Model Curriculum

QP Name: Automotive Machining Master Technician

QP Code: ASC/Q3506

QP Version: 2.0

NSQF Level: 6

Model Curriculum Version: 1.0

Automotive Skills Development Council | 153, Gr Floor, Okhla Industrial Area, Phase – III, Leela Building, New Delhi – 110020

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Training Parameters

Sector	Automotive
Sub-Sector	Manufacturing
Occupation	Machining Operation
Country	India
NSQF Level	6
Aligned to NCO/ISCO/ISIC Code	NCO-2015/7223.0501
Minimum Educational Qualification and Experience	10th Class + I.T.I (Machinist/Turner) with 4 Years of relevant experience OR 3 years Diploma (Mechanical/ Automobile) (after Class 10th) from a recognized body with relevant 4 Years of experience OR B.E/B.Tech (Mechanical/Automobile) with 1 year of relevant experience OR Certificate-NSQF (Automotive Machining Lead Technician Level 5) with 3 Years of Experience
Pre-Requisite License or Training	
Minimum Job Entry Age	18 years
Last Reviewed On	29/07/2021
Next Review Date	29/07/2026
NSQC Approval Date	29/07/2021
QP Version	2.0
Model Curriculum Creation Date	29/07/2021
Model Curriculum Valid Up to Date	29/07/2026
Model Curriculum Version	1.0
Minimum Duration of the Course	570 Hours 00 Minutes
Maximum Duration of the Course	570 Hours 00 Minutes

Program Overview

This section summarizes the end objectives of the program along with its duration.

Training Outcomes

At the end of the program, the learner should have acquired the listed knowledge and skills.

- Perform machining and post-machining operations for new part development process.
- Prepare shift plans, manage operational productivity and measure employee performance in the Shift/ Line on a day to day basis.
- Identify and implement process improvement techniques on the shop floor.
- Maintain quality standards and manage organizational resources efficiently and effectively.
- Work effectively and efficiently as per schedules and timelines.
- Implement safety practices.
- Use resources optimally to ensure less wastage and maximum conservation.
- Communicate effectively and develop interpersonal skills.

Compulsory Modules

The table lists the modules and their duration corresponding to the Compulsory NOS of the QP.

NOS and Module Details	Theory Duration	Practical Duration	On-the-Job Training Duration (Mandatory)	On-the-Job Training Duration (Recommended)	Total Duration
Bridge Module	**05:00**	**00:00**			**05:00**
Module 1: Introduction to the role of an Automotive Machining Master Technician	5:00	0:00			8:00
ASC/N9803: Manage work and resources (Manufacturing) NOS Version No. – 1.0 NSQF Level – 5	**20:00**	**40:00**	-	-	**60:00**
Module 2: Manage work and resources according to safety and conservation standards	20:00	40:00	-	-	60:00
ASC/N9802– Interact effectively with team, customers and others NOS Version No. 1.0 NSQF Level 5	**20:00**	**35:00**			**55:00**
Module 3: Communicate effectively and efficiently	20:00	35:00			55:00
ASC/N9805 – Interpret engineering drawing NOS Version No. – 1.0 NSQF Level - 4	**15:00**	**15:00**			**30:00**
Module 4: Interpret engineering drawing	15:00	15:00			30:00
ASC/N3540 – Manage shop floor machining operations	**60:00**	**120:00**			**180:00**

and team NOS Version No. – 1.0 NSQF Level – 5					
Module 5: Manage shop floor operations and team	60:00	120:00			180:00
ASC/N3511 – Plan, execute and evaluate the machine processes for new product development NOS Version No. – 2.0 NSQF Level – 6	**90:00**	**150:00**			**240:00**
Module 6: Plan and perform machining and post-machining activities	90:00	150:00			240:00
Total Duration	**210:00**	**360:00**			**570:00**

Module Details

Module 1: Introduction to the role of an Automotive Machining Master Technician

Bridge module

Terminal Outcomes:

- Discuss the role and responsibilities of an Automotive Machining Master Technician.

