



Maldives National Skills Development Authority



National Competency Standard for Composite Manufacturing and Repair

Standard Code: CON-19L4-V1-25

Qualification Name: National Certificate IV in Composite Manufacturing and Repair

FOREWORD

The pivotal role of the Maldives National Skills Development Authority (MNSDA) in meticulously implementing and expanding Technical and Vocational Education & Training (TVET) exemplifies the steadfast commitment of the Maldives to build a skilled and resilient workforce. This commitment is evident from the strategic formulation of National Standards and the establishment of a comprehensive framework for training and certification.

Under the Higher Education and Training Act 7/2021, the MNSDA assumes an instrumental role, reflecting the government's unwavering dedication to streamlining TVET policies and procedures. This includes the establishment of a robust system for accrediting and registering both Institution Based Training (IBT) and Employer Based Training (EBT) providers. The MNSDA's active involvement in conducting the National Apprenticeship Program (NAP), National Trade Testing and Certification (NTTC), and the issuance of National Certificates reflects a comprehensive approach to ensure elevated quality standards and competency within the workforce.

The National Competency Standards (NCS) revised through the Maldives Enhancing Employability and Resilience of Youth (MEERY) project accentuates the commitment to updating and sustaining contemporary skill sets aligned precisely with industry demands. Deliberate efforts to revise existing NCS, coupled with the development of curriculum, teaching materials, resource books, and logbooks, attest to our dedication to ensuring the ongoing relevance and currency of the TVET system in the Maldives.

The active engagement of Technical Panels and Employment Sector Councils in the NCS development and approval process, coupled with alignment to the Maldives National Qualification Framework (MNQF) and accreditation by the Maldives Qualifications Authority (MQA), certifies that the TVET system not only remains highly responsive but also ensures the quality standards demanded by industries. This approach enables the system to effectively meet the diverse needs of industries and adapt to the evolving economic landscape.

The collaborative development of the National Certificate IV in Composite Manufacturing and Repair by the MNSDA, MEERY, and the Maldives Institute of Technology exemplifies the practical implementation of TVET initiatives. This training package represents a critical stride towards addressing the requisite skills while fostering opportunities to integrate sustainable economic development within the TVET framework.



Dr. Zahra Mohamed

Chief Executive Officer

Maldives National Skills Development Authority

EMPLOYMENT SECTOR COUNCILS

#	Name	Designation	Organisation
01	Ahmed Thalhath	Director General	Ministry of Construction and Infrastructure
02	Adnan Haleem (Chair)	Secretary General	Maldives National Association of Construction Industry
03	Mohamed Rasheed	Director	Housing Development Corporation
04	Mohamed Waheed	Lecturer	Maldives Polytechnic
05	Hussain Shiyam	Civil Engineer	Civil Engineers Association
06	Ibrahim Shareef Hassan	Training Expert	Ibrahim Shareef Hassan
07	Mohamed Yoosuf	Professional Member	Architects Association of Maldives
08	Shakeeba Ali	Director General	Maldives National Skills Development Authority
09			

National Occupational Standard has been endorsed by:

Adnan Haleem
Chairperson
Construction Sector Council

Maldives National Skills Development Authority
Umar Zahir Office Building, 5th Floor,
Orchid Ma higuun, HulhuMale', Republic of Maldives.

Date of Endorsement: 26/02/2025

TECHNICAL SUPPORT

#	Name	Designation	Organisation
01			
02			

TECHNICAL PANEL MEMBERS

#	Name	Designation	Organisation
01	Ahmed Anwar	Senior Manufacturing Engineer	Male' Water and Sewerage Company PVT LTD
02	Hussain Shiyam	Member	Association of Civil Engineers
03	Abdulla Naushad	Secretary General	Association of Civil Engineers

VERSION	DEVELOPER	DATE	STANDARD CODE
V1	Maldives Institute of Technology	29/05/2024	CON-19L4-V1-25

