



Model Curriculum

QP Name: CNC Turning

Operator

QP Code: CSC/Q0115

Version: 4.0

NSQF Level: 4

Model Curriculum Version: 4.0

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Training Parameters

Sector	Capital Goods
Sub-Sector	<ol style="list-style-type: none"> Machine Tools Dies, Moulds and Press Tools
Occupation	Machining
Country	India
NSQF Level	4
Aligned to NCO/ISCO/ISIC Code	NCO-2015/ 7223.40
Minimum Educational Qualification and Experience	<p>12th grade pass or equivalent</p> <p>Completed 2nd year of 3-year diploma * (after 10th) or equivalent.</p> <p>10th grade pass with two years of any combination of NTC/NAC/CITS or equivalent.</p> <p>10th grade pass with 3 years of relevant experience or equivalent</p> <p>11th grade pass with 1.5 years of relevant experience or equivalent</p> <p>Previous relevant Qualification of NSQF Level 3.5 with 1.5 year relevant experience</p> <p>Previous relevant Qualification of NSQF level 3 with 3 years of relevant experience.</p> <p>*Diploma - Electrical/ Mechanical</p>
Pre-Requisite License or Training	NA

Minimum Job Entry Age	18 Years
Last Reviewed On	
Next Review Date	30 th April 2028
NSQC Approval Date	8 th May 2025
QP Version	4.0
Model Curriculum Creation Date	5 th June 2025
Model Curriculum Valid Up to Date	30 th April 2028
Model Curriculum Version	4.0
Minimum Duration of the Course	450 Hours

Maximum Duration of the Course	450 Hours
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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 to:

- Explain the importance of following the health and safety practices at work.
- Demonstrate ways to coordinate with co-workers to achieve work efficiency.
- Demonstrate the process of setting up the CNC turning machine for operations.
- Demonstrate the process of carrying out turning operations using the CNC machine.

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
CSC/N1335 Follow the health and safety practices at work NOS Version- 2.0 NSQF Level- 3	25:00	35:00	0:00	00:00	60:00
Module 1: Introduction to the role of a CNC Operator Turning	05:00	0:00	0:00	00:00	06:00
Module 2: Health and safety practices	20:00	35:00	0:00	00:00	55:00
CSC/N1336 Coordinate with co-workers to achieve work efficiency NOS Version- 2.0 NSQF Level- 3	10:00	20:00	0:00	00:00	30:00
Module 3: Process of coordinating with co-workers to achieve work efficiency	10:00	20:00	0:00	00:00	30:00
CSC/N0120: Set up the CNC turning machine for operations NOS Version- 2.0 NSQF Level- 4	40:00	80:00	30:00	00:00	150:00
Module 4: Process of setting up the CNC turning machine for operations	40:00	80:00	30:00	00:00	120:00

CSC/N0115: Carry out turning operations using the Advanced CNC machine with Real Time Monitoring System.	45:00	105:00	30:00	00:00	180:00
Module 5: Process of carrying out turning operations using the CNC machine	25:00	65:00	30:00	00:00	120:00
Module 6:Quality Control & Maintenance of CNC Machines	20:00	40:00	00:00	00:00	60:00
DGT/VSQ/N0101 - Employability Skills (30 hours) NOS Version No. – 1.0 NSQF Level – 4	12:00	18:00	0:00	00:00	30:00
Module 7: Introduction to Employability Skills	0.5:00	0.5:00	0:00	00:00	1:00
Module 8: Constitutional values - Citizenship	0.5:00	0.5:00	0:00	00:00	1:00
Module 9: Becoming a Professional in the 21st Century	0.5:00	0.5:00	0:00	00:00	1:00
Module 10: Basic English Skills	1:00	1:00	0:00	00:00	2:00
Module 11: Communication Skills	1.5:00	2.5:00	0:00	00:00	4:00
Module 12: Diversity & Inclusion	0.5:00	0.5:00	0:00	00:00	1:00
Module 13: Financial and Legal Literacy	1.5:00	2.5:00	0:00	00:00	4:00
Module 14: Essential Digital Skills	1:00	2:00	0:00	00:00	3:00
Module 15: Entrepreneurship	2.5:00	4.5:00	0:00	00:00	7:00
Module 16: Customer Service	1.5:00	2.5:00	0:00	00:00	4:00
Module 17: Getting ready for apprenticeship & Jobs	1:00	1:00	0:00	00:00	2:00
Total Duration	132:00	258:00	60:00	00:00	450:00

