



**NATIONAL COMPETENCY STANDARDS  
FOR  
PANEL BEATER  
(NC2 & NC3)**

**Department of Occupational Standards  
Ministry of Labour and Human Resources  
Thimphu Bhutan  
(Revised 2020)**



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## **FOREWORD**

The Department of Occupational Standards of the Ministry of Labour and Human Resources is pleased to present the revised version of National Competency Standards (NCSs) for Panel Beater. 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 Qualifications 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

### NATIONAL COMPETENCY STANDARDS FOR PANEL BEATER

**Validation date** : 16/11/2020

**Date of Review** : 16/11/2023 (Max. 3 years)

#### **Technical Advisory Committee (TAC) members for the Automobile service Sector involved in the validation of NCS:**

- 1) Tandin (**Chairperson**) TTI-Samthang
- 2) Karma Loday (**Member Secretary**), DOS, MoLHR
- 3) Rupesh Mongar, Expert, AMW Automobile Workshop
- 4) Tshering Norbu, TTI-Thimphu
- 5) Kirtiman Gurung, TTI-Thimphu
- 6) Sangay Dorji, Kuenga Automobile workshop
- 7) Tshering Tobgay, Kitab Automobile workshop, Thimphu
- 8) Rinchen Wangdi, Noryang Company, Paro
- 9) Kuenzang Wangchuk, Bhutan Motor works, Thimphu
- 10) Tandin Wangchuk, Lungten Automobile workshop, Thimphu
- 11) Ugyen Jimba, U. J workshop, Thimphu
- 12) Yeshe Choden, 3 Brother workshop, Thimphu
- 13) Damcho Thinley, Department of Technical Education, MoLHR.

#### **Subject experts involved during the consultative workshop for the development of NCS for Panel Beater:**

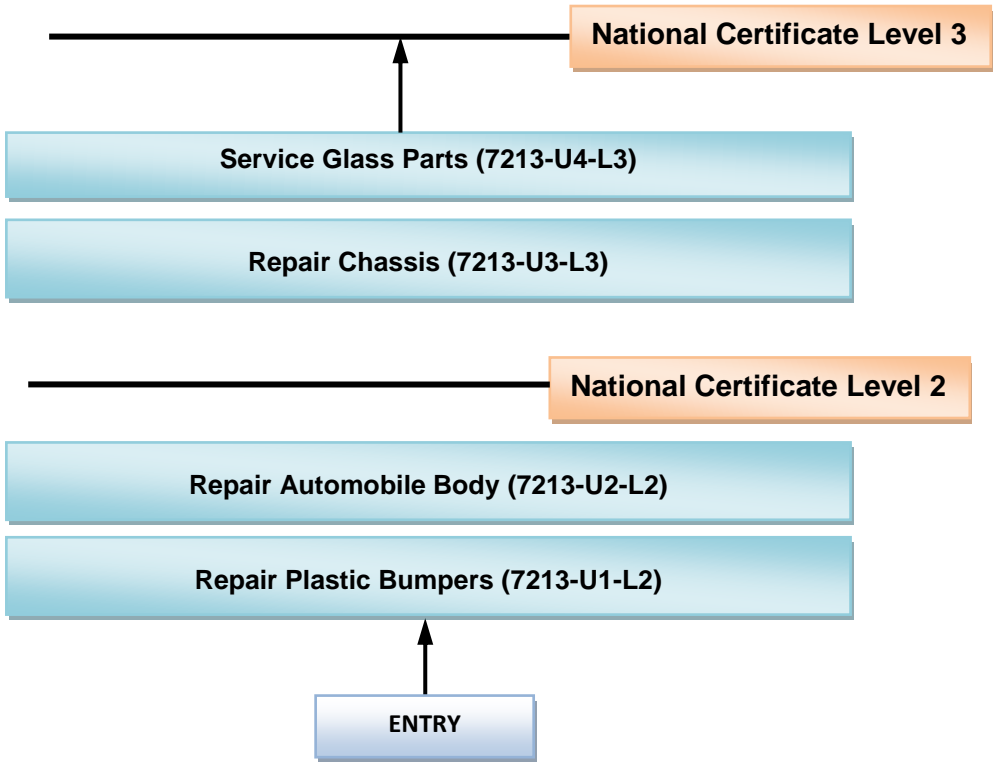
1. Bibik Sharma, Panel Beater, STCBL, Phuntsholing.
2. Mani Gopal Das, Panel Beater, Zimdra Automobiles, Phuntsholing.
3. Badur Gurung, Noryang Engineering Workshop, Phuntsholing.
4. Parimol Das, Nagtsho Engineering Workshop, Phuntsholing.
5. Nimai Pal, Panel Beater, Rabten Engineering Workshop, Phuntsholing.