Duration: *<05:00>*	**Duration**: *<00:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• List the role and responsibilities of an Automotive Machining Master Technician. • Discuss the job opportunities for an Automotive Machining Master Technician in the automobile industry. • Explain about Indian automotive manufacturing market. • List various automobile Original Equipment Manufacturers (OEMs) and different products/ models manufactured by them. • Discuss manufacturing standards, procedures, quality norms and standards, etc. followed in the company. • List different types of products manufactured by the company. • Discuss various functional processes like Procurement, Store management, inventory management, quality management and key contact points for query resolution etc. followed in an organisation.	
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 2: Manage work and resources according to safety and conservation standards

Mapped to ASC/N9803, v1.0

Terminal Outcomes:

- Employ appropriate ways to maintain safe and secure working environment
- Apply material and energy conservation practices at the workplace.

Duration: *<20:00>*	**Duration**: *<40:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss organisational procedures for health, safety and security and individual role and responsibilities related to the same. • List the potential workplace related risks, threats and hazards, their causes and preventions. • List personal protective equipment like safety gloves, glasses, shoes and mask used at the workplace. • List various types of fire extinguisher. • Identify various safety boards/ signs placed on the shop floor. • Explain 5S standards, procedures and policies followed at workplace. • Discuss organisational procedures to deal with emergencies and accidents at the workplace and importance of following them. • State the importance of conducting safety drills or training sessions. • Explain the process of filling daily check sheet for reporting to the concerned authorities about improvements done and risks identified. • Discuss how and when to report about potential hazards identified in the workplace and limits of responsibility for dealing with them. • Outline the importance of keeping workplace, equipment, restrooms etc. clean and sanitised. • Explain the importance of following hygiene and sanitation regulations developed by organisation at the workplace. • Discuss the importance of maintaining the availability of running water, hand wash and alcohol-based sanitizers at the	• Apply appropriate ways to implement safety practices to ensure safety of people at the workplace. • Display the correct way of wearing and disposing PPE. • Demonstrate the use of fire extinguisher. • Demonstrate how to provide first aid procedure in case of emergencies. • Demonstrate how to evacuate the workplace in case of an emergency. • Employ various techniques for checking malfunctions in the machines with the support of maintenance team and as per Standard Operating Procedures (SOP). • Demonstrate to arrange tools/ equipment/ fasteners/ spare parts into proper trays, cabinets, lockers as mentioned in the 5S guidelines/work instructions. • Apply appropriate ways to organise safety drills or training sessions for others on the identified risks and safety practices. • Prepare a report about the health, safety and security breaches. • Apply appropriate ways to check that workplace, equipment, restrooms etc. are cleaned and sanitised. • Role play a situation to brief the team about the hygiene and sanitation regulations developed by organisation. • Demonstrate the correct way of washing hands using soap and water and alcohol-based hand rubs. • Apply appropriate methods to support the employees to cope with stress, anxiety etc. • Demonstrate proper waste collection and disposal mechanism depending upon types of waste.

workplace. • Discuss the significance of conforming to basic hygiene practices such as washing hands, using alcohol based hand sanitizers or soap. • Recall ways of reporting advanced hygiene and sanitation issues to the concerned authorities. • Elucidate various stress and anxiety management techniques. • Discuss the significance of greening. • Classify different categories of waste for the purpose of segregation. • Differentiate between recyclable and non-recyclable waste. • Discuss various methods of waste collection and disposal. • List the various materials used at the workplace. • Explain organisational recommended norms for storage of tools, equipment and material. • Discuss the importance of efficient utilisation of material and water. • Explain basics of electricity and prevalent energy efficient devices. • Explain the processes to optimize usage of material and energy/electricity. • Enlist common practices for conserving electricity at workplace.	• Perform the steps involved in storage of tools, equipment and material after completion of work. • Employ appropriate ways to resolve malfunctioning (fumes/ sparks/ emission/ vibration/ noise) and lapse in maintenance of equipment as per requirements. • Perform the steps to prepare a sample material and energy audit reports. • Employ practices for efficient utilization of material and energy/electricity.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Housekeeping material: Cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel, fire extinguisher • Safety gears: Safety shoes, ear plug, goggles, gloves, helmet, first-aid kit	

Module 3: Communicate Effectively and Efficiently

Mapped to ASC/N9802, v1.0

Terminal Outcomes:

- Use effective communication and interpersonal skills.
- Apply sensitivity while interacting with different genders and people with disabilities.

