



**NATIONAL COMPETENCY STANDARDS
FOR
CONSTRUCTION ENGINEERING TECHNOLOGIST
(DIPLOMA)**

CONSTRUCTION SECTOR

**TECHNICAL & VOCATIONAL EDUCATION AND TRAINING
QUALITY COUNCIL
BHUTAN QUALIFICATION AND PROFESSIONAL
CERTIFICATION AUTHORITY
THIMPHU, BHUTAN
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FOREWORD

The TVET Quality Council, BQPCA, is pleased to present the National Competency Standards (NCS) for Construction Engineering Technologist, Diploma, developed in collaboration with industry experts and trainers. These standards establish a nationally recognized qualification aligned with international best practices, setting a benchmark for TVET qualifications in Bhutan.

The NCS ensures that trainees acquire the necessary skills, knowledge, and attitude required by industries. Developed through close consultation with experts, it enhances the relevance of training to labor market needs, equipping graduates to meet industry expectations and improving their employability. A strong and responsive TVET system will also make vocational education more attractive to youth.

The Council acknowledges the valuable contributions of industry experts and trainers in the development of these standards. We urge employers and training providers to continue their support in implementing the NCS, fostering a skilled and productive workforce that contributes to national socio-economic development. Moving forward, we look forward to enhanced industry engagement and collaborative efforts in building a quality-assured, demand-driven TVET system.

Director
BQPCA

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PACKAGING OF QUALIFICATIONS

DIPLOMA

Carry out Construction Site Works (3112-U7-L4)

Manage Construction Activities and Projects (3112-U6-L4)

**Manage Quality Assurance and Quality Control at worksite
(3112-U5-L4)**

**Perform Cost Estimation and Contract Administration works
(3112-U4-L4)**

**Perform Site Surveying and Setting Out for Construction activities
(3112-U3-L4)**

**Implement Occupational Safety, Health and Environmental practices
at worksite (3112-U2-L4)**

**Demonstrate Professional Values and Ethical Conduct at worksite
(3112-U1-L4)**

ENTRY

OVERVIEW OF THE NCS

Unit Title	Element of Competence
1. Demonstrate Professional Values and Ethical Conduct at worksite	<ol style="list-style-type: none"> 1. Cultivate positive motivation and growth mindset 2. Apply ethical norms and positive values 3. Exhibit ethical and professional conduct
2. Implement Occupational Safety, Health, and Environmental practices at worksite	<ol style="list-style-type: none"> 1. Implement workplace safety management systems 2. Apply environmental protection and sustainability measures 3. Lead safety culture and emergency response 4. Investigate incidents and implement corrective actions
3. Perform Site Surveying and Setting out for Construction activities	<ol style="list-style-type: none"> 1. Manage survey control networks 2. Carry out setting out and alignments of structures 3. Calculate volumes and areas 4. Operate and maintain surveying instruments
4. Perform Cost Estimation and Contract Administration works	<ol style="list-style-type: none"> 1. Prepare quantity take-off 2. Develop unit rates and cost estimates 3. Perform progress payments and variations administration 4. Interpret contract conditions

<p>5. Manage Quality Assurance and Quality control at worksite</p>	<ol style="list-style-type: none">1. Perform Testing and Quality Control of Construction Materials2. Maintain construction quality standards, specifications and contractual agreements
<p>6. Manage Construction Activities and projects</p>	<ol style="list-style-type: none">1. Prepare workplan and allocate resources2. Supervise construction activities and projects
<p>7. Carry out Construction Site Works</p>	<ol style="list-style-type: none">1. Interpret engineering drawings and designs2. Prepare construction site3. Execute concrete, structural and civil construction works

UNIT TITLE	Demonstrate Professional Values and Ethical Conduct at worksite
DESCRIPTOR	This unit contains the essential employability skills and graduates are required to have reliably demonstrated it in addition to the core competencies.
CODE	3112-U1-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Cultivate positive motivation and growth mindset	<p>1.1 Exhibit strong awareness of self and others, and appreciate belief systems, social norms and relationship building.</p> <p>1.2 Analyse own beliefs, attitudes, strengths, and behaviours in relation to workplace expectations.</p> <p>1.3 Recognise how personal and cultural belief systems influence interactions with others.</p> <p>1.4 Apply appropriate social norms and cultural sensitivity in diverse workplace situations.</p> <p>1.5 Build and maintain positive professional relationships through effective communication and empathy.</p> <p>1.6 Demonstrate emotional intelligence and respect in managing workplace interactions and conflicts.</p> <p>1.7 Inculcate respect for diversity and interdependence.</p> <p>1.8 Develop a sense of duty for care and love for the country and contribute to nation building.</p>

