



**NATIONAL COMPETENCY STANDARDS
FOR
DRIVER (HEAVY VEHICLE)
(NC2)**

**Department of Occupational Standards
Ministry of Labour and Human Resources
Thimphu, Bhutan
(April 2021)**



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FOREWORD

The Department of Occupational Standards of the Ministry of Labour and Human Resources is pleased to present the National Competency Standards (NCS) for Driver (Heavy Vehicle). The standards represent the fruits of hard work and invaluable experiences gained by the department since its establishment in the latter half of 2003. The main aim of developing NCS is to set up a well-defined nationally recognized Vocational Qualification System that will help set a benchmark for the Technical Vocational Education and Training (TVET) System in our country aligned to international best practices.

NCS is one of the base pillars in the Bhutan Vocational Qualifications Framework (BVQF) and is the first step in its implementation. The NCS are developed and revised to ensure that employees or vocational graduates possess and acquire the desired competencies required by industries and employers. In order to ensure this close match in supply and demand of competencies, NCS have been developed and revised in close consultation and partnership with industry experts and validated by the Technical Advisory Committees of the concerned economic sectors.

A vocational education and training system based on NCS shall ensure that delivered training is of a high quality and relevant to the needs of the labour market. As a result, future TVET graduates will be better equipped to meet the need and expectations of industries and employers. This positive impact on the employability of TVET graduates will enhance the reputation of vocational education and training and make it attractive to school leavers.

I gratefully acknowledge collaboration and the valuable contributions made by experts from industries during the consultation and validation processes of the standards. I look forward for continued engagement and participation of the industry and employers in the development of a quality assured demand driven TVET system and to build competent and productive national workforce that will contribute to the continued socio-economic progress of our country.

Director
Department of Occupational Standards
Ministry of Labour and Human Resource

Acknowledgement

Validation date : 28/04/2021

Date of Review : 28/04/2023 (Max. 3 years)

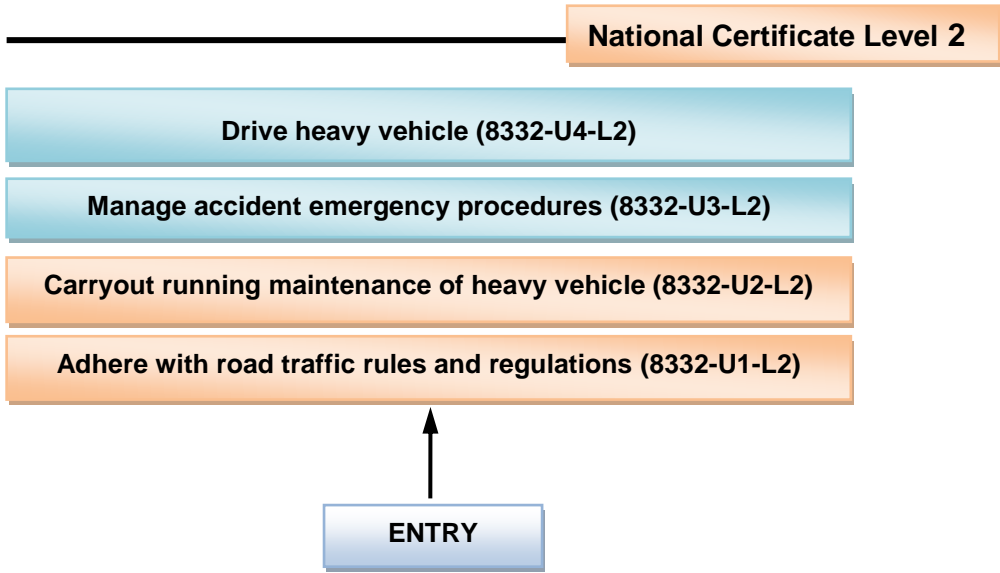
Technical Advisory Committee (TAC) members for the Transportation Sector involved in the validation of NCS:

1. Deo Raj Baraily (**Chairperson**), Freelance Driver, Wangduephodrang
2. Karma Loday (**Member Secretary**), SQD, DOS, MoLHR
3. Deo Bahadur Rai, Sunrise Driving Institute, Wangduephodrang
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Development Group (Facilitator):

