



**NATIONAL COMPETENCY STANDARDS
FOR
SOUND TECHNCIAN
(NC2)**

**Department of Occupational Standards
Ministry of Labour and Human Resources
Thimphu, Bhutan: August 2022**

FOREWORD

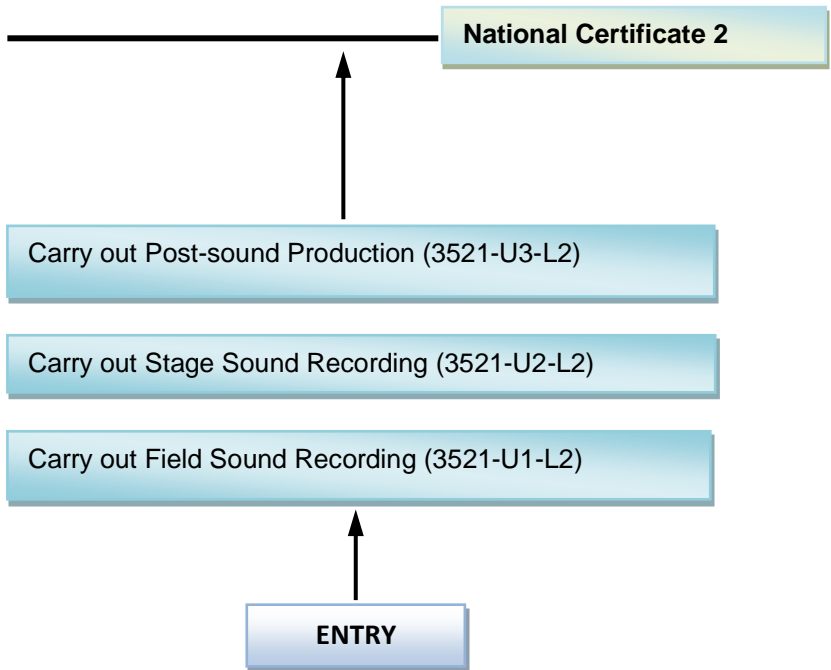
The Department of Occupational Standards is pleased to release the National Competency Standards (NCS) for Sound Technician at NC2. This NCS is developed in close consultation with industry or field experts to capture the competencies required at workplaces. The National Competency Standards contains the knowledge, skills and attitude required by competent workers to perform best at workplace.

The development of National Competency Standards was initiated with the implementation of Bhutan Vocational Qualifications Framework (BVQF) as part of Technical Vocational Education and Training (TVET) reform process in our country. The Qualifications set through the NCS will be the accredited and recognized nationally. The Training providers are required to develop curriculums based on NCS to get their courses accredited and to avail National Certification for their trainees.

This department would like to acknowledge the active participation of industry or field experts from private, corporate and public sectors. The industry participation is very crucial to shift our TVET system from supply based to demand driven. The trainings delivered based on the NCS is expected to make our workforce competent and productive thereby enhancing the productivity of our industries. The competent workforce is the key to socio economic development of our country.

Director
Department of Occupational Standards

PACKAGING OF QUALIFICATIONS



ACKNOWLEDGEMENT

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OVERVIEW OF NATIONAL COMPETENCY STANDARDS

SI.	UNIT TITLE	ELEMENTS OF COMPETENCE
1.	Carry out Field Sound Recording	1.1 Set up Sound Equipment 1.2 Operate Sound Equipment 1.3 Dismantle the Sound Equipment
2.	Carry out Stage Sound Recording	2.1. Set up Sound Equipment 2.2. Operate sound Equipment 2.3. Dismantle the Sound Equipment
3.	Carry out Post-sound Production	3.1 Prepare to Perform Sound Editing 3.2 Perform Sound Editing 3.3 Perform Mastering of Sound

UNIT TITLE	Carryout Field Sound Recording
DESCRIPTOR	This unit covers the competencies required to set up, operate and pack the sound equipment to carry out sound recording successfully
CODE	3521-U1-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Set up Sound Equipment	<p>1.1 Use PPE as per the job requirement following standard procedures</p> <p>1.2 Obtain the sound equipment as per the job requirement following standard procedures</p> <p>1.3 Unpack the sound equipment following standard procedures</p> <p>1.4 Set up the sound equipment as per the required position following standard procedures</p> <p>1.5 Test the sound as per the job requirement following standard procedures</p>
2. Operate Sound Equipment	<p>2.1 Identify the source of sound as per the job requirement following standard procedures</p> <p>2.2 Position the microphone as per job requirement following standard procedures</p> <p>2.3 Monitor and adjust the quality of sound as per the job requirement following standard procedures</p> <p>2.4 Record the sound as per the job requirement following standard procedures</p>