6. NC Mandal, Panel Beater, Wangdi Engineering Workshop, Phuntsholing.
7. Sunil Barman, Panel Beater, Tashi Engineering workshop, Phuntsholing.

**Facilitators:**

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

## Packaging of Qualifications for Panel Beater





## Overview of the National Competency Standards

UNIT TITLE	ELEMENTS OF COMPETENCE
1. Repair plastic bumpers	1. Remove the parts 2. Repair/replace the plastic parts
2. Repair automobile body	1. Remove the parts 2. Perform denting
3. Repair Chassis	1. Remove the parts 2. Repair the chassis
4. Service glass parts	1. Remove the part 2. Fit the glass parts

<b>UNIT TITLE:</b>	<b>Repair plastic bumpers</b>
<b>DESCRIPTOR :</b>	This unit covers the competencies required to remove the parts and repairing /replacing the plastic parts following standard procedures.
<b>CODE :</b>	<b>7213- U1- L2</b>
<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Remove the plastic parts	<p>1.1 Select and use required <b>tools and equipment</b> following standard procedures.</p> <p>1.2 Remove bumper as per the job requirement following standard procedures.</p> <p>1.3 Store the removed parts in safe place as per the job requirement following standard procedures.</p>
2. Repair/replace the plastic parts	<p>2.1 Select and use tools and equipment as per the job requirement.</p> <p>2.2 Repair plastic parts as per the job requirement following standard procedures.</p> <p>2.3 Repair brackets to their original shape in accordance with manufacturer's specification following standard procedures.</p> <p>2.4 Replace plastic parts as per the job requirement following standard procedures.</p> <p>2.5 Align the plastic bumper as per the manufacturer's specification following standard procedures.</p>

## RANGE STATEMENT

Work connected to this unit may take place in a workshop. This work may be performed individually.

### Tools and equipment may include but not limited to:

- |   |   |
|---|---|
| <ul style="list-style-type: none"><li>• Hand tool set</li><li>• Allen key set</li></ul> | <ul style="list-style-type: none"><li>• Gas welding set</li></ul> |
|---|---|

### Performance of this unit is expected to be carried out to the following standards

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Occupational Health and Safety regulations</li></ul> | <ul style="list-style-type: none"><li>• Manufacturer's specifications</li></ul> |
|--|---|

### Critical Aspects:

- Follow occupational health and safety procedures.
- Align the plastic bumper as per the manufacturer's specification following standard procedures.
- Repair brackets to their original shape in accordance with manufacturer's specification following standard procedures.