1. Karma Loday, Specialist, DOS, MoLHR
2. Chogay Lhendup, Senior Program Officer, DOS, MoLHR

PACKAGING OF QUALIFICATIONS



OVERVIEW OF NATIONAL COMPETENCY STANDARDS

UNIT TITLE	ELEMENTS OF COMPETENCE
Adhere with road traffic rules and regulations	<ol style="list-style-type: none"><li>1. Observe road traffic signs and road markings<li>2. Follow Traffic rules and Regulations<li>3. Cooperate with law enforcers
Carryout running maintenance of heavy vehicle	<ol style="list-style-type: none"><li>1. Perform minor routine maintenance<li>2. Perform periodic maintenance
Manage Accident emergency procedures	<ol style="list-style-type: none"><li>1. Respond to emergencies<li>2. Arrange follow up support and assistance
Drive Heavy Vehicle	<ol style="list-style-type: none"><li>1. Drive heavy vehicle<li>2. Transport load<li>3. Tow and towed the vehicle

UNIT TITLE: Adhere with road Traffic rules and Regulations

DESCRIPTOR : This unit covers the competencies required to observe and follow traffic rules and regulations while driving a vehicle.

CODE : 8332-U1-L2

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1 Observe road traffic signs and road markings	1.1 Read and interpret traffic signs and signals as per the standard procedures 1.2 Follow road traffic signs and signals as per the road safety rules and regulations 1.3 Follow road marking following standard procedures
2 Follow road traffic rules and regulations	2.1 Follow road safety rules and regulations as per the standard procedures 2.2 Maintain vehicle documents as per the rules and regulations.
3 Cooperate with law enforcers	3.1 Comply with traffic authority instructions as per the rules and regulations 3.2 Accept Traffic Infringement Notice (TIN) and take necessary action as per the rules and regulations 3.3 Comply with other law enforcers as per the applicable rules and regulations

RANGE STATEMENT

Road Traffic signs and signals include but not limited to:

- | | |
|---|--|
| <ul style="list-style-type: none">• Mandatory signs• Cautionary signs• Informatory signs• Traffic lights | <ul style="list-style-type: none">• Road marking• Mile post• Hazardous signs |
|---|--|

Road Traffic rules and regulation may include but not limited to:

- | | |
|--|---|
| <ul style="list-style-type: none">• Parking• Wearing of seat belts• Using of cell phone while driving• Excessive noises• Dazzling light• Tinted glasses | <ul style="list-style-type: none">• Avoiding driving under the influence of substance abuse or alcohol• Fatigue driving• Over loading• Over speeding• Traffic signs• Unnecessary Honking |
|--|---|

Document may include but not limited to:

- | | |
|---|---|
| <ul style="list-style-type: none">• Driving License• Registration certificate• Road worthiness certificate• Emission Certificate | <ul style="list-style-type: none">• Insurance certificate• Route permit• Movement order• Vehicle logbook |
|---|---|

Law enforcers may include:

- | | |
|--|--|
| <ul style="list-style-type: none">• RSTA officials• BAFRA• Forest officials• Revenue and Custom Officials | <ul style="list-style-type: none">• Traffic police• Police• Immigration officials• BNCA |
|--|--|

Performance of this unit is expected to be carried out to the following standards	
<ul style="list-style-type: none"> Occupational Health and Safety regulations 	<ul style="list-style-type: none"> Road Safety Rules and Regulations
Critical Aspects:	
<ul style="list-style-type: none"> Follow occupational health and safety procedures Concern about personal safety and safety about others Follow road markings, road traffic signs and signals Follow road safety and transport regulations Cooperate with law enforcers 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> Ethics and Integrity Road Traffic signs and signals Road markings Road safety and transport regulations Defensive driving techniques Positive work values Different law Enforcers Traffic violations and penalties 	<ul style="list-style-type: none"> Communication skills Interpersonal relationship Team work Time management

UNIT TITLE : **Carryout running maintenance of heavy vehicle**

DESCRIPTOR : This unit covers the competencies required to carry out running maintenance of heavy vehicle following safety procedures at all times.