3. Pack Sound Equipment	<p>3.1 Disconnect the sound equipment following standard procedures</p> <p>3.2 Pack the sound equipment following standard procedures</p>
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RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Safety Boots • Work Dress 	<ul style="list-style-type: none"> • Helmet • Safety Belt
Sound equipment may include but not limited to:	
<ul style="list-style-type: none"> • Mic • Cable • Headphone 	<ul style="list-style-type: none"> • Recorder • Sound Mixer
Critical Aspects: <ul style="list-style-type: none"> • Use PPE as per the job requirement following standard procedures • Identify the source of sound as per the job requirement following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety • Basic First Aid • Sound Properties (frequency, wavelength, amplitude) • Microphone Directionality • Area and location to determine sound setup • Types of microphones 	<ul style="list-style-type: none"> • Team work • Communication • Time Management • Problem Solving • Innovative thinking • Negotiation • Critical Thinking

UNIT TITLE	Carry out Stage Sound Recording
DESCRIPTION	This unit covers the competencies required to set up, operate and dismantle sound equipment
CODE	3521-U2-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Set up Sound Equipment	1.1 Use PPE as per the job requirement following standard procedures 1.2 Place the sound equipment as per the job requirement following standard procedures 1.3 Connect the sound system as per the job requirement following standard procedures 1.4 Test the sound system following standard procedures
2. Operate Sound System	2.1 Apply sound effects as per the job requirement following standard procedures 2.2 Perform sound balancing as per the job requirement following standard procedures 2.3 Monitor sound following standard procedures 2.4 Record sound as per the job requirement following standard procedures
3. Dismantle the Sound System	3.1 Allow the equipment to cool down following standard procedure 3.2 Disconnect the equipment following standard procedures 3.3 Pack the equipment following standard procedures

RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Safety Boots • Work Dress 	<ul style="list-style-type: none"> • Helmet • Safety Belt
Sound Equipment may include but not limited to:	
<ul style="list-style-type: none"> • Speakers • Microphone • Amplifier 	<ul style="list-style-type: none"> • Mixer • Recorder
Critical Aspects: <ul style="list-style-type: none"> • Use PPE as per the job requirement following standard procedures • Perform sound balancing as per the job requirement following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety • Basic First Aid • Sound Properties • Microphone Directionality • Types of Microphones • Area and location to determine sound setup • Software for Sound Devices 	<ul style="list-style-type: none"> • Team Work • Communication Skills • Time Management • Problem Solving • Innovative Thinking • Negotiation • Critical Thinking

UNIT TITLE	Carry out Post- Sound Production
DESCRIPTION	This unit covers the competencies required to prepare to perform sound editing, perform sound editing, perform mastering of sound.
CODE	3521-U3-L2
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare to Perform Sound Editing	<p>1.1 Perform sound editing setup as per the job requirement following standard procedures</p> <p>1.2 Obtain final sound requirement from the client following the standard procedures</p> <p>1.3 Perform sound file management as per the job requirement following standard procedures</p>
2. Perform Sound Editing	<p>2.1 Use sound editing software and equipment as per the job requirement following standard procedures</p> <p>2.2 Perform noise clean up following standard procedures</p> <p>2.3 Perform sound levelling following standard procedures</p> <p>2.4 Apply sound effects following standard procedures</p>
3. Perform Mastering of Sound	<p>3.1 Check the final sound output following standard procedure</p> <p>3.2 Generate the final output as per the client's requirement following standard procedures</p>

RANGE STATEMENT	
Sound requirement may include but not limited to:	
<ul style="list-style-type: none"> • Sound Format 	<ul style="list-style-type: none"> • Effects
Editing Software may include but not limited to:	
<ul style="list-style-type: none"> • Adobe Audition • Pro-tools 	<ul style="list-style-type: none"> • Nuendo
Critical Aspects: <ol style="list-style-type: none"> 1. Perform noise clean up following standard procedures 2. Perform sound levelling following standard procedures 3. Apply sound effects following standard procedures 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Occupational Health and Safety • Basic First Aid • Sound Editing Software • Basic Concept of Sound • Types of Sound Formats • Related Rules and Regulations • Intellectual Property Rights 	<ul style="list-style-type: none"> • Team Work • Communication Skills • Time Management • Problem Solving • Innovative Thinking • Negotiation • Critical Thinking