Standard Development Process

The development of the “National Certificate IV in Composite Manufacturing and Repair” Standard involved a comprehensive study of Composite Manufacturing and Repair occupations in Maldivian workplaces, with a focus on related enterprises. Job descriptions and international occupational trends were analysed to draft an initial Occupational Standard. This draft will undergo further refinement through a Technical Panel (TP) from Maldivian workplaces, ensuring incorporation of competencies and edits. The TP will provide technical input, suggesting changes to the standard, until a final draft is agreed upon. The approved Final Draft will then be submitted to the Construction Sector Council for endorsement and validation. A brief report detailing the compilation process will accompany the Standard for the Council's review, and any recommended changes will be addressed before final endorsement.

With the endorsement from the Construction Sector Council, the finalised National Occupational Standard for Composite Manufacturing and Repair will be submitted to the Maldives Qualification Authority (MQA) for final approval. Upon receiving MQA approval, the standard will be officially published on the Maldives National Skills Development Authority (MNSDA) website. This publication will enable training providers in the Maldives to utilise the standard for delivering the Composite Manufacturing and Repair program, ensuring its widespread implementation across the country

Description of “Composite Manufacturing and Repair”

The National Certificate Level IV in Composite Manufacturing and Repair is designed to equip trainees with the necessary skills and knowledge to excel in the composite manufacturing and repair in the Construction industry. The curriculum covers a comprehensive range of competencies, ensuring that graduates can meet industry standards and perform effectively in various roles within the sector.

Upon successful completion, graduates will be equipped with the expertise to excel in various roles within the construction sector.

Proposed Qualification Titles

Following are the recommended titles by the selected internal expert team of MIT for the National Certificate IV in Composite Manufacturing and Repair.

1. Nil-

Job opportunities upon completion of “National Certificate IV in Composite Manufacturing and Repair”

Upon successful completion of the National Certificate IV in Composite Manufacturing and Repair, students can work in the following jobs.

1. *Composites Manufacturing Technician*
2. *Composites Repair Technician*
3. *Composite Assembly Technician*

KEY FOR CODING

Coding Competency Standards and Related Materials

DESCRIPTION	REPRESENTED BY
Industry Sector as per ESC (Three letters)	Construction Sector (CON) Fisheries and Agriculture (FNA) Information, Communication and Technology (ICT) Transport Sector (TRN) Tourism Sector (TOU) Social Sector (SOC) Foundation (FOU)
Standard Number - Occupation with in an industry sector	Two digits 01-99
Common Competency	CM
Core Competency	CC
Unit Number - Occupation within a Standard	Three digits 01-99
MNQF level of qualification	L1, L2, L3, L4 etc.
Version Number	V1, V2 etc.
Separator	-
Year of Last Review of standard, qualification	Two digits responding to the year of last review, example 23 for the year 2023
Qualification Code	Refers to Standard code in cover page

1. Endorsement Application for Qualification 01		
2. NATIONAL CERTIFICATE IV IN COMPOSITE MANUFACTURING AND REPAIR		
3. Qualification code: CON-19L4-V1-25		Total Number of Credits: 120
4. Purpose of the qualification The purpose of the National Certificate Level IV in Composite Manufacturing and Repair is to provide individuals with comprehensive knowledge and practical skills required for a successful career in the composite manufacturing and repair. This qualification aims to equip learners with expertise in various aspects of excelling in the composite manufacturing and repair in Construction industry.		
5. Regulations for the qualification		National Certificate IV in Composite Manufacturing and Repair will be awarded to those who are competent in units 1+2+3+4+5+6+7+8+9+10+11+12
6. Schedule of Units		
Unit No.	Unit Title	Code
Common Competencies		
01	Participate in sustainable work practices	CON-09-CM01-V1-24
02	Apply work ethics and manage diversity in the workplace	CON-04-CM04-V2-24
03	Apply engineering science	CON-09-CM03-V1-24
04	Apply engineering mathematics	CON-09-CM04-V1-24
Core Competencies		
05	Ensure workplace safety and compliance	CON-19-CC01-V1-25
06	Develop composite design and engineering drawing	CON-19-CC02-V1-25
07	Understand material science for composites	CON-19-CC03-V1-25
08	Operate composite manufacturing equipment	CON-19-CC04-V1-25
09	Apply composite fabrication/ manufacturing techniques	CON-19-CC05-V1-25
10	Conduct composite repair procedure	CON-19-CC06-V1-25
11	Implement best manufacturing principles	CON-19-CC07-V1-25
12	Perform quality control and testing	CON-19-CC08-V1-25
7. Accreditation requirements		The training provider should have a workshop or similar training facility to provide the trainees the hands-on experience related to this qualification and related hours of industrial experience.
8. Recommended sequencing of units		As appearing under the section 06