Module Details

Module 1: Introduction to the role of a CNC Turning Operator

Mapped to CSC/N1335 v2.0

Terminal Outcomes:

- Discuss the job role of a CNC Turning Operator.

Duration: 05:00	Duration: 0:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe the size and scope of the capital goods industry and its sub-sectors. • Discuss the role and responsibilities of a CNC Operator Turning. • Identify various employment opportunities for a CNC Turning Operator. 	
Classroom Aids	
Training Kit - Trainer Guide, Presentations, Whiteboard, Marker, Projector, Laptop, Video Films	
Tools, Equipment and Other Requirements	
NA	

Module 2: Health and safety Practices

Mapped to CSC/N1335 v2.0

Terminal Outcomes:

- Demonstrate ways to maintain personal health and safety.
- Describe the process of assisting in hazard management.
- Explain how to check the first aid box, firefighting and safety equipment.
- Describe the process of assisting in waste management.
- Explain the importance of following the fire safety guidelines.
- Explain the importance of following the emergency and first-aid procedures.
- Demonstrate the process of carrying out relevant documentation and review.

Duration: 20:00	Duration: 35:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the recommended practices to be followed to ensure protection from infections and transmission to others, such as the use of hand sanitiser and face mask. • Explain the importance and process of checking the work conditions, assessing the potential health and safety risks, and take appropriate measures to mitigate them. • Explain the importance and process of selecting and using the appropriate PPE relevant to the task and work conditions. • Explain the recommended techniques to be followed while lifting and moving heavy objects to avoid injury. • Explain the importance of following the manufacturer’s instructions and workplace safety guidelines while working on heavy machinery, tools and equipment. • Explain the importance and process of identifying existing and potential hazards at work. • Describe the process of assessing the potential risks and injuries associated with the various hazards. • Explain how to prevent or minimise different types of hazards. • Explain how to handle and store hazardous materials safely. • Explain the importance of ensuring the first aid box is updated with the relevant first aid supplies. • Describe the process of checking and testing the firefighting and various safety equipment to ensure they are in 	<ul style="list-style-type: none"> • Demonstrate the use of appropriate Personal Protective Equipment (PPE) relevant to the task and work conditions. • Demonstrate how to handle hazardous materials safely. • Demonstrate the process of testing the firefighting and various safety equipment to ensure they are in usable condition. • Demonstrate the process of recycling and disposing different types of waste appropriately. • Demonstrate how to use the appropriate type of fire extinguisher to extinguish different types of fires safely. • Demonstrate how to administer appropriate first aid to the injured personnel. • Demonstrate the process of performing Cardiopulmonary Resuscitation (CPR) on a potential victim of cardiac arrest. • Demonstrate the process of carrying out appropriate documentation following a health and safety incident at work, including all the required information.

a usable condition.