ANNEXURE

A. National Competency Standards (NCS)

Competency Standards specify the skill, knowledge and attitude applied to a particular occupation. Standards also specify the requirements 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

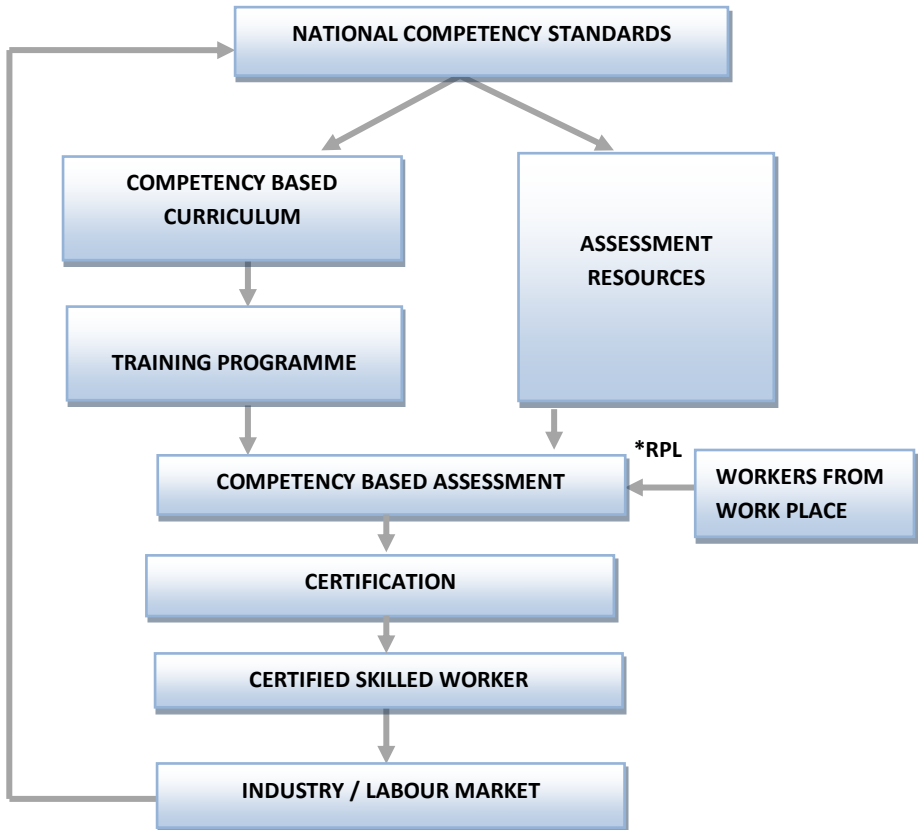
National Competency Standards serve a number of purposes including:

- Providing advice to curriculum developers about the skill and knowledge to be included in curriculum.
- Providing specifications to assessment resource developers about the skill, knowledge and attitudes 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 Qualification 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 standards, in training institutions, in the workplace, in schools or anywhere where learning takes place.

Components of the Bhutan Vocational Qualification Framework (BVQF)



* RPL = Recognition of Prior Learning

BVQF Levels

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

- National Diploma 2 (ND2)
- National Diploma1 (ND1)
- 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">• 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

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

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.

National Diploma 1 (ND1)

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> Require wide range of specialized technical or scholastic skills. Involve a wide choice of standard procedures Are employed in a variety of routine & non-routine contexts 	<ul style="list-style-type: none"> A broad knowledge based with substantial depth in some areas Analytical interpretation of wide range of data Determination of appropriate methods & procedures in response to a range of concrete problems with same theoretical elements 	<ul style="list-style-type: none"> Self directed and sometimes directed activity Under broad general guidelines for functions With full responsibility for the nature, quantity & quality of outcomes With possible responsibility for the achievement of team output

National Diploma 2 (ND2)

Carry out processes that:	Learning demand:	Responsibilities which are applied:
<ul style="list-style-type: none"> Require a wide range of technical or scholastic skills. Offer a wide choice of standard and non- standard procedures Are employed in a variety of routine and non- routine contexts 	<ul style="list-style-type: none"> Specialist knowledge with depth in more than one area Analysis reformatting and evaluation of a wide range of information Formulation of appropriate responses to resolve both concrete and abstract 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 quality and quantity of 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).