<p>2. Apply ethical norms and positive values</p>	<p>2.1 Understand ethical norms and legal rules in decision-making and understand the link between values and behavior.</p> <p>2.2 Make decisions based on established ethical norms, professional codes, and legal requirements.</p> <p>2.3 Identify potential ethical dilemmas and apply structured reasoning to resolve them.</p> <p>2.4 Demonstrate accountability and transparency in actions and decisions.</p> <p>2.5 Explain how personal and organisational values influence workplace behaviour and outcomes.</p> <p>2.6 Promote ethical conduct and compliance within the work environment.</p> <p>2.7 Apply ethical norms in workplace and learning activities.</p>
<p>3. Exhibit ethical and professional conduct</p>	<p>3.1 Demonstrate commitment to own profession and quality of work.</p> <p>3.2 Demonstrate commitment to self-management of learning and performance.</p> <p>3.3 Show dedication to professional standards and continuous skill development.</p> <p>3.4 Maintain high-quality work outputs in line with industry expectations.</p> <p>3.5 Set personal development goals and implement strategies for self-improvement.</p> <p>3.6 Seek feedback, reflect on performance and make improvements where necessary.</p>

	<p>3.7 Manage the use of time and other resources to complete projects.</p> <p>3.8 Take responsibility for one's own actions, decisions and their consequences.</p> <p>3.9 Locate, select, organize and document information using appropriate technology and information systems.</p> <p>3.10 Analyze, evaluate and apply relevant information from a variety of sources.</p> <p>3.11 Apply a systematic approach to solve problems.</p> <p>3.12 Use a variety of thinking skills to anticipate and solve problems.</p> <p>3.13 Communicate clearly, concisely and correctly in the written, spoken and visual form that fulfills the purpose and meets the needs of the audience.</p> <p>3.14 Respond to written, spoken or visual messages in a manner that ensures effective communication.</p>
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UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • Role of Social Norms • Importance of relationship building • Importance of workmanship • Concepts on quality and professionalism • Social values and belief system • Concepts on GNH • Importance of environmental conservation • Waste management • Concepts on sustainable development • Five Zorig Commitments • Importance and understanding of Gender Equality, Disability and Social Inclusion (GEDSI) 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation and creativity

UNIT TITLE	Implement Occupational Safety, Health and Environmental practices at worksite
DESCRIPTOR	This unit covers the competencies required to perform risk assessment and environment protection following safety procedures at all times.
CODE	3112-U2-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Implement workplace safety management systems	<p>1.1 Identify and control site hazards.</p> <p>1.2 Perform risk assessments for high-risk activities.</p> <p>1.3 Apply hierarchy of controls to mitigate identified risks.</p> <p>1.4 Identify hazardous substances and implement safety data sheet (SDS) controls.</p> <p>1.5 Assess geotechnical hazards for excavations, trenches, and tunnel faces including potential for collapse or rock fall.</p> <p>1.6 Evaluate environmental hazards based on site location</p> <p>1.7 Implement Permit-to-Work (PTW) systems for high-risk activities including hot work, confined space entry, and electrical isolation.</p>

	<p>1.8 Apply lock-out/tag-out (LOTO) procedures for mechanical and electrical plant isolation.</p> <p>1.9 Perform pre-start safety checks on all construction plants & equipment.</p> <p>1.10 Maintain safety registers including incident logs, inspection records, training matrices, and equipment certification.</p> <p>1.11 Implement site-specific safety rules including traffic management, pedestrian segregation and exclusion zones.</p>
<p>2. Apply environmental protection and sustainability measures</p>	<p>2.1 Implement erosion and sediment control plans (ESCP) using silt fences, sediment basins, and stabilised entry/exit points.</p> <p>2.2 Implement dust suppression measures during demolition, earthworks, and crushing operations.</p> <p>2.3 Perform noise and vibration monitoring to comply with statutory limits using barriers, timing restrictions and monitoring equipment.</p> <p>2.4 Perform construction camp waste management in remote sites.</p>
<p>3. Lead safety culture and emergency response</p>	<p>3.1 Perform daily toolbox talks covering specific tasks, hazards, and control measures for the day's activities.</p> <p>3.2 Perform site safety inductions for all new personnel including visitors and subcontractors.</p> <p>3.3 Develop and communicate site-specific emergency response plans for fire, medical</p>