- Explain the criteria for segregating waste into appropriate categories.
- Describe the appropriate methods for recycling recyclable waste.
- Describe the process of disposing of the non-recyclable waste safely and the applicable regulations.
- Explain the use of different types of fire extinguishers to extinguish different types of fires.
- State the recommended practices to be followed for a safe rescue during a fire emergency.
- Explain how to request assistance from the fire department to extinguish a serious fire.
- Explain the appropriate practices to be followed during workplace emergencies to ensure safety and minimise loss to organisational property.
- State the common health and safety hazards present in a work environment, associated risks, and how to mitigate them.
- State the safe working practices to be followed while working at various hazardous sites and using electrical equipment.
- Explain the importance of ensuring easy access to firefighting and safety equipment.
- Explain the appropriate preventative and remedial actions to be taken in the case of exposure to toxic materials, such as poisonous chemicals and gases.
- Explain various causes of fire in different work environments and the recommended precautions to be taken to prevent fire accidents.
- Describe different methods of extinguishing fire.
- List different materials used for extinguishing fire.
- Explain the applicable rescue techniques to be followed during a fire emergency.
- Explain the importance of placing safety signs and instructions at strategic locations in a workplace and following them.
- Explain different types of first aid treatment to be provided for different types of injuries.
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<ul style="list-style-type: none"> • Explain how to move an injured person safely. • State various hazards associated with the use of various machinery, tools, implements, equipment and materials. • Explain the importance of ensuring no obstruction and free access to fire exits. • Explain how to free a person from electrocution safely. • Explain how to administer appropriate first aid to an injured person. • Explain how to perform Cardiopulmonary Resuscitation (CPR). • Explain the importance of coordinating with the emergency services to request urgent medical assistance for persons requiring professional medical attention or hospitalisation. • State the appropriate documentation to be carried out following a health and safety incident at work, and the relevant information to be included. • Explain the importance and process of reviewing the health and safety conditions at work regularly or following an incident. • Explain the importance and process of implementing appropriate changes to improve the health and safety conditions at work. 	
Classroom Aids	
Computer, Projection Equipment, PowerPoint Presentation and Software, Facilitator's Guide, Participant's Handbook.	
Tools, Equipment and Other Requirements	
Personal Protective Equipment, Cleaning Equipment and Materials, Sanitizer, Soap, Mask	

Module 3: Process of coordinating with co-workers to achieve work efficiency

Mapped to NOS CSC/N1336 v2.0

Terminal Outcomes:

- Demonstrate ways to Work and communicate effectively with co-workers.
- Discuss ways to promote diversity and inclusion at the workplace.

Duration: 10:00	Duration: 20:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the importance and process of effective communication in the workplace. • Explain the barriers to effective communication and how to overcome them. • Explain the importance of teamwork in an organisation's and individual's success. • Explain the importance of active listening in the work environment. • State the appropriate techniques to be followed for active listening. • Explain the importance of tone and pitch ineffective communication. • Explain the importance of avoiding casual expletives and unpleasant terms while communicating professional circles. • Explain the importance of maintaining discipline and ethical behaviour at work. • State the common reasons for interpersonal conflict and how to resolve them. • Explain the importance of developing effective working relationships for professional success. • Describe the process of expressing and addressing grievances appropriately and effectively. • Explain the importance and process of planning daily tasks to ensure their timely completion and efficient use of time. • Explain the importance of adhering to the limits of authority at work. • Explain the importance of following the applicable quality standards and timescales at work. • Explain the importance of coordinating with co-workers to achieve the work objectives efficiently. 	<ul style="list-style-type: none"> • Demonstrate the process of preparing the relevant documents and reports as per the supervisor's instructions, providing appropriate information clearly and systematically. • Demonstrate how to mentor and assist subordinates in the execution of their work responsibilities. • Demonstrate the process of using various resources efficiently to ensure maximum utilisation and minimum wastage. • Demonstrate how to communicate clearly and politely to ensure effective communication with co- workers. • Demonstrate appropriate verbal and non- verbal communication that is respectful of genders and disability.

