



**NATIONAL COMPETENCY STANDARDS
FOR
BAKER
(NC2 & NC3)**

**Department of Occupational Standards
Ministry of Labour and Human Resources
Thimphu Bhutan
(March, 2019)**



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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 Baker. 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

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- 2) Karma Loday, (Member Secretary), CPO, DOS, MoLHR, Thimphu
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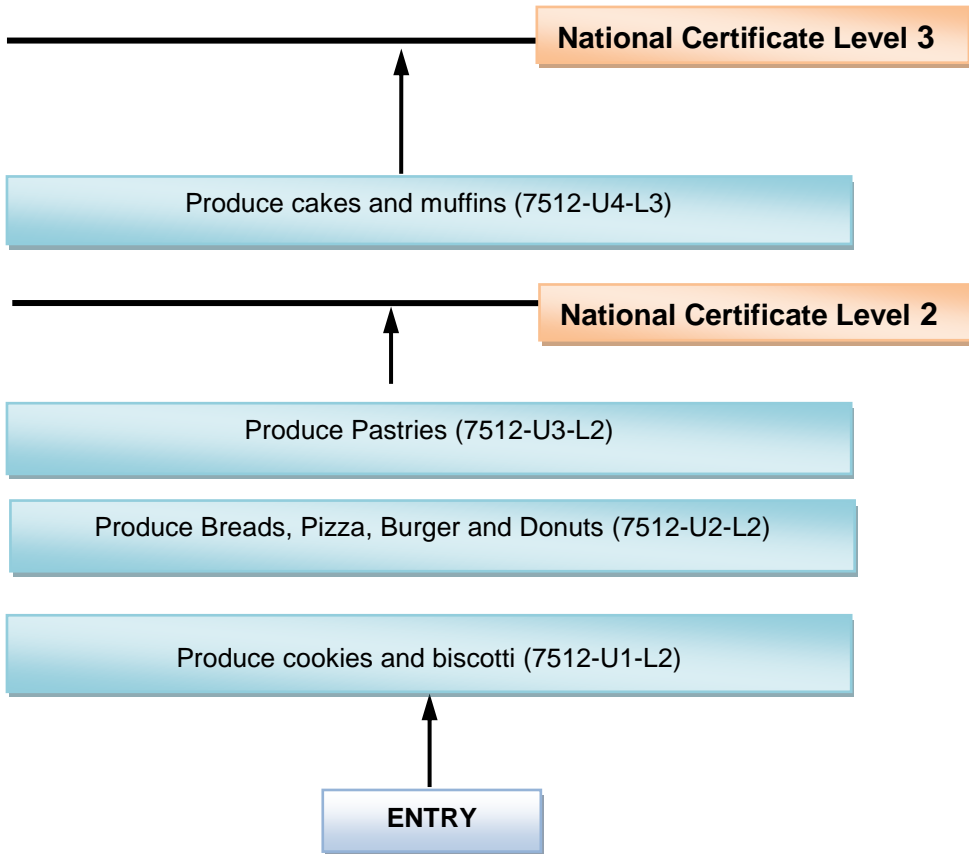
1. Sangay Wangmo, Coffee House, Phuntsholing
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3. Sonam Lhamo, Lhaki Hotel, Phuntsholing
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Development Group (Facilitator):

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

PACKAGING OF QUALIFICATIONS

The qualifications are clustered into following levels.



OVERVIEW OF NATIONAL COMPETENCY STANDARDS

UNIT TITLE	ELEMENTS OF COMPETENCE
Produce Cookies and Biscotti	<ol style="list-style-type: none"> 1. Prepare Cookies 2. Prepare Biscotti
Produce Breads, Pizza , Burger and Donuts	<ol style="list-style-type: none"> 1. Prepare bread 2. Prepare pizza 3. Prepare burger 4. Prepare Donuts
Produce Pastries	<ol style="list-style-type: none"> 1. Prepare non-laminated pastry 2. Prepare laminated pastry 3. Prepare Choux Pastry
Produce Cakes and Muffins	<ol style="list-style-type: none"> 1. Prepare cakes 2. Prepare muffins