Duration: *<20:00>*	**Duration**: *<35:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Explain the importance of complying with organizational requirements to share information with team members. • Discuss the ways to adjust the communication styles to reflect sensitivity towards gender and persons with disability (PwD). • Explain the importance of respecting personal space of colleagues and customers. • Describe the ways to manage and coordinate with team members for work integration. • State the importance of team goals over individual goals, keeping commitment made to team members, and informing them in case of delays. • Discuss the importance of following the organisation's policies and procedures • Discuss the importance of rectifying errors as per feedback and minimizing mistakes. • Discuss gender-based concepts, issues and legislation as well organization standards, guidelines, rights and duties of PwD. • Discuss the importance of PwD and gender sensitization to ensure that team shows sensitivity towards them. • State the importance of following organizational standards and guidelines related to PwD. • Recall the rights and duties at workplace with respect to PwD. • Outline organisation policies and procedures pertaining to written and verbal communication.	• Employ different means and methods of communication depending upon the requirement to interact with the team members. • Employ appropriate ways to maintain good relationships with team members and superiors. • Apply appropriate techniques to resolve conflicts and manage team members for smooth workflow. • Conduct training sessions to train the team members on proper reporting of completed work and receiving feedback. • Employ suitable ways to escalate problems to superiors as and when required. • Prepare a sample report on the progress and team performance . • Role play a situation on how to offer help to people with disability (PwD) if required at work.
Classroom Aids:	
Whiteboard/blackboard, marker/chalk, duster, computer or Laptop attached to LCD projector	
Tools, Equipment and Other Requirements	

Module 4: Interpret engineering drawing

Mapped to ASC/N9805, v1.0

Terminal Outcomes:

- Describe the basics of engineering drawing.
- Interpret the machine drawings and symbols for understanding the job requirements.

Duration: *<15:00>*	**Duration:** *<15:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Identify uniqueness, dimensioning and important features of 2D and 3D shapes. • Identify types of lines, angles, points and their symmetry in shapes. • Differentiate between first angle and third angle projection. • Interpret 3 axis (x, y and z axis) of projection and machine symbols used in drawing. • Describe GD&T and use of its symbols in the drawings. • Identify required limits and tolerances of component from drawing. • Explain standards used in India for making assembly drawings. • Identify organisational drawing standards for interpreting the work requirements appropriately.	• Read an object in first angle and third angle projection. • Demonstrate appropriate way of reading and interpreting the shapes (cones, cylinder, sphere, cuboid, etc) on to a 2D and 3D projection. • Interpret and read orthographic and isometric views. • Read GD&T symbols in the given drawing. • Employ appropriate ways of storing the drawings in a defined and appropriate place. • Role play a situation on how to communicate the changes in drawing to the concerned authority.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Drawing tools • Engineering drawing handbook • Sample engineering drawings	

Module 5: Manage shop floor operations and team

Mapped to ASC/N93540, v1.0

Terminal Outcomes:

- Demonstrate ways to implement process improvement techniques.
- Prepare shift rosters and production MIS reports.
- Perform various activities such as maintaining availability of material, arranging trainings and maintaining production data related to employee performance measurement and development.

Duration: *<60:00>*	**Duration**: *<120:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Elucidate procedure of planning manpower shift and preparing shift rosters on day to day basis as per the organisational norms and guidelines. • Discuss ways to reduce production losses and wastages in the production and increase minimum rejection of components during shift operation. • List improvement areas in the production line and corrective measures for following the identified gaps. • Explain process improvement techniques, Kaizens, TQM, Poka Yoke etc. and their impact on the production line to rectify the failure and gaps in the production process. • Identify ways for analysing breakdown trends and current maintenance process and areas of improvement in it. • Discuss corrective measures for reducing the breakdown and improving the maintenance process. • Describe use of ERP system for maintaining and updation production line data. • Discuss the documents and reports needed to maintain and prepare related to production process. • Discuss the importance and ways of involving employees in various engagement and development activities such as trainings, meets, brainstorming sessions, safety drills etc. organised in the plant. • List different types of information such as production targets, new guidelines, new processes etc. to be shared with team.	• Prepare a plan for allocating manpower shifts based on the skills matrix. • Prepare shift rosters for the week and month based on the production plan to support the Shift In Charge/ Process head/ Shop head. • Apply appropriate ways for maintaining the information of leaves, IN-Out time and shift/ line overtime for the operators and helpers and sharing it with the concerned authorities. • Apply organisational specified procedures to send inventory requirements and follow up with the stores and purchase department for timely receipt of material. • Employ appropriate ways to maintain the movement and availability of required material, tools and equipment on shop floor within specified TAKT. • Demonstrate ways for using the resources and streamlining the activities effectively on shop floor. • Apply appropriate ways to communicate required information to other departments and resolving production related queries to achieve required production target and quality standards. • Role play a situation on how to implement ways to reduce losses and wastages and increase minimum rejection of components during shift operation. • Prepare MIS reports of daily and monthly production to match the production and target achieved and report to the production Incharge. • Apply appropriate ways to verify the correctness of production and material