- Explain the relevant documentation

<p>requirements.</p> <ul style="list-style-type: none"> • Explain the importance of providing appropriate information clearly and systematically in work documents. • State the escalation matrix to be followed to deal with out of authority tasks and concerns. • Explain the importance and process of mentoring and assisting subordinates in execution of their work responsibilities. • Explain how to identify possible disruptions to work prevent them. • Explain how to use various resources efficiently to ensure maximum utilisation and minimum wastage. • Explain the recommended practices to be followed at work to avoid and resolve conflicts at work. • Explain the importance and process of efficient and timely dissemination of information to the authorised personnel. • Explain the procedure to report inappropriate behaviour e.g., harassment. 	
Classroom Aids:	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
NA	

Module 4: Process of setting up the CNC turning machine for operations

Mapped to CSC/N0120 v2.0

Terminal Outcomes:

- Describe the process of preparing for setting the CNC turning machine.
- Demonstrate the process of setting the CNC turning machine.

Duration: 40:00	Duration: 80:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe Concept of CNC turning principles, terminology, and processes. • Describe the main components of a CNC turning machine, including the spindle, turret, tool holder, and control panel. • Explain the function and importance of each component in the turning process. • Describe the step-by-step process for setting up a CNC turning machine for operation, including workpiece installation, tool selection, and calibration. • Fundamentals of CNC programming and G-code as it relates to CNC turning operations. • Various types of cutting tools used in CNC turning, discussing their materials, geometries, and applications. • Safety hazards associated with CNC turning operations and describe best practices for ensuring a safe working environment. • Explain methods for inspecting the quality of turned parts, including measuring dimensions and surface finish. • Implement quality control procedures to ensure compliance with specifications throughout the machining process. • Demonstrate basic troubleshooting 	<ul style="list-style-type: none"> • Identify and describe the main components of a CNC turning machine, including the spindle, turret, coolant system, and control panel. • Select the appropriate cutting tools for specific materials and operations based on provided technical drawings or specifications. • Demonstrate the correct method for installing tools into the turret, ensuring they are securely fastened and correctly aligned. • Configure the work offset and tool offset settings for accurate machining operations. • Perform necessary calibration procedures to ensure the CNC turning machine is accurately set up for operations, including checking for mechanical integrity and alignment. • Conduct pre-start checks according to safety and quality standards, ensuring all systems are operational before machining begins. • Demonstrate an understanding of the basic programming structure and commands necessary for turning operations. • Identify potential hazards associated with CNC turning operations and describe appropriate safety measures and personal protective equipment (PPE) to mitigate risks. • Monitor the CNC turning process during operation, identifying and addressing issues such as tool wear, vibrations, or irregular machining results. • Demonstrate Modern CNC Interfaces for CAD /CAM Software Integration.

<p>techniques and preventive maintenance procedures to ensure optimal machine performance.</p> <ul style="list-style-type: none"> • Discuss the Modern CNC Interfaces for integration of CAD/CAM software for efficient design-to-manufacturing. • Explain the CNC turning Innovation Tools. 	
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Classroom Aids
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop
Tools, Equipment and Other Requirements
Safety Glasses, Safety Shoes, Face Mask, Work Holding Devices, CNC Machine with All Accessories, Engineering Drawings, Sample Instruction Sheets, Sample Daily Check Sheet, Turning Tool, Threading Tool, Centre Drills, Threading Tools, Reamers, Vernier Caliper, Micrometer Screw Gauge, Depth Gauge, Work Holding Devices, carbide cutting tools, reusable turning tools.

Module 5: Process of carrying out turning operations using the CNC machine.

Mapped to CSC/N0115 v2.0

Terminal Outcomes:

- Describe the process of preparing for carrying out turning operations.
- Demonstrate the process of carrying out turning operations.