CODE : **8332-U2-L2**

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Perform minor routine maintenance	1.1 Select and use tools and equipment as per the job requirement. 1.1 Check the operation of lighting system and rectify following standard procedures 1.2 Check the conditions of tyres and rectify following standard procedures 1.3 Check the functioning of fuses and rectify following standard procedures
2. Perform periodic maintenance	2.1 Select and use tools and equipment as per the job requirement. 2.2 Conduct periodic maintenance as per owner's manual following standard procedures 2.3 Maintain log book and vehicle history records as per the standard procedures

RANGE STATEMENT	
Tools and equipment may include:	
<ul style="list-style-type: none">• Pressure gauge• Hand tool set• Grease gun	<ul style="list-style-type: none">• Air compressor• Jack and handle• Oil dispenser

<ul style="list-style-type: none"> • SST (Special Service Tools) 	<ul style="list-style-type: none"> • Wheel Wrench
Minor routine checks may include but not limited to:	
<ul style="list-style-type: none"> • Blown bulbs • Broken/loose fan belt • Blown fuse • Broken mirrors • Cleaning of battery/poles terminals 	<ul style="list-style-type: none"> • Rear tail-light lens • Punctured Tires • Broken hose pipe • Spare tires
Periodic maintenance may include but not limited to:	
<ul style="list-style-type: none"> • Top up distilled water in the battery • Maintain tire pressure • Top up Coolant • Top up engine oil • Check transmission fluid level and leakages • Service air cleaner 	<ul style="list-style-type: none"> • Greasing • Top up brake fluid • Check and adjust Fan belt tension • Bleed fuel system
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Identify minor vehicle faults and make adjustment/repairs as per job requirement following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulation • Pollution control procedures • Minor maintenance procedures • First Aid • Fundamentals of basic vehicle system such as 	<ul style="list-style-type: none"> • Communication skills • Team work • Planning skills • Time Management • Interpersonal relationship • Conflict management

electrical system, fuel system, cooling system, steering system, tires, brake systems, suspension system, transmission system, exhaust system and lubrication system

- Lubricants and oils
- 5 S (Sort, Systematize, Sweep, Standardize, Shine)
- Waste management

UNIT TITLE : **Manage accident emergency procedures**

DESCRIPTOR : This Unit covers the competencies required to respond to emergency incidents, follow-up support and assistance and communicate to concerned agencies during emergency.

CODE : **8332-U3-L2**

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Respond to emergencies	1.1 Identify and assess emergency as per standard procedures 1.2 Prioritize and provide actions based on the criticality of the emergency situation 1.3 Fulfill responsibilities in accordance with emergency procedures and/or regulatory requirements
2. Arrange follow-up support and assistance	2.1 Arrange medical assistance and support in accordance with workplace procedures 2.2 Apply first aid as per the job requirement following standard procedures 2.3 Identify and provide passenger needs based on emergency situation

RANGE STATEMENT	
Emergency may include but not limited to:	
<ul style="list-style-type: none">• Vehicle collision• Crime incidents (hold-up kidnapping and related crimes)• Road and weather conditions	<ul style="list-style-type: none">• Vehicle break down• Hit and run• Fire• Veering off

Actions may include but not limited to:	
<ul style="list-style-type: none"> • Transporting of injured passenger to the nearest hospitals • Inform relevant authorities 	<ul style="list-style-type: none"> • Providing assistance in controlling the accident site both prior to and following arrival of emergency services • Providing first aid
Responsibilities may include but not limited to:	
<ul style="list-style-type: none"> • Reporting to concern agencies • Informing victim's relatives 	<ul style="list-style-type: none"> • Respond to investigation and authority inquiry
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Respond to emergency situations • Arrange follow-up support and assistance • Apply first aid 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS Rules and regulations • Emergency situations • Procedure to be followed in the event of emergency • Problem that may arise during emergency situations • First Aid • Emergency numbers 	<ul style="list-style-type: none"> • Communication skills • Team work • Time management • Interpersonal relationship • Planning skills

UNIT TITLE : **Drive Heavy Vehicle**

DESCRIPTOR : This unit covers the competencies required to drive heavy motor vehicle under different environment conditions and following traffic rules and regulations.