• Discuss the importance of organising training sessions and making the team aware of the new processes, inputs and outputs. • Discuss organizational structure to be followed to escalate and resolve issues related to team personal grievances/ complaints etc. • List various grievance and problem solving tools utilized in an organisation.	movement related data entries in the system (manual/ ERP) for the line/ shift. • Prepare the preventive maintenance schedule for the shop/ line and execute it on time. • Employ ways to analyse the various data sheets and reports related to production, maintenance, manpower deployment etc. to support the In charge/ Engineer/ Shop Head. • Apply ways to analyse improvement areas in the production line and identify corrective measures for the identified gaps. • Show how to audit production process for capability of each operation. • Perform steps to prepare sample report on the non-compliances for the regulatory authorities. • Employ appropriate ways to implement Kaizens, TQM, Poka Yoke etc. in the production line. • Apply ways to analyse breakdown trends and current maintenance process and identify corrective measures for the identified gaps. • Perform steps to monitor and review the effectiveness of process improvement techniques and corrective actions on production and preparing reports for the regulatory authorities. • Role play a situation on how to encourage team members for suggesting process improvement measures and their implementation process. • Apply ways to conduct daily floor meeting/ morning meetings/ staff meetings and share information to team such as production targets, new guidelines, new processes etc. • Show how to organise training sessions for team to enhance their skills and knowledge. • Demonstrate organisational specified procedure to identify, escalate and resolve team problems/ work grievances/ complaints etc. • Role play a situation on how to counsel employees for any work related issues or any personal problems.
Classroom Aids:	
Whiteboard, marker pen, projector	

Tools, Equipment and Other Requirements
• Basic tool box, Work bench with vice • Sampling tools, sample rejection data • Case studies, shift planning document or software

Module 6: Plan and perform machining and post-machining activities

Mapped to ASC/N3511, v2.0

Terminal Outcomes:

- Identify tools and equipment required for machining operations.
- Prepare production plan and schedule to achieve production targets.
- Demonstrate various types of machining processes such as drilling, boring, turning etc.
- Perform the steps to carry out post-machining activities.

Duration: *<90:00>*	**Duration**: *<150:00>*
Theory – Key Learning Outcomes	**Practical – Key Learning Outcomes**
• Discuss basic fundamentals of the CNC/conventional machine. • Describe various types of machining processes such as drilling, boring, turning etc. • Discuss how to give inputs to the lead machining technician about production target and planning. • List tools, measuring instruments, equipment, jigs, fixtures and input material required during machining work. • Describe importance of selecting correct program in the CNC machine for machining operation as per the work instructions. • Summarise the steps to be performed for mounting, positioning and alignment of the tools, attachments, fixtures etc. on the machine as per the requirements. • Describe machining parameters like cutting speed, depth of cut, feed rate etc. as per the Work Instructions (WI) and their impact on quality and quantity of output product. • Discuss the do's and don'ts of the manufacturing process as per SOPs/ work instructions. • Describe zero-off set position and how to set it. • Discuss importance of writing correct program in the CNC machine for machining operation as per the work instructions. • Describe various parameters such as optimizes cycle time, tool life and cost of production need to be cover in process sheet of new component development. • Describe manufacturability of items under	• Role play a situation on how to give instructions to the lead technician about the production target and planning. • Perform the steps to prepare plan and schedule for machining activities to meet the production target in co-ordination with the lead technician. • Read the drawing, job orders for identifying work requirements for new part development. • Demonstrate the standard operating procedure to use jigs, fixtures, tools, equipment and measuring instruments required during job. • Show how to set and moodify the CNC machine program as per the production requirements and WI. • Show how to calculate and set machining parameters and workpiece as per the work instructions. • Apply appropriate ways to review the CNC program for covering all the machine and process parameters. • Show how to use pre-setters to set the tools. • Perform steps to conduct the dry run of program and modify it as per the requirements and SOPs/Work Instructions. • Perform steps to check that CNC machine and all tools, attachments, fixtures etc. are mounted, positioned and aligned properly as per the work instructions. • Show how to set the zero-off set position to align it with the fixture. • Perform steps to machine the first component and compare its dimensions with the specified dimensions in the job orders and drawing by using precision