UNIT TITLE :	Produce Cookies and Biscotti
DESCRIPTOR :	This unit covers the competencies required to produce cookies and biscotti following standard procedures
CODE :	7512-U1-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
Prepare Cookies	<p>1.1 Select and use required Personal Protective Equipment (PPE) as per the job requirement following standard procedures</p> <p>1.2 Select tools and equipment as per the job requirement following standard procedures</p> <p>1.3 Pre-heat the oven to the required temperature as per the job requirement following standard procedures</p> <p>1.4 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>1.5 Measure the ingredients as per the recipe following standard procedures</p> <p>1.6 Mix the ingredients as per the recipe following standard procedures</p> <p>1.7 Roll/pipe and shape the dough uniformly as per the job requirement following standard procedures</p> <p>1.8 Bake shaped dough as per the job requirement following standard procedures</p> <p>1.9 Check product for doneness through texture and color as per the job requirement following standard procedures</p> <p>1.10 Remove the product from the oven and cool the product as per the job requirement following standard procedures</p>

Prepare biscotti	<p>2.1 Select tools and equipment as per the job requirement following standard procedures</p> <p>2.2 Pre-heat the oven to the required temperature as per the job requirement following standard procedures</p> <p>2.3 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>2.4 Measure the ingredients as per the recipe following standard procedures</p> <p>2.5 Mix the ingredients as per the recipe following standard procedures</p> <p>2.6 Roll and shape the dough uniformly as per the job requirement following standard procedures</p> <p>2.7 Bake shaped dough as per the job requirement following standard procedures</p> <p>2.8 Check product for doneness through texture and color as per the job requirement following standard procedures</p> <p>2.9 Remove the product from the oven and cool the product as per the job requirement following standard procedures</p>
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RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Work dress • Hand Gloves 	<ul style="list-style-type: none"> • Ear muff • Mask
Tools and Equipment may include but not limited to:	
<ul style="list-style-type: none"> • Measuring scale • Dough Mixer • Oven • Mould • Measuring Spoon 	<ul style="list-style-type: none"> • Hand Blenders • Dough sheeter • Container • Measuring cup
Ingredients may include but not limited to:	
<ul style="list-style-type: none"> • Icing Sugar • Baking Powder 	<ul style="list-style-type: none"> • Milk • Water

<ul style="list-style-type: none"> • Salt • Flour • Dry fruits • Nuts 	<ul style="list-style-type: none"> • Fats • Essence • Eggs
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Bake cookies and biscotti as per the recipe following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety regulations • Basic first Aid • Grooming • Personal Hygiene • HACCP • Types of Cookies and Biscotti • Types of ingredients • Nutrient contents • Shelf life • Food regulations • Cost estimation and pricing 	<ul style="list-style-type: none"> • Communication • Team Work • Interpersonal relationships • Creativity • Problem solving • Negotiation

UNIT TITLE :	Produce Breads, Pizza, Burger and Donuts
DESCRIPTOR :	This unit covers the competencies required to produce breads and related product following standard procedures
CODE :	7512-U2-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
Prepare breads	<p>1.1 Select and use required Personal Protective Equipment (PPE) as per the job requirement following standard procedures</p> <p>1.2 Select tools and equipment as per the job requirement following standard procedures</p> <p>1.3 Pre-heat the oven to the required temperature as per the job requirement following standard procedure</p> <p>1.4 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>1.5 Measure the ingredients as per the recipe following standard procedures</p> <p>1.6 Mix the ingredients to make dough as per the recipe following standard procedures</p> <p>1.7 Ferment the dough to the required size as per the job requirement following standard procedures</p> <p>1.8 Scale and shape the dough as per the job requirement following standard procedures</p> <p>1.9 Proof the shaped dough as per the job requirement following standard procedures</p> <p>1.10 Bake bread dough at the required temperature and time as per the job requirement</p>

	<p>following standard procedures</p> <p>1.11 De-pan and cool the baked products to normal temperature as per the job requirement following standard procedures</p>
Prepare pizza	<p>2.1 Pre-heat the oven to the required temperature as per the job requirement following standard procedures</p> <p>2.2 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>2.3 Measure the ingredients as per the recipe following standard procedures</p> <p>2.4 Mix the ingredients to make dough as per the recipe following standard procedures</p> <p>2.5 Add toppings as per the recipe following standard procedures</p> <p>2.6 Bake pizza as per the recipe following standard procedures</p> <p>2.7 Check texture and color of product as per the job requirement following standard procedures</p>
Prepare Burger	<p>3.1 Pre-heat the oven to the required temperature as per the job requirement following standard procedures</p> <p>3.2 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>3.3 Measure the ingredients as per the recipe following standard procedures</p> <p>3.4 Prepare stuffings (Veg and Non-Veg) as per the job requirement following standard procedures</p> <p>3.5 Mix the ingredients to make sauce as per the recipe following standard procedures</p> <p>3.6 Use stuffing as per the recipe following standard procedures</p>