CODE : **8332-U4-L2**

ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Drive heavy vehicle	1.1 Conduct pre-driving checks following standard procedures 1.2 Perform cockpit drill as per the standard procedures 1.3 Move off, steer and stops HMV as per the standard procedures. 1.4 Reverse HMV as per the standard procedures. 1.5 Negotiate intersections and turns as per the standard procedures. 1.6 Overtake and pass the vehicle as per the standard procedures. 1.7 Park the vehicle as per the standard procedures. 1.8 Drive HMV on the highway, town and hills as

	<p>per traffic rules following standard procedures.</p> <p>1.9 Drive HMV at night and in poor light condition as per the standard procedure.</p> <p>1.10 Drive a HMV on difficult roads as per the standard procedures</p>
2. Transport load	<p>2.1 Perform loading of goods following standard procedures</p> <p>2.2 Drive loaded vehicle depending upon types and weight of loads following standard procedures.</p> <p>2.3 Perform Power Take Off(PTO) for unloading as per job requirement following standard procedures</p> <p>2.4 Unload goods from the vehicle following standard procedures</p> <p>2.5 Maintain consignment documents following standard procedures</p>
3. Tow and towed the vehicle	<p>3.1 Tow the vehicle as per the standard procedures.</p> <p>3.2 Tow by another vehicle as per the standard procedures.</p>

RANGE STATEMENT	
Consignment documents may include but not limited to:	
<ul style="list-style-type: none"> • Bills 	<ul style="list-style-type: none"> • Challan
Reverse may include but not limited to:	
<ul style="list-style-type: none"> • Straight • Zig Zag • Narrow 	<ul style="list-style-type: none"> • Uphill • Downhill
Parking may include but not limited to:	
<ul style="list-style-type: none"> • Angle • Parallel 	<ul style="list-style-type: none"> • Straight

Difficult roads may include but not limited to:	
<ul style="list-style-type: none"> • Snowy road • Icy road • Muddy road • Off road (rough road) • Slope • Narrow 	<ul style="list-style-type: none"> • River crossing • Sandy • Foggy weather • Rainy • Terrain
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Drive heavy vehicle following rules and regulations • Use cautionary signs while driving HMV with oversize/hazardous loads following standard practices 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Search technique • Signaling, cornering and gear changing • System Of Vehicle Control (SOVC) • Driving ethics • Defensive driving techniques • Courtesy driving • Grooming • Load capacity 	<ul style="list-style-type: none"> • Communication skills • Team work • Time management • Interpersonal relationship

<ul style="list-style-type: none">• Eco-driving• GPS tracking	
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ANNEXURE

A. National Competency Standards (NCS)

The National Competency Standards specify the skill, knowledge and attitudes applied to a particular occupation. Standards also specify the standards or criteria of performance of a competent worker and the various contexts in which work may take place. Standards provide explicit advice to assessors regarding the skill and knowledge to be demonstrated by candidates seeking formal recognition either following training or through work experience.