different processes. • Elucidate Production Part Approval Process (PPAP) in new product development process. • Elucidate six sigma in manufacturing of new product development process. • Describe Design For Manufacturing (DFM). • Discuss the PPAP documents and records needed to prepare related to new part product development activities done. • Discuss the necessary precautions to avoid any hazard and accident during machining activities.	gauges. • Demonstrate organizational specified procedure of all machining processes such as drilling, boring, turning etc. • Apply ways to check the quality of output. • Show how to fill the run chart and correct the tool settings to meet the required quality output. • Apply appropriate ways to test and validate the effectiveness and accuracy of program on machine. • Prepare a sample process sheet for a new component for all kind of machine processes covering all the parameters as per organisational guidelines. • Show how to modify the process sheet as per the process requirement. • Prepare sample PPAP documents as per the organisational guidelines. • Perform steps for conducting six sigma process capability study and establishing desired process capability levels after producing first component. • Show how to select machines which are not process capable. • Apply appropriate ways to make them process capable as per the organisational requirement. • Show how to audit process capability to ensure that all machines are process capable. • Role play a situation on how to co-ordinate with R&D department regarding Design For Manufacturing (DFM) and ensure that all components are manufacturable. • Role play a situation on how to co-ordinate with other departments for smooth establishment of new part production and its processes.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	
• Basic tool box, Work bench with vice • Machining tools/ equipment: Surface marking plate, cutting tools, threading, dies & guides, etc. • Machines: Conventional lathe and vertical milling machine with standard accessories and Production CNC machining center with ATC • Measuring equipment: Vernier calipers, micrometre, feeler gauges, bore gauge, slip gauge, thickness gauge, steel ruler, measuring tape, height, gauge , dial gauge, angle plate, set square compass etc.	

- Consumables: Oil stones, Emery, Dressing stone, File cord, Tool post packing, Spares for cutting tools, Carbide inserts, Grinding Wheels etc.
- Hand book, job orders, work order, completion material requests, and Technical Reference Books.
- Sample of Rejected parts for defects like dent, scratch, damage and burrs
- Safety materials: Fire extinguisher, helmet, leather safety gloves, leather aprons, safety glasses with side shields, ear plug, safety shoes and first-aid kit
- Cleaning material: Tip cleaner, wire brush (M.S.), cleaning agents, cleaning cloth, waste container, dust pan and brush set, liquid soap, hand towel

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
B.E/B.Tech	Mechanical/Automobile	5	Mechanical/ Automobile	1	Mechanical/ Automobile	NA
B.E/B.Tech	Mechanical/Automobile	6	Mechanical/ Automobile	0	Mechanical/ Automobile	NA
Diploma	Mechanical/Automobile	6	Mechanical/ Automobile	1	Mechanical/ Automobile	NA
M.E/M.Tech	Mechanical/Automobile	3	Mechanical/ Automobile	2	Mechanical/ Automobile	NA