<b>UNDERPINNING KNOWLEDGE</b>	<b>UNDERPINNING SKILLS</b>
<ul style="list-style-type: none"><li>• Ethics and Integrity</li><li>• Occupational Health and safety regulations</li><li>• Basic first aid</li><li>• Estimation and costing</li><li>• Alignment</li><li>• Relevant environment rules and regulations</li></ul>	<ul style="list-style-type: none"><li>• Team work</li><li>• Communication skills</li><li>• Planning skills</li><li>• Problem solving</li><li>• Negotiation</li><li>• Time management</li></ul>

<b>UNIT TITLE:</b>	<b>Repair automobile body</b>
<b>DESCRIPTOR :</b>	This unit covers the competencies required to remove the parts and performing denting of automobile body as per the standard procedures.
<b>CODE :</b>	<b>7213- U2- L2</b>
<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Remove the body parts	<p>1.1 Select and use required <b>tools and equipment</b> following standard procedures.</p> <p>1.2 Select and use <b>Personal Protective Equipment (PPE)</b> as per the job requirement following standard procedures.</p> <p>1.3 Remove the <b>parts</b> as per the job requirement following standard procedures</p> <p>1.4 Store the removed parts in safe place as per the job requirement following standard procedures.</p>
2. Perform denting	<p>2.1 Select and use required <b>tools and equipment</b> as per the standard procedures.</p> <p>2.2 Select and use sealant as per the job requirement following standard procedures.</p> <p>2.3 Perform denting on damaged parts to regain its original shape as per the standard procedures.</p> <p>2.4 Cut and weld the sheet metal as per the job requirement following standard procedures.</p> <p>2.5 Perform alignment of body parts as per the job</p>

	<p>requirement following standard procedures.</p> <p>2.6 Fit the automobile body parts as per the job requirement following standard procedures.</p>
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<b>RANGE STATEMENT</b>	
<p>Work connected to this unit may take place in a workshop. This work may be performed individually.</p>	
<p><b>Tools and equipment may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Pliers</li> <li>• Screw driver</li> </ul>	<ul style="list-style-type: none"> <li>• Wrench</li> <li>• Socket</li> </ul>
<p><b>Personal Protective Equipment (PPE) may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Mask</li> <li>• Hand gloves</li> <li>• Safety shoes</li> </ul>	<ul style="list-style-type: none"> <li>• Working dress</li> <li>• Goggles</li> <li>• Cap</li> </ul>
<p><b>Body Parts may include but not limited to:</b></p>	
<ul style="list-style-type: none"> <li>• Rubber part</li> <li>• Door trim</li> </ul>	<ul style="list-style-type: none"> <li>• Beads</li> <li>• Rear view mirror</li> </ul>
<p><b>Tools and Equipment for denting may include but not limited to:</b></p>	

<ul style="list-style-type: none"> <li>• Gas welding set</li> <li>• Arc welding machine set</li> <li>• Hammers</li> <li>• Puller(electrical/vacuum)</li> </ul>	<ul style="list-style-type: none"> <li>• Denting File</li> <li>• Dolly set</li> <li>• Grinder</li> <li>• Lever</li> </ul>
<p><b>Performance of this unit is expected to be carried out to the following standards</b></p>	
<ul style="list-style-type: none"> <li>• Occupational Health and Safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's specifications</li> </ul>
<p><b>Critical Aspects:</b></p>	
<ul style="list-style-type: none"> <li>• Follow occupational health and safety procedures.</li> <li>• Perform alignment of body parts as per the job requirement following standard procedures.</li> <li>• Perform denting on damaged parts to regain its original shape as per the standard procedures.</li> </ul>	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> <li>• Ethics and Integrity</li> <li>• Occupational Health and safety regulations</li> <li>• Basic First Aid</li> <li>• Estimation and costing</li> <li>• Types of denting tools and equipment</li> <li>• Fire safety</li> <li>• Sheet metal drawings</li> <li>• Basic sheet metal works</li> </ul>	<ul style="list-style-type: none"> <li>• Team work</li> <li>• Communication skills</li> <li>• Problem solving</li> <li>• Negotiation</li> <li>• Time management</li> </ul>



