Unit standard 119744: Select, use and care for engineering hand tools – 8 credits

Outcomes

- Select and use Engineering hand tools.
- Care for and maintain engineering hand tools.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.

Unit standard 12476: Select, use and care for engineering measuring equipment – 4 credits

Outcomes

- Explain and discuss basic units of measure and symbols.
- Explain and discuss basic units of measure and symbols.
- Care for and maintain measuring equipment.
- Recognise and report problems, changes and/or malfunctions while working.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.

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Unit standard 10255: Select, use and care for power tools -5 credits

Outcomes

- Select a power tool pertaining to specific job requirements.
- Use fixed power tools.
- Use portable power tools.
- Caring for and storing of power tools and their accessories.

Unit standard 12481: Sling loads – 4 credits

Outcomes

- Plan and prepare for load slinging activity.
- Prepare site and equipment for load slinging.
- Sling load.
- Signal the lifting equipment operator.
- Conduct post-slinging activities.
- Care for and store load slinging equipment.

Unit standard 9879: Use and care for tools and equipment -10 credits

Outcomes

- Lift, load and unload materials, components, products and equipment.
- Select and use appropriate tools.
- Clean and store tools and equipment.
- Check on power supply sources to equipment.
- Work safely with due care for self, fellow workers, equipment, materials and the environment.

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- Discuss and report incidents and problems related to tools & equipment during the production process.

Unit standard 244504: Describe and explain the principles of logistics support in a specific context – 6 credits

Outcomes

- Explain the role of logistics as they apply to a specific operation.
- Describe logistics activities in a specific operation.
- Describe the concepts relating to inventory that are applicable to a specific operation.

Unit standard 117897: Maintain stock balances in a distribution centre – 8 credits

Outcomes

- Explain the financial impact of stock on the business.
- Explain stock flow through the Distribution Centre/Warehouse are explained.
- Interpret information on the stock management system.
- Solve discrepancies between actual stock and stock reports.
- Initiate and control stock counts.

Unit standard 14625: Manufacture concrete products – 10 credits

Outcomes

- Demonstrate an understanding of concrete manufacturing processes and products.
- Prepare for manufacturing of concrete products.
- Manufacture concrete products.
- Perform end of manufacturing procedures.

Unit standard 117901: Receive stock in a DC/Warehouse - 10 credits

Outcomes

- Receive goods into the DC.

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- Prevent shrinkage and losses in the Receiving Area.
- Update DC stock balances in order to enhance the efficiency of the supply chain.