	<p>emergency, flood, and rescue from height/confined space.</p> <p>3.4 Perform emergency drills at minimum quarterly intervals.</p> <p>3.5 Maintain first aid facilities, rescue equipment and trained first aiders appropriate to site size and risk profile.</p>
<p>4. Investigate incidents and implement corrective actions</p>	<p>4.1 Perform initial site investigation of all incidents.</p> <p>4.2 Apply root cause analysis techniques.</p> <p>4.3 Complete statutory incident notification and reporting forms as required by local OHS regulations.</p> <p>4.4 Develop and track corrective and preventive action (CAPA) plans to prevent recurrence.</p> <p>4.5 Prepare incident investigation reports with findings, recommendations and implementation timelines.</p>

<p>RANGE STATEMENT</p>	
<p>High Risk Activities may include but not limited to:</p>	
<ul style="list-style-type: none"> • Working at height • Confined spaces 	<ul style="list-style-type: none"> • Deep excavations • Heavy lifting • Tunnel operations
<p>Hierarchy of Controls may include but not limited to</p>	

<ul style="list-style-type: none"> • Elimination • Substitution • Engineering 	<ul style="list-style-type: none"> • Administration • PPE
Hazardous Substances may include but not limited to:	
<ul style="list-style-type: none"> • Chemicals • Asbestos 	<ul style="list-style-type: none"> • Silica dust
Environmental Hazards may include but not limited to:	
<ul style="list-style-type: none"> • Flooding • Extreme temperatures 	<ul style="list-style-type: none"> • Lightning • Landslides
Dust suppression measures may include but not limited to:	
<ul style="list-style-type: none"> • Water spraying • Enclosures 	<ul style="list-style-type: none"> • Vacuum extraction
Critical Aspects	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Basic First Aid • Specification of civil & electrical and mechanical works • Civil Liability Act • Clearances (Environment, forest, Power, Culture, Public, etc) • Bhutan Schedule of Rates (BSR) • Procurement Rules and Regulations(PRR) of MoF • Autocad Drawings • eGP & eTools • Risk Assessment Methodologies • Hierarchy of Controls • Research and Development • Green and sustainability • Construction Manager Software (CMS) 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation

UNIT TITLE	Perform Site Surveying and Setting Out for Construction activities
DESCRIPTOR	This unit covers the competencies required to perform survey and calculate volumes following safety procedures at all times.
CODE	3112-U3-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Manage survey control networks	<p>1.1 Perform establishment of primary control points using GNSS/GPS (real-time kinematic RTK) with accuracy appropriate to project specifications.</p> <p>1.2 Perform establishment of secondary control using closed traverses with angular and linear misclosure within specified tolerances.</p> <p>1.3 Perform differential levelling to establish temporary benchmarks (TBMs).</p> <p>1.4 Perform establishment of local grid systems and transformation between national grid and site coordinates.</p> <p>1.5 Perform verification of control network stability through periodic re-observation and adjustment.</p>
2. Carry out setting out and alignments of structures	2.1 Perform setting out of horizontal alignments including tangents, circular curves, and

	<p>transition (spiral) curves for roads, canals, tunnels, and pipelines.</p> <p>2.2 Perform setting out of vertical alignments including grades, vertical curves and chainage points at specified intervals.</p> <p>2.3 Perform setting out of building grids, column centres, foundation footprints, and slab edges to specified tolerance.</p> <p>2.4 Perform setting out of bridge pier centres, abutment positions, bearing pads, and deck alignment using offset methods.</p> <p>2.5 Perform setting out of tunnel centre lines, heading profiles, and ring positions using laser alignment or total station.</p>
<p>3. Calculate volumes and areas</p>	<p>3.1 Perform calculation of cut and fill volumes for earthworks.</p> <p>3.2 Perform calculation of mass haul diagrams to determine borrow, waste, and average haul distances.</p> <p>3.3 Perform calculation of concrete volumes for foundations, slabs, columns, beams, tunnels, and canal linings.</p> <p>3.4 Perform calculation of pavement layer quantities for road projects.</p> <p>3.5 Perform calculation of pipeline trench volumes including bedding, embedment, and backfill materials.</p>