Duration: 25:00	Duration: 65:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain the fundamental principles of turning operations, including the types of turning operations, tooling involved, and the importance of setup and programming. • Identify and select the correct cutting tools for various turning operations, including different types of lathe tools, inserts, and tool holders. • Program a CNC lathe using a computer-aided manufacturing (CAM) system or a programming language such as G-code, including creating tool paths, defining feed rates, and setting spindle speeds. • Safely and efficiently operate a CNC lathe, including loading and unloading workpieces, setting machine parameters, and monitoring machine performance. • Maintain a safe working environment by adhering to safety protocols, wearing personal protective equipment (PPE), and following lockout/tagout procedures • Meet quality standards by adhering to tolerances, inspecting workpieces for defects, and implementing corrective action as needed. 	<ul style="list-style-type: none"> • Demonstrate knowledge of CNC machinery components, types of CNC turning machines, and their functions. • Perform the setup of CNC turning machines, including tool installation, workpiece clamping, and alignment. • Calibrate CNC machines to ensure accurate machining performance. • Analyze and interpret technical drawings, blueprints, and CAD files relevant to turning operations. • Write and modify CNC programs using G-code and M-code for turning operations. • Utilize CNC programming software to create and simulate turning programs before execution. • Select appropriate cutting tools for various materials and turning operations. • Conduct routine maintenance and inspection of cutting tools to ensure optimal performance. • Execute turning operations following established safety protocols and standard operating procedures. • Demonstrate the ability to monitor machine performance and adjust as necessary during the machining process.

Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
CNC Turning Machines (2- Axis CNC Lathe Machine), Cutting Tools Measuring Tools, Hand Tools, Power Tools, PPE, Drawing Tools, Drilling Machines, Cutting Machines, Hand Grinders, GD&T, Safety Glasses, Safety Shoes, Face Mask, Work Holding Devices, CNC Machine with all Accessories, Engineering Drawings, Sample Instruction Sheets, Sample Daily Check Sheet, Turning Tool, Threading Tool, Centre Drills, Threading Tools, Reamers, Vernier Caliper, Micrometer Screw Gauge, Depth Gauge, Work Holding Devices. Etc.	

Module 6: Quality Control & Maintenance of CNC Machines Mapped to CSC/N0115 v2.0

Terminal Outcomes:

- Describe the process of Dimensional accuracy checks under Quality Control
- Demonstrate the process of Routine maintenance.

Duration: 20:00	Duration: 40:00
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes

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| <ul style="list-style-type: none"> • Define the principles of quality control in CNC machining. • Explain the importance of quality control in ensuring precision and consistency in turned components. • Identify common defects in CNC-turned parts (e.g., dimensional inaccuracies, surface roughness, tool marks). • Identify the importance of preventive and corrective maintenance for CNC machines. • Describe the key maintenance tasks, including: <ul style="list-style-type: none"> • Lubrication and oil checks • Coolant monitoring and replacement • Cleaning of machine components • Tool wear inspection and replacement • Checking spindle and chuck alignment • Explain the impact of poor maintenance on machine performance and part quality. | <ul style="list-style-type: none"> • Use measuring tools (micrometers, vernier calipers, dial indicators) to check workpiece dimensions. • Interpret engineering drawings and tolerances (GD&T). • Measure surface roughness using a surface profilometer. • Identify machining defects such as chatter marks, burrs, and tool marks. • Check lubrication systems, coolant levels, and hydraulic fluids. • Inspect guideways, ball screws, and spindle bearings for wear. • Clean machine components to prevent chip buildup and contamination. • Monitor and replace worn-out cutting tools to maintain consistent machining quality. • Use tool presetting devices to ensure accurate tool offsets. |
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Classroom Aids	
Training Kit (Trainer Guide, Presentations). Whiteboard, Marker, Projector, Laptop	
Tools, Equipment and Other Requirements	
CNC Turning Machines (2- Axis CNC Lathe Machine), Cutting Tools Measuring Tools, Hand Tools, Power Tools, PPE, Drawing Tools, Drilling Machines, Cutting Machines, Hand Grinders, GD&T, Safety Glasses, Safety Shoes, Face Mask, Work Holding Devices, CNC Machine with all Accessories, Engineering Drawings, Sample Instruction Sheets, Sample Daily Check Sheet, Turning Tool, Threading Tool, Centre Drills, Threading Tools, Reamers, Vernier Caliper, Micrometer Screw Gauge, Depth Gauge, Work Holding Devices. Etc.	