<b>UNIT TITLE:</b>	<b>Repair Chassis</b>
<b>DESCRIPTOR :</b>	This unit covers the competencies required to remove the parts and repairing the chassis following standard procedures.
<b>CODE :</b>	<b>7213- U3- L3</b>
<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Remove the body parts from chassis	<p>1.1 Select and use required <b>tools and equipment</b> following standard procedures.</p> <p>1.2 Identify the chassis defects as per the job requirement following standard procedures.</p> <p>1.3 Remove the body as per the job requirement following standard procedures.</p> <p>1.4 Store the body parts in safe place as per the job requirement.</p>
2. Repair the chassis	<p>2.1 Align chassis frame using <b>tools and equipment</b> (Jack, chain, measuring tape, hammer, screw puller) as per the manufacturer's specification following standard procedures.</p> <p>2.2 Weld components to complete repair as per the job requirement following standard procedures.</p> <p>2.3 Check alignment as per the manufacturer's specification following standard procedures.</p>

	2.4 Align and refit the chassis and body parts according to manufacturer's specification following standard procedures.
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<b>RANGE STATEMENT</b>	
Work connected to this unit may take place in a workshop. This work may be performed individually.	
<b>Tools and equipment may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Hand tool set</li> <li>• Gas welding set</li> <li>• Arc welding set</li> <li>• Collision repair kits</li> </ul>	<ul style="list-style-type: none"> <li>• Chassis alignment equipment</li> <li>• Measuring tape</li> <li>• Pipe jack</li> </ul>
<b>Performance of this unit is expected to be carried out to the following standards</b>	
<ul style="list-style-type: none"> <li>• Occupational Health and Safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's specifications</li> </ul>
<b>Critical Aspects:</b>	
<ul style="list-style-type: none"> <li>• Follow occupational health and safety procedures.</li> <li>• Check alignment as per the manufacturer's specification following standard procedures.</li> </ul>	

<b>UNDERPINNING KNOWLEDGE</b>	<b>UNDERPINNING SKILLS</b>
<ul style="list-style-type: none"><li>• Ethics and integrity</li><li>• Occupational Health and safety regulations</li><li>• Basic first aid</li><li>• Estimation and costing</li><li>• Chassis alignment</li></ul>	<ul style="list-style-type: none"><li>• Team work</li><li>• Communication skills</li><li>• Problem solving</li><li>• Negotiation</li><li>• Time management</li></ul>

<b>UNIT TITLE:</b>	<b>Service glass components</b>
<b>DESCRIPTOR :</b>	This unit covers the competencies required to remove the glass parts and fitting the glass parts following standard procedures.
<b>CODE :</b>	<b>7213- U4- L3</b>
<b>ELEMENTS OF COMPETENCE</b>	<b>PERFORMANCE CRITERIA</b>
1. Remove the glass components	<p>1.1 Select and use required <b><i>tools and equipment</i></b> following standard procedures.</p> <p>1.2 Remove wind shield following standard procedures</p> <p>1.3 Remove door glasses following standard procedures</p> <p>1.4 Store the removed glasses in safe place following standard procedure.</p>
2. Fit the glass part	<p>2.1 Install the wind shield using adhesive or molding as per the job requirement following standard procedure</p> <p>2.2 Clean the glass and glass frame using thinner following standard procedures</p> <p>2.3 Use wind shield adhesives following standard procedures</p> <p>2.4 Install the door glasses as per the standard procedures.</p> <p>2.5 Check alignment and leakage as per the job</p>

	requirement following standard procedures
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<b>RANGE STATEMENT</b>	
Work connected to this unit may take place in a workshop. This work may be performed individually.	
<b>Tools and equipment may include but not limited to:</b>	
<ul style="list-style-type: none"> <li>• Adhesive cutting Cable/machine</li> <li>• Screw driver set</li> <li>• Belt</li> </ul>	<ul style="list-style-type: none"> <li>• Pliers</li> <li>• Wind shield adhesive gun</li> <li>• Adhesive removing tools</li> </ul>
<b>Performance of this unit is expected to be carried out to the following standards</b>	
<ul style="list-style-type: none"> <li>• Occupational Health and Safety regulations</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturer's specifications</li> </ul>
<b>Critical Aspects:</b>	
<ul style="list-style-type: none"> <li>• Follow occupational health and safety procedures.</li> <li>• Check for alignment and leakage as per the job requirement following standard procedures</li> <li>• Apply wind shield adhesive and glass molding following standard procedures</li> </ul>	