Trainer Certification	
Domain Certification	**Platform Certification**
"Automotive Machining Master Technician, ASC/Q3506, version 2.0". Minimum accepted score is 80%.	"Trainer, MEP/Q2601 v1.0" Minimum accepted score is 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	**Specialization**	**Relevant Industry Experience**		**Training Experience**		**Remarks**
		Years	***Specialization***	***Years***	***Specialization***	
B.E/B.Tech	Mechanical/Automobile	6	Mechanical/ Automobile	1	Mechanical/ Automobile	NA
B.E/B.Tech	Mechanical/Automobile	7	Mechanical/ Automobile	0	Mechanical/ Automobile	NA
M.E/M.Tech	Mechanical/Automobile	4	Mechanical/ Automobile	2	Mechanical/ Automobile	NA
Diploma	Mechanical/Automobile	7	Mechanical/ Automobile	1	Mechanical/ Automobile	NA

Assessor Certification	
Domain Certification	**Platform Certification**
"Automotive Machining Master Technician, ASC/Q3506, version 2.0". Minimum accepted score is 80%.	"Assessor; MEP/Q2701 v1.0" Minimum accepted score is 80%.

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Assessment Strategy

1. Assessment System Overview:
   - Batches assigned to the assessment agencies for conducting the assessment on SDMS/SIP or email
   - Assessment agencies send the assessment confirmation to VTP/TC looping SSC
   - Assessment agency deploys the ToA certified Assessor for executing the assessment
   - SSC monitors the assessment process & records

2. Testing Environment:
   - Confirm that the centre is available at the same address as mentioned on SDMS or SIP
   - Check the duration of the training.
   - Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.
   - If the batch size is more than 30, then there should be 2 Assessors.
   - Check that the allotted time to the candidates to complete Theory & Practical Assessment is correct.
   - Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).
   - Confirm the number of TABs on the ground are correct to execute the Assessment smoothly.
   - Check the availability of the Lab Equipment for the particular Job Role.

3. Assessment Quality Assurance levels / Framework:
   - Question papers created by the Subject Matter Experts (SME)
   - Question papers created by the SME verified by the other subject Matter Experts
   - Questions are mapped with NOS and PC
   - Question papers are prepared considering that level 1 to 3 are for the unskilled & semi-skilled individuals, and level 4 and above are for the skilled, supervisor & higher management
   - Assessor must be ToA certified & trainer must be ToT Certified
   - Assessment agency must follow the assessment guidelines to conduct the assessment

4. Types of evidence or evidence-gathering protocol:
   - Time-stamped & geotagged reporting of the assessor from assessment location
   - Centre photographs with signboards and scheme specific branding
   - Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period
   - Time-stamped & geotagged assessment (Theory + Viva + Practical) photographs & videos

5. Method of verification or validation:
   - Surprise visit to the assessment location
   - Random audit of the batch
   - Random audit of any candidate

6. Method for assessment documentation, archiving, and access
   - Hard copies of the documents are stored
   - Soft copies of the documents & photographs of the assessment are uploaded / accessed from Cloud Storage
   - Soft copies of the documents & photographs of the assessment are stored in the Hard Drives

References

Glossary

Term	Description
Declarative Knowledge	Declarative knowledge refers to facts, concepts and principles that need to be known and/or understood in order to accomplish a task or to solve a problem.
Key Learning Outcome	Key learning outcome is the statement of what a learner needs to know, understand and be able to do in order to achieve the terminal outcomes. A set of key learning outcomes will make up the training outcomes. Training outcome is specified in terms of knowledge, understanding (theory) and skills (practical application).
OJT (M)	On-the-job training (Mandatory); trainees are mandated to complete specified hours of training on site
OJT (R)	On-the-job training (Recommended); trainees are recommended the specified hours of training on site
Procedural Knowledge	Procedural knowledge addresses how to do something, or how to perform a task. It is the ability to work, or produce a tangible work output by applying cognitive, affective or psychomotor skills.
Training Outcome	Training outcome is a statement of what a learner will know, understand and be able to do upon the completion of the training.
Terminal Outcome	Terminal outcome is a statement of what a learner will know, understand and be able to do upon the completion of a module. A set of terminal outcomes help to achieve the training outcome.

Acronyms and Abbreviations

NOS	National Occupational Standard(s)
NSQF	National Skills Qualifications Framework
QP	Qualifications Pack
TVET	Technical and Vocational Education and Training
SOP	Standard Operating Procedure
WI	Work Instructions
PPE	Personal Protective equipment