Module 7: Introduction to Employability Skills

Mapped to DGT/VSQ/N0101

Terminal Outcomes:

- Discuss about Employability Skills in meeting the job requirements

Duration: <0.5:00>	Duration: <1:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss the importance of Employability Skills in meeting the job requirements 	<ul style="list-style-type: none"> • List different learning and employability related GOI and private portals and their usage
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 8: Constitutional values - Citizenship

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Discuss about constitutional values to be followed to become a responsible citizen

Duration: <0.5:00>	Duration: <1:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Explain constitutional values, civic rights, duties, citizenship, responsibility towards society etc. that are required to be followed to become a responsible citizen. 	<ul style="list-style-type: none"> • Show how to practice different environmentally sustainable practices
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 9: Becoming a Professional in the 21st Century

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Demonstrate professional skills required in 21st century

Duration: <1:00>	Duration: <1.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss 21st century skills. • Describe the benefits of continuous learning 	<ul style="list-style-type: none"> • Exhibit 21st century skills like Self-Awareness, Behavior Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn etc. in personal or professional life.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 10: Basic English Skills

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Practice basic English speaking.

Duration: <4:00>	Duration: <6:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Describe basic communication skills • Discuss ways to read and interpret text written in basic English 	<ul style="list-style-type: none"> • Show how to use basic English sentences for everyday conversation in different contexts, in person and over the telephone • Read and interpret text written in basic English • Write a short note/paragraph / letter/e - mail using basic English
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 11: Career Development & Goal Setting

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Demonstrate Career Development & Goal Setting skills.

Duration: <1:00>	Duration: <1:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> • Discuss need of career development plan 	<ul style="list-style-type: none"> • Demonstrate how to communicate in a well -mannered way with others. • Create a career development plan with well-defined short- and long-term goals
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 12: Communication Skills

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Practice basic communication skills.

Duration: <2:00>	Duration: <3:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the importance of active listening for effective communication Discuss the significance of working collaboratively with others in a team 	<ul style="list-style-type: none"> Demonstrate how to communicate effectively using verbal and nonverbal communication etiquette
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 13: Diversity & Inclusion

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Describe PwD and gender sensitisation.

Duration: <1:00>	Duration: <1.5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the significance of reporting sexual harassment issues in time 	<ul style="list-style-type: none"> Demonstrate how to behave, communicate, and conduct oneself appropriately with all genders and PwD
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 14: Financial and Legal Literacy

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Describe ways of managing expenses, income, and savings.

Duration: <2:00>	Duration: <3:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> List the common components of salary and compute income, expenditure, taxes, investments etc. Discuss the legal rights, laws, and aids 	<ul style="list-style-type: none"> Outline the importance of selecting the right financial institution, product, and service Demonstrate how to carry out offline and online financial transactions, safely and securely
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 15: Essential Digital Skills

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Demonstrate procedure of operating digital devices and associated applications safely.

Duration: <4:00>	Duration: <6:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Describe the role of digital technology in today's life Discuss the significance of using internet for browsing, accessing social media platforms, safely and securely 	<ul style="list-style-type: none"> Show how to operate digital devices and use the associated applications and features, safely and securely Create sample word documents, excel sheets and presentations using basic features Utilize virtual collaboration tools to work effectively
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 16: Entrepreneurship

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Describe opportunities as an entrepreneur.

Duration: <3:00>	Duration: <4:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the types of entrepreneurship and enterprises Discuss how to identify opportunities for potential business, sources of funding and associated financial and legal risks with its mitigation plan Describe the 4Ps of Marketing-Product, Price, Place and Promotion and apply them as per requirement 	<ul style="list-style-type: none"> Create a sample business plan, for the selected business opportunity
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 17: Customer Service

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Describe ways of maintaining customer.