Unit Details

Unit No.	Unit Title	Code	Level	No. of credits	Credit hours	Contact hours
01	Participate in sustainable work practices	CON-09-CM01-V1-24	IV	04	40	20
02	Apply work ethics and manage diversity in the workplace	CON-04-CM04-V2-24	IV	15	150	75
03	Apply engineering science	CON-09-CM03-V1-24	IV	10	100	50
04	Apply engineering mathematics	CON-09-CM04-V1-24	IV	10	100	50
06	Ensure workplace safety and compliance	CON-19-CC01-V1-25	IV	05	50	25
07	Develop composite design and engineering drawing	CON-19-CC02-V1-25	IV	08	80	40
08	Understand material science for composites	CON-19-CC03-V1-25	IV	10	100	50
09	Operate composite manufacturing equipment	CON-19-CC04-V1-25	IV	15	150	75
10	Apply composite fabrication/ manufacturing techniques	CON-19-CC05-V1-25	IV	15	150	75
11	Conduct composite repair procedure	CON-19-CC06-V1-25	IV	10	100	50
12	Implement best manufacturing principles	CON-19-CC07-V1-25	IV	08	80	40
13	Perform quality control and testing	CON-19-CC08-V1-25	IV	10	100	50
Total				120	1200	600

Packaging of National Qualifications:

National certificate IV in Composite Manufacturing and Repair will be awarded to those who are competent in units 1+2+3+4+5+6+7+8+9+10+11+12+13

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COMPETENCY BASED ASSESSMENT

The final assessment of the National Competency-Based Programmes conducted by the Maldives National Skills Development Authority (MNSDA) is a competency-based assessment.

The Competency-Based Assessment ensures that the students' performance meets the requirements specified in the National Competency Standards (NCS). This assessment approach is designed to verify that graduates are job-ready and meet established occupational competency requirements within their respective fields.

Eligibility for Final Assessment

To be eligible for the final Competency-Based Assessment, students must fulfil the following conditions:

- achieve a **minimum of 80%** attendance
- deemed competent in each of the units of the programme in the pre-assessment

Competency-Based Assessment Process

Upon submission of the Pre-assessment report by the training provider, MNSDA will check for all the necessary supporting documents and conduct Competency-Based Assessment through a National Assessor registered with MNSDA. It is important to note that any trainer involved in the training process is **not permitted** to conduct the assessment to maintain impartiality and integrity of the process.

The final Competency-Based Assessment conducted by MNSDA includes both:

- **Theory:** Evaluating students' knowledge and understanding of key theoretical aspects of the competency.
- **Practical:** Assessing hands-on skills and application of knowledge in real-world or simulated environments.

Once the assessment is completed, the National Assessor will send the Competency-Based Assessment Report to MNSDA.

Competency Status Requirement

For certification to be granted, the student must be officially declared "**Competent**" in each of the units of the programme by the National Assessor.

Conclusion

Competency-Based Assessment is a critical component in ensuring the quality and credibility of technical and vocational skills-based training. By adhering to the outlined procedure, MNSDA upholds the standards required to certify students who are fully prepared to meet industry demands.