<b>UNDERPINNING KNOWLEDGE</b>	<b>UNDERPINNING SKILLS</b>
<ul style="list-style-type: none"><li>• Ethics and Integrity</li><li>• Occupational Health and safety regulations</li><li>• Basic first aid</li><li>• Estimation and costing</li><li>• Types of wind shield</li></ul>	<ul style="list-style-type: none"><li>• Team work</li><li>• Communication skills</li><li>• Problem solving</li><li>• Negotiation</li><li>• Time management</li></ul>

## **Annexure**

### **1.1 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.

### **1.2 Purpose of National Competency Standards**

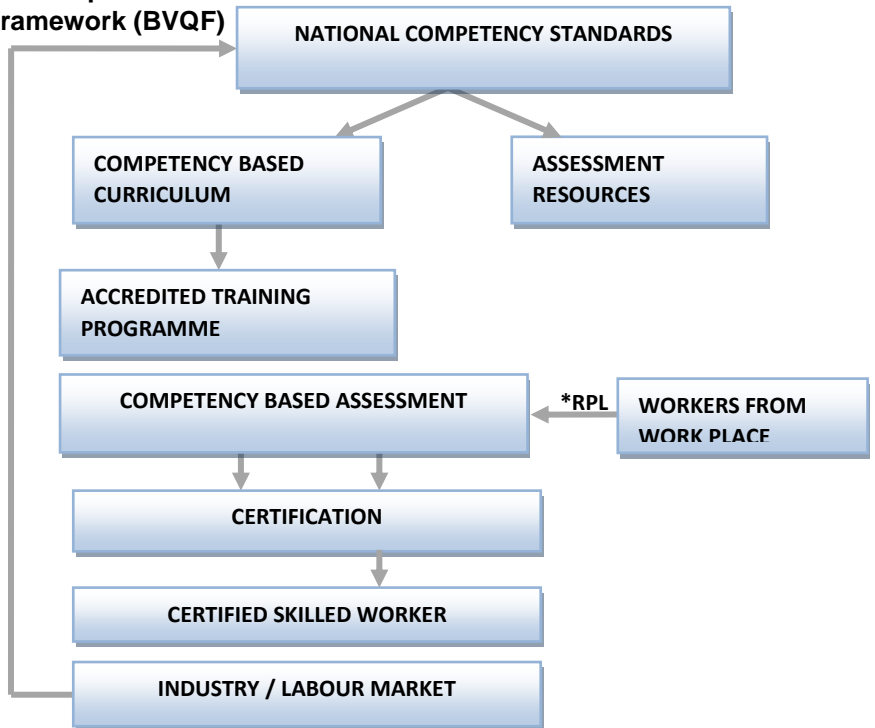
National Competency Standards serve a number of purposes including:

- 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.

### 1.3 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.

### 1.4 Components of the Bhutan Vocational Qualifications Framework (BVQF)



\* RPL = Recognition of Prior Learning



### 1.5 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

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

## National Certificate Level 2

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

## National Certificate Level 3

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> <li>• Requires a wide range of technical or scholastic skills.</li> <li>• Offer a considerable choice of</li> </ul>	<ul style="list-style-type: none"> <li>• A broad knowledge base which incorporates some theoretical concepts.</li> <li>• Analytical</li> </ul>	<ul style="list-style-type: none"> <li>• In self-directed activity.</li> <li>• Under broad guidance and evaluation.</li> <li>• With complete responsibility for quantity and</li> </ul>

<p>procedures requiring prioritization to achieve optimum outcomes.</p> <ul style="list-style-type: none"> <li>• Are employed in a variety of familiar and unfamiliar contexts.</li> </ul>	<p>interpretation of information.</p> <ul style="list-style-type: none"> <li>• Informed judgment.</li> <li>• A range of sometimes innovative responses to concrete but often unfamiliar problems.</li> </ul>	<p>quality of output.</p> <ul style="list-style-type: none"> <li>• With possible responsibility for the output of others.</li> </ul>
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## 1.6 PURPOSE

This qualification is designed for people interested in a career as a Panel Beater at the Certificate level. It comprises of four units that cover the essential knowledge and skills required for people working as a Panel Beater.