Duration: <2:00>	Duration: <3:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Explain the significance of identifying customer needs and addressing them. Explain the significance of identifying customer needs and responding to them in a professional manner. Discuss the significance of maintaining hygiene and dressing appropriately. 	<ul style="list-style-type: none"> Demonstrate how to maintain hygiene and dressing appropriately.
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Module 18: Getting ready for apprenticeship & Jobs

Mapped to DGT/VSQ/N0102

Terminal Outcomes:

- Describe ways of preparing for apprenticeship & Jobs appropriately.

Duration: <3:00>	Duration: <5:00>
Theory – Key Learning Outcomes	Practical – Key Learning Outcomes
<ul style="list-style-type: none"> Discuss the significance of maintaining hygiene and confidence during an interview List the steps for searching and registering for apprenticeship opportunities 	<ul style="list-style-type: none"> Create a professional Curriculum Vitae (CV) Use various offline and online job search sources such as employment exchanges, recruitment agencies, and job portals respectively Perform a mock interview
Classroom Aids:	
Whiteboard, marker pen, projector	
Tools, Equipment and Other Requirements	

Annexure

Trainer Requirements

Trainer Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Diploma	4	CNC Operator-Vertical Machining Centre	0		Practical skills and knowledge required in the relevant job role
Degree	Degree in Mechanical Engineering	4	CNC Operator-Vertical Machining Centre	0		Practical skills and knowledge required in the relevant job role

Trainer Certification	
Domain Certification	Platform Certification
Certified for the job role “ CNC Turning Operator ”, mapped to QP: “CSC/Q0115, v4.0” with minimum accepted score of 80%.	Recommended that the Trainer is certified for the job role “Trainer(VET & Skills)”, mapped to the Qualification Pack: “MEP/Q2601 V3.0” with minimum accepted score of 80%.

Assessor Requirements

Assessor Prerequisites						
Minimum Educational Qualification	Specialization	Relevant Industry Experience		Training/Assessment Experience		Remarks
		Years	Specialization	Years	Specialization	
Diploma	Diploma /Degree	4	CNC Operator-Vertical Machining Centre	0		Practical skills and knowledge required in the relevant job role
Degree	Degree in Mechanical Engineering	4	CNC Operator-Vertical Machining Centre	0		Practical skills and knowledge required in the relevant job role

Assessor Certification	
Domain Certification	Platform Certification
Certified for the job role: “CNC Turning Operator” , mapped to QP : “CSC/Q0115, v4.0” with minimum accepted score of 80%.	Recommended that the Assessor is certified for the job role :“Assessor(VET & Skills)”, mapped to the qualification pack: “MEP/Q2701,V3.0” with minimum accepted score of 80%.

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
- The assessment agency deploys the ToA certified Assessor for executing the assessment
- SSC monitors the assessment process & records

2. Testing Environment

To ensure a conducive environment for conducting a test, the trainer will:

- 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 10 a.m. and 5 p.m. respectively
- Ensure there are 2 Assessors if the batch size is more than 30.
- 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 levels 1 to 3 are for the unskilled & semi- skilled individuals, and levels 4 and above are for the skilled, supervisor & higher management
- The assessor must be ToA certified and the trainer must be ToT Certified
- The 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:

To verify the details submitted by the training centre, the assessor will undertake:

- A surprise visit to the assessment location
- A random audit of the batch
- A random audit of any candidate

6. Method for assessment documentation, archiving, and access

To protect the assessment papers and information, the assessor will ensure:

- 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 on the Hard drive

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	The 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
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	The 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

Term	Description
NOS	National Skills Qualification Committee
NSQF	National Skills Qualification Framework
OJT	On-the-Job Training
OMR	Optical Mark Recognition
PC	Performance Criteria
PwD	Persons with Disabilities
QP	Qualification Pack
SDMS	Skill Development & Management System
SIP	Skill India Portal
SSC	Sector Skill Council
TC	Trainer Certificate
ToA	Training of Assessors
ToT	Training of Trainers
TP	Training Provider