Prepare donuts	<p>4.1 Select and use required Personal Protective Equipment (PPE) as per the job requirement following standard procedures</p> <p>4.2 Select tools and equipment as per the job requirement following standard procedure</p> <p>4.3 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>4.4 Mix the ingredients to make dough as per the recipe following standard procedures</p> <p>4.5 Fry the dough as per the recipe following standard procedures</p> <p>4.6 Check texture and color of product as per the job requirement following standard procedures</p>
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RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Work dress • Hand Gloves • Safety shoes 	<ul style="list-style-type: none"> • Ear muff • Mask • Chef Cap
Tools and Equipment may include but not limited to:	
<ul style="list-style-type: none"> • Measuring scale • Dough Mixer • Oven • Mould 	<ul style="list-style-type: none"> • Dough sheeter • Container • Bread Slicer • Frying pan
Ingredients may include but not limited to:	
<ul style="list-style-type: none"> • Sugar • Baking Powder • Yeast • Salt • Flour 	<ul style="list-style-type: none"> • Milk • Water • Fats • Eggs
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Bake breads, pizza and burger as per the recipe following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety regulations • Basic first Aid • Grooming • Personal Hygiene • HACCP • Temperature • Types of breads • Types of ingredients • Nutrient contents • Shelf life • Food regulations • Storage of products • Cost estimation and pricing 	<ul style="list-style-type: none"> • Communication • Team Work • Interpersonal relationships • Creativity • Problem solving • Negotiation

UNIT TITLE :	Produce Pastries
DESCRIPTOR :	This unit covers the competencies required to produce laminated and non-laminated pastries following standard procedures
CODE :	7512-U3-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
Prepare non-laminated pastry	<p>1.1 Select and use required Personal Protective Equipment (PPE) as per the job requirement following standard procedures</p> <p>1.2 Select tools and equipment as per the job requirement following standard procedures</p> <p>1.3 Pre-heat the oven to the required temperature as per the job requirement following standard procedure</p> <p>1.4 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>1.5 Measure the ingredients as per the recipe following standard procedures</p> <p>1.6 Use fillings as per the recipe following standard procedures</p> <p>1.7 Bake non-laminated pastry as per the recipe following standard procedures</p> <p>1.8 Check texture and color of product as per the job requirement following standard procedures</p>
Prepare laminated pastry	<p>2.1 Mise-en-place ingredients as per the job requirement following standard procedures</p> <p>2.2 Measure the ingredients as per the recipe following standard procedures</p> <p>2.3 Prepare dough as per the recipe following standard procedures</p> <p>2.4 Pre-heat the oven to the required temperature as per the job requirement following standard</p>

	<p>procedures</p> <p>2.5 Fold the dough to make layers as per the job requirement following standard procedures</p> <p>2.6 Use fillings as per the recipe following standard procedures</p> <p>2.7 Bake <i>laminated pastry</i> as per the recipe following standard procedures</p> <p>2.8 Check texture and color of product as per the job requirement following standard procedures</p>
Prepare Choux Pastry	<p>3.1 Pre-heat the oven to the required temperature as per the job requirement following standard procedure</p> <p>3.2 Mise-en-place <i>ingredients</i> as per the job requirement following standard procedures</p> <p>3.3 Measure the ingredients as per the recipe following standard procedures</p> <p>3.4 Bake batter as per the recipe following standard procedures</p> <p>3.5 Use <i>fillings</i>(butter creams, egg yolk cream, whipped cream) as per the job requirement following standard procedures</p> <p>3.6 Add chocolate topping as per the job requirement following standard procedures</p>

RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Work dress • Hand Gloves • Safety shoes 	<ul style="list-style-type: none"> • Ear muff • Mask • Chef Cap
Tools and Equipment may include but not limited to:	
<ul style="list-style-type: none"> • Measuring scale • Dough Mixer • Oven 	<ul style="list-style-type: none"> • Hand Blenders • Dough sheeter • Container