The pre-requisite for the candidates aspiring to pursue certificate level in panel beater should have minimum educational requirement.

It provides industry specific skills and demands a level of performance that will enable new recruits to the industry to be immediately productive.

## **1.7 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 skills 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.

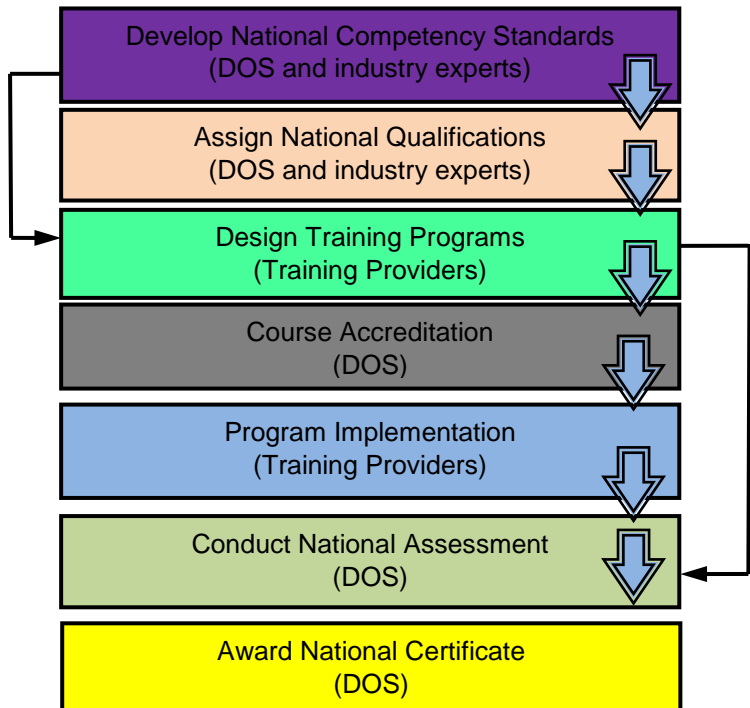
A job can include a number of competencies described in the national competency standards.

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 7213 to the occupation of Panel Beater and related trades. Therefore, in the Bhutan's context, the occupation Panel beater has been assigned the code 7213 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

## **1.8 ASSESSMENT GUIDE**

### **Form of assessments**

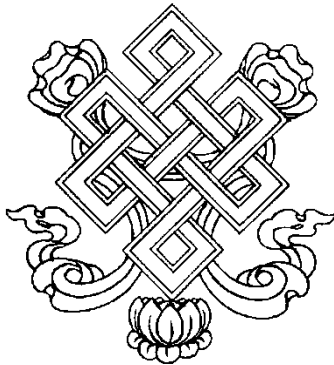
- Continuous assessment together with collected evidence of performance will be used.
- Evidence of the performance shall be based on practical demonstration.
- Knowledge can be assessed through diagrams, in writing or orally (viva-voce).

### **Assessment context**

- Competency may be assessed in the actual work place or in a simulated workplace setting.

### **Assessment condition**

- The candidate shall have access to all required tools, equipments, materials and documents.
- Candidate must complete the assessment in industry accepted time frame.



**Department of Occupational Standards  
Ministry of Labour & Human Resources  
Thongsel Lam, Lower Motithang  
P.O. Box 1036, Thimphu.  
Tel: 02-331611, Fax: 02-326873  
[www.molhr.gov.bt](http://www.molhr.gov.bt)**