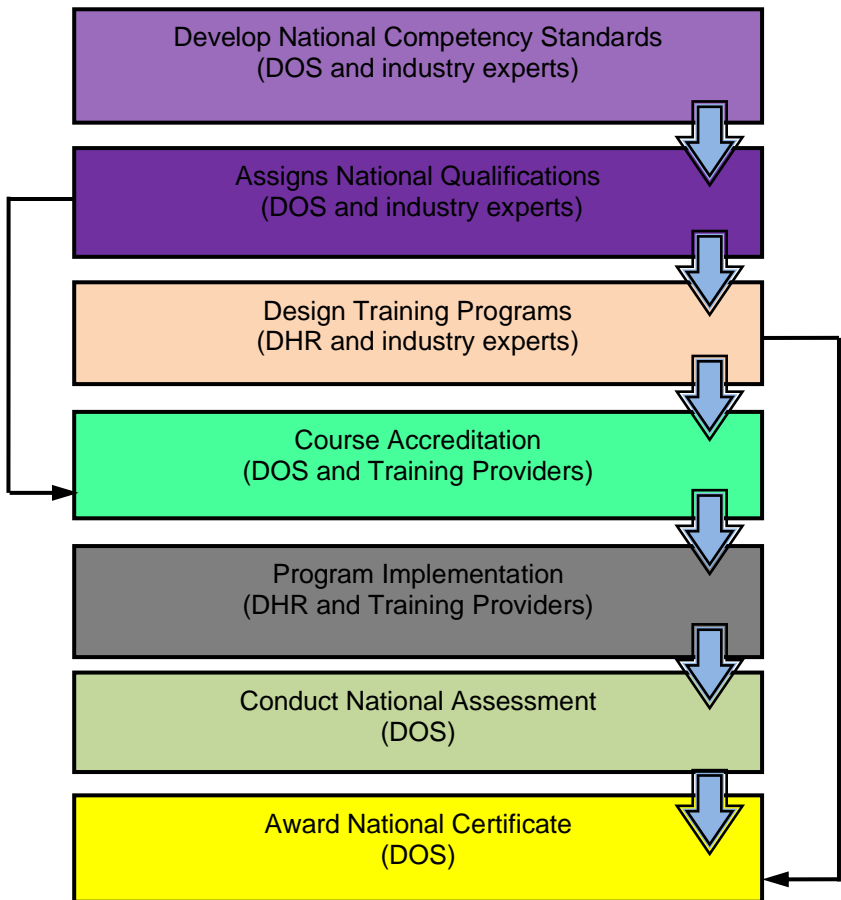
The coding of the National Competency Standards forms the basis of the identification code for the Vocational Education and Training Management Information System (VET – MIS) both in terms of economic sector identification and that of the individual standard.

Coding the individual unit of National Competency Standard

Coding the individual units of Competency Standard is to identify the level where that particular unit belongs. While packaging, 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 qualification package.

The ILO assigns the code 3123 to the occupation, Construction Supervisor and related trades. Therefore, in Bhutan, the occupation Construction supervisor has been assigned the code 3123 in the national coding system. The units are assigned the code 'U' while the levels are assigned the code 'ND'. Therefore, the code for the National Diploma¹ will be 3123-U1-ND1

Implementation and operational procedures for National Competency Standards (NCS)

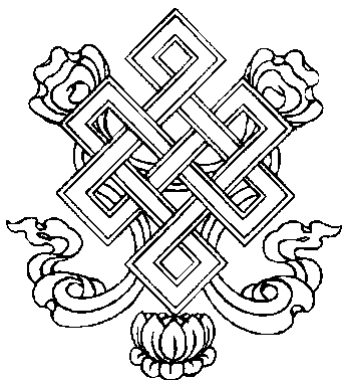


Key:

MoLHR – Ministry of Labour and Human Resources

DHR – Department of Human Resources

DOS – Department of Occupational Standards



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