<ul style="list-style-type: none"> • Mould • Parchment paper 	<ul style="list-style-type: none"> • Baking tray • Cutter
Ingredients may include but not limited to:	
<ul style="list-style-type: none"> • Sugar • Yeast • Salt • Flour • Eggs • Fruits 	<ul style="list-style-type: none"> • Milk • Water • Fats • Cream • Chocolate
Texture and color may include but not limited to:	
<ul style="list-style-type: none"> • Crispy 	<ul style="list-style-type: none"> • Golden • Flaky
Non-laminated pastry may include	
<ul style="list-style-type: none"> • Pies 	<ul style="list-style-type: none"> • Tarts
Laminated Pastry may include	
<ul style="list-style-type: none"> • Croissant 	<ul style="list-style-type: none"> • Puff pastries
Critical Aspects:	
<ul style="list-style-type: none"> • Demonstrate compliance with safety regulations applicable to work operations at all times. • Bake pastries as per the recipe following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety regulations • Basic first Aid • Grooming • Personal Hygiene • HACCP • Temperature • Types of pastries 	<ul style="list-style-type: none"> • Communication • Team Work • Interpersonal relationships • Creativity • Problem solving • Negotiation

<ul style="list-style-type: none">• Types of fillings• Types of ingredients• Nutrient contents• Shelf life• Food regulations• Storage of products• Cost estimation and pricing	
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UNIT TITLE :	Produce cakes and muffins
DESCRIPTOR :	This unit covers the competencies required to produce cakes and muffins following standard procedures
CODE :	7512-U4-L3
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
Prepare cakes	<ul style="list-style-type: none"> 1.1 Mise-en-place ingredients as per the job requirement following standard procedures 1.2 Mix the ingredients to make batter as per the recipe following standard procedures 1.3 Bake the batter as per the recipe following standard procedures 1.4 Check texture and color of product as per the job requirement following standard procedures 1.5 Prepare icing as per the job requirement following standard procedures 1.6 Decorate the cake as per the customer's requirement following standard procedures 1.7 Store the product as per the job requirement following standard procedures
Prepare muffins	<ul style="list-style-type: none"> 2.1 Pre-heat the oven to the required temperature as per the job requirement following standard procedures 2.2 Mise-en-place ingredients as per the job requirement following standard procedures 2.3 Mix the ingredients to make batter as per the recipe following standard procedures 2.4 Bake the batter as per the recipe following standard procedures 2.5 Add toppings as per the job requirement following standard procedures 2.6 Check texture and color of product as per the

job requirement following standard procedures

RANGE STATEMENT

PPE may include but not limited to:

- Work dress
- Hand Gloves
- Safety shoes
- Ear muff
- Mask
- Chef Cap

Tools and Equipment may include but not limited to:

- Measuring scale
- Oven
- Mould
- Parchment Paper
- Cake ring
- Piping bag
- Hand Blenders
- Container
- Baking tray
- Palette knife
- Nozzles
- Cake tunnel

Ingredients may include but not limited to:

- Sugar
- Baking Powder
- Salt
- Essence
- Flour
- Eggs
- Food color
- Milk
- Cream
- Chocolate
- Butter

Texture and color may include but not limited to:

- Sponge
- Moist

Toppings may include but not limited to:

- Fruits
- Cream
- Chocolates

Critical Aspects:

- Demonstrate compliance with safety regulations applicable to work operations at all times.
- Produce cakes and muffins as per the recipe following standard procedures

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety regulations • Basic first Aid • Grooming • Personal Hygiene • HACCP • Types of Cake Recipe • Temperature • Types of icing • Types of ingredients • Nutrient contents • Shelf life • Food regulations • Storage of products • Cost estimation and pricing 	<ul style="list-style-type: none"> • Communication • Team Work • Interpersonal relationships • Creativity • Problem solving • Negotiation

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.