Purpose of National Competency Standards

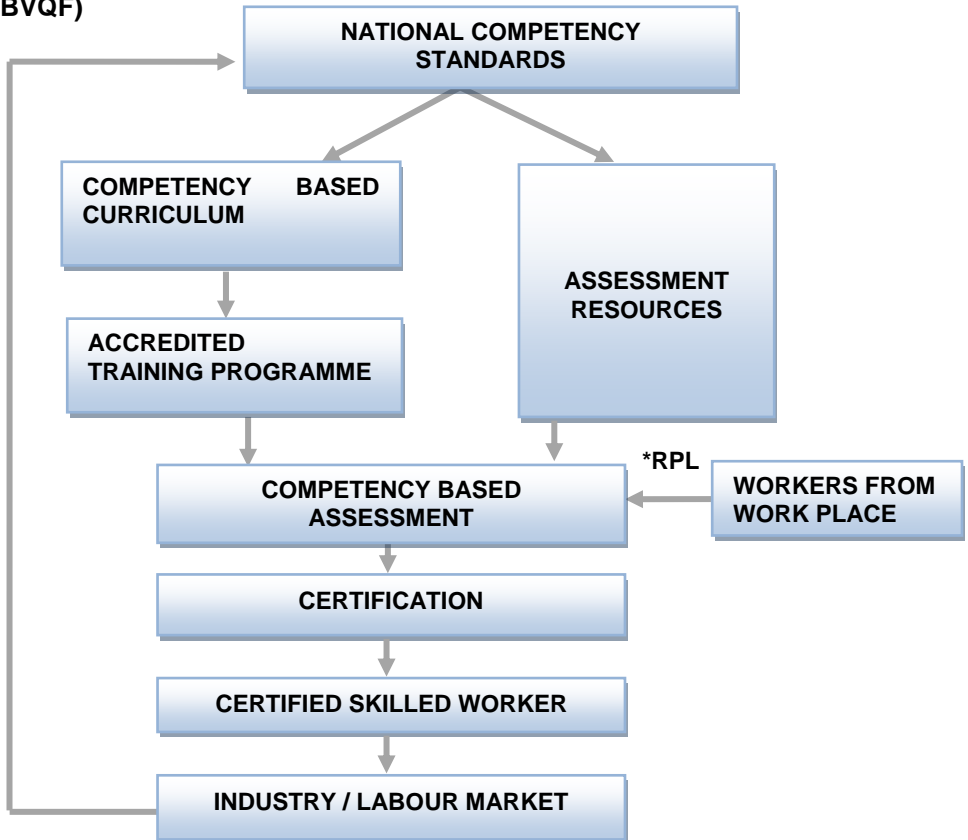
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the competencies to be included in curriculum.
- Providing specifications to assessment resource developers about the competencies within an occupation to be demonstrated by candidates.
- Providing advice to industry/employers about job functions, which in turn can be used for the development of job descriptions, performance appraisal systems and work flow analysis.

B. Bhutan Vocational Qualifications Framework (BVQF)

Bhutan Vocational Qualifications Framework is an agreed system of Assessing, Certifying and Monitoring nationally recognized qualifications for all learning in the TVET sector against national competency standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

Components of the Bhutan Vocational Qualifications Framework (BVQF)



* RPL = Recognition of Prior Learning

BVQF Levels

The Bhutan Vocational Qualifications Framework has three levels classified based on the competency of the skilled workers. The three levels are:

- National Certificate Level 3 (NC III)
- National Certificate Level 2 (NC II)
- National Certificate Level 1 (NC I)

BVQF Level Descriptors

The qualification levels are decided based on level descriptors. The detail of the qualification level descriptor is as follows:

National Certificate Level 1 (Semi Skilled)

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none">• Are narrow in range.• Are established and familiar.• Offer a clear choice of routine responses.• Involve some prioritizing of tasks from known solutions.	<ul style="list-style-type: none">• Basic operational knowledge and skill.• Utilization of basic available information.• Known solutions to familiar problems.• Little generation of new ideas.	<ul style="list-style-type: none">• In directed activity.• Under general supervision and quality control.• With some responsibility for quantity and quality.• With no responsibility for guiding others.

National Certificate Level 2 (Craftsman)

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> • Require a range of well-developed skills. • Offer a significant choice of procedures requiring prioritization. • Are employed within a range of familiar context. 	<ul style="list-style-type: none"> • Some relevant theoretical knowledge. • Interpretation of available information. • Discretion and judgments. • A range of known responses to familiar problems 	<ul style="list-style-type: none"> • In directed activity with some autonomy. • Under general supervision and quality checking. • With significant responsibility for the quantity and quality of output. • With some possible responsibility for the output of others.