Purpose of National Competency Standards

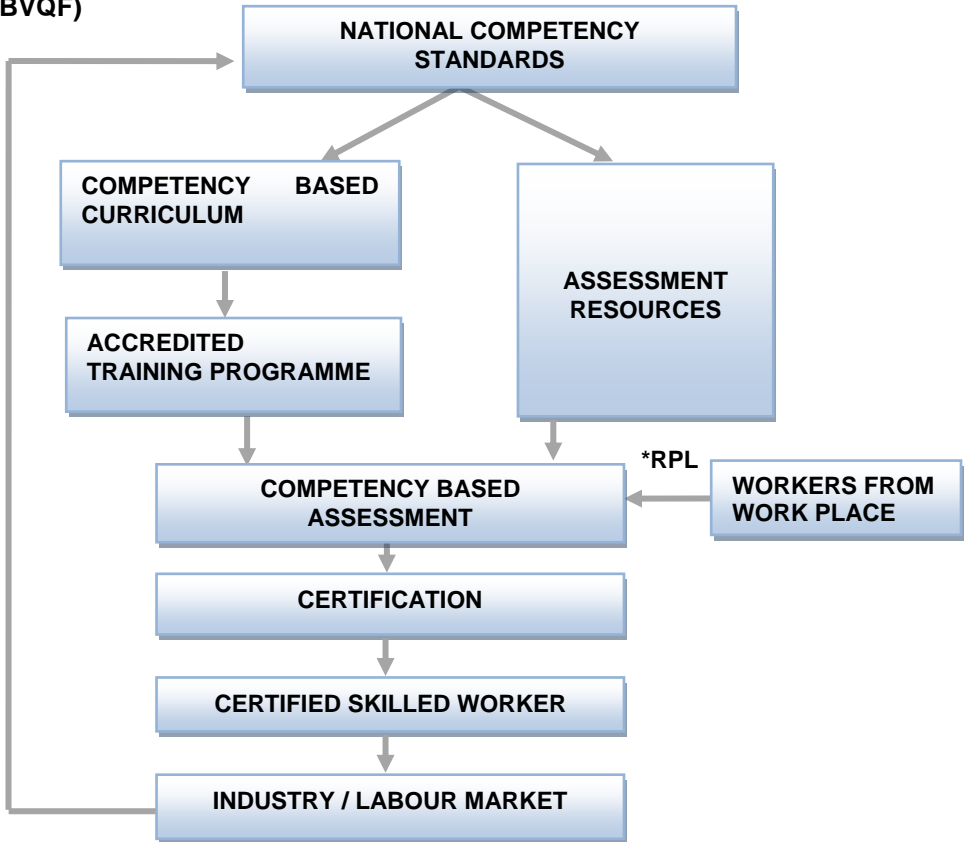
National Competency Standards serve a number of purposes including:

- 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.

1.2. 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.

1.3. PURPOSE

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

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

1.4. 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.

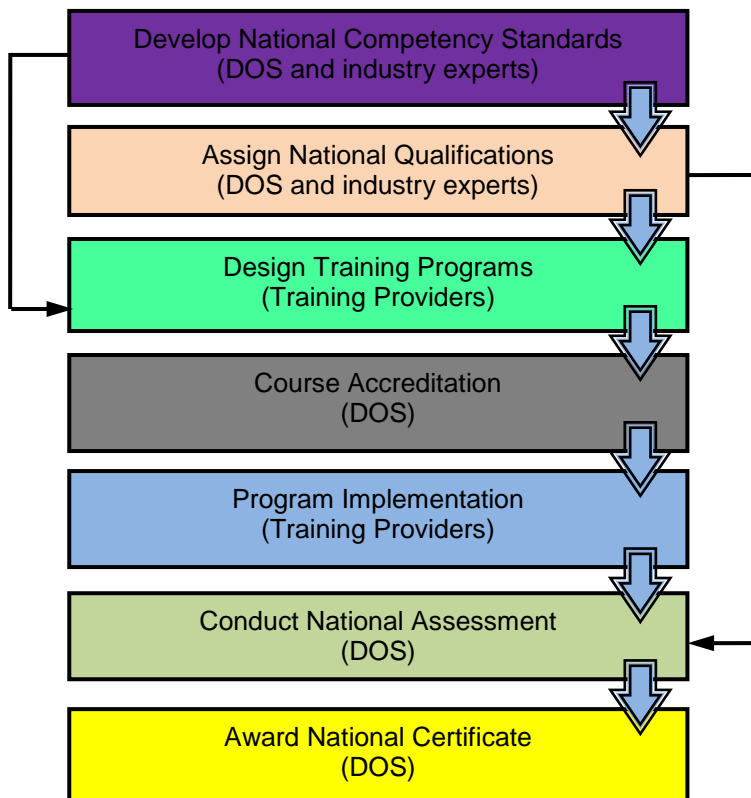
A job can include a number of competencies described in the national competency standards.

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 7512 to the occupation of Baker and related trades. Therefore, in the Bhutan's context, the occupation Baker has been assigned the code 7512 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)



1.5 ASSESSMENT GUIDE

Form of assessment

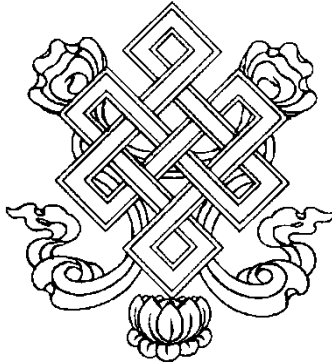
- Continuous assessment together with collected evidence of performance will be used.
- Evidence of the performance shall be based on practical demonstration.
- Knowledge can be assessed through written form of assessment.

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, equipment, materials and documents.
- The candidate must complete the assessment in an accepted time frame



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