National Certificate Level 3 (Master craftsman)

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> • Requires a wide range of technical or scholastic skills. • Offer a considerable choice of procedures requiring prioritization to achieve optimum outcomes. • Are employed in a variety of familiar and unfamiliar contexts. 	<ul style="list-style-type: none"> • A broad knowledge base which incorporates some theoretical concepts. • Analytical interpretation of information. • Informed judgment. • A range of sometimes innovative responses to concrete but often unfamiliar problems. 	<ul style="list-style-type: none"> • In self-directed activity. • Under broad guidance and evaluation. • With complete responsibility for quantity and quality of output. • With possible responsibility for the output of others.

CODING USED FOR NATIONAL COMPETENCY STANDARDS

The coding and classification system developed in Bhutan is logical, easy to use, and also aligned with international best practises. The Bhutanese coding and classification system is based on the International Standard Classification of Occupations, 2008 (ISCO-08) developed by the International Labour Organisation (ILO).

The coding of the National Competency Standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

Coding the individual National Competency Standards

Coding the individual National Competency standard has a multiple purpose:

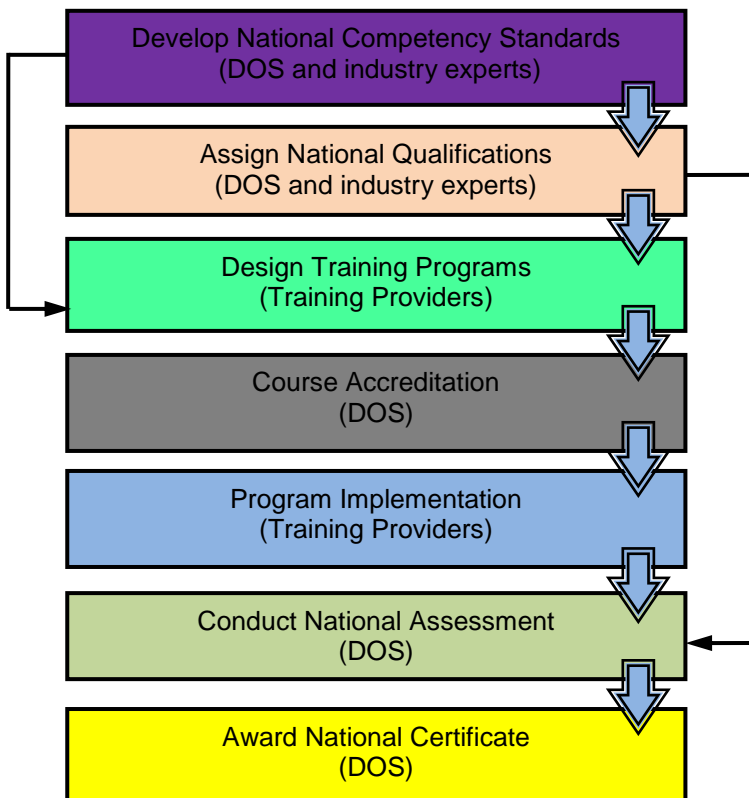
- to identify the level,
- to identify to which module the standard belongs,
- to identify in which order the standard is clustered within that module.

A job can include a number of competencies described in the national competency standards.

However, in order to follow a logical order, only national competency standards related to each other and following a logical sequence in terms of training delivery, from the simple to the complex, are clustered into a module. Some standards are so complex that they need to stand alone.

To illustrate with an example, the ILO assigns the code 8332 to the occupation of driving and related trades. Therefore, in the Bhutan's context, the occupation driver has been assigned the code 8332 in the National Coding System. The first unit is assigned the code U1. Levels are assigned the code L and follow a logical progression from the National Certificate Level 1 (NC I) to the National Certificate Level 3 (NC III). Therefore the National Certificate Level 1 is assigned the code L1.

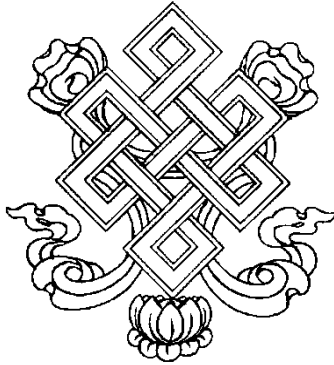
Implementation and operational procedures for National Competency Standards (NCS)



Key:

MoLHR – Ministry of Labour and Human Resources

DOS – Department of Occupational Standards



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