<p>4. Operate and maintain surveying instruments</p>	<p>4.1 Perform set up and levelling of automatic levels, digital levels, total stations, and GNSS receivers correctly on stable tripods.</p> <p>4.2 Perform field <i>checks of instrument calibration</i> before each use.</p> <p>4.3 Operate surveying equipment and setting out.</p> <p>4.4 Perform downloading and management of survey data using field controllers and office software.</p> <p>4.5 Perform routine maintenance including cleaning optics, checking batteries, and arranging annual calibration.</p>
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<p>RANGE STATEMENT</p>	
<p>Checks of instrument calibration may include but not limited to:</p>	
<ul style="list-style-type: none"> • Collimation error • Index error 	<ul style="list-style-type: none"> • Prism constant
<p>Critical Aspects</p>	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Basic First Aid • Coordinate Geometry • Applied Trigonometry • Traverse Calculations • Differential levelling • Vertical curve geometry • Surveying principles • Survey Accuracy standards 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation

UNIT TITLE	Perform Cost Estimation and Contract Administration works
DESCRIPTOR	This unit covers the competencies required to prepare cost estimation and administer contract documents following standard procedures.
CODE	3112-U4-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare quantity take-off	<p>1.1 Prepare quantity of materials based on design and drawings.</p> <p>1.2 Perform measurement of quantities from drawings.</p> <p>1.3 Perform measurement of other works as required.</p>
2. Develop unit rates and cost estimates	<p>2.1 Perform calculation of labour cost per unit based on crew composition, productivity rates, and hourly wages.</p> <p>2.2 Perform calculation of plant cost per unit based on plant type, hourly and productivity.</p> <p>2.3 Perform calculation of material cost per unit based on supply price, delivery, wastage allowance and storage.</p> <p>2.4 Prepare reports for overheads for construction works.</p>

	<p>2.5 Tracking of labour hours, plant hours and materials used.</p>
<p>3. Perform progress payments and variations administration</p>	<p>3.1 Perform measurement of work completed at site based on actual quantities.</p> <p>3.2 Prepare progress claim with measured quantities, unit rates and amount.</p> <p>3.3 Identify variations and prepare variation order.</p> <p>3.4 Perform site cost monitoring and financial control.</p> <p>3.5 Perform calculation of variation costs including additional labour, plant, materials, and extended overheads.</p>
<p>4. Interpret contract conditions</p>	<p>4.1 Identify contract type and its implications for risk and payment.</p> <p>4.2 Interpret key contract clauses.</p> <p>4.3 Prepare extension of time (EOT) claim with critical path analysis showing delay impact and cause.</p> <p>4.4 Prepare cost claim for delay or disruption with supporting records.</p> <p>4.5 Comply with notice provisions for variations, EOT, and claims.</p>

RANGE STATEMENT	
PPE may include but not limited to:	
<ul style="list-style-type: none"> • Helmet • Safety boot • Safety Harness 	<ul style="list-style-type: none"> • Rubber gloves • Reflective vest
Relevant regulatory agencies may include but not limited to:	
<ul style="list-style-type: none"> • Labour official • OHS focal Officer • NEC • BPC 	<ul style="list-style-type: none"> • Forest official • Local Government
Contract documents may include but not limited to:	
<ul style="list-style-type: none"> • Contract agreements • BOQ • Drawings 	<ul style="list-style-type: none"> • Technical specification • Contract between company and workers
Critical Aspects	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Basic First Aid • Types of PPEs and applications • Estimation and costing • eGP and eTools • Types of signage used at construction site 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Creativity • Time Management • Innovation

UNIT TITLE	Manage Quality Assurance and Quality Control at worksite
DESCRIPTOR	This unit covers the competencies required to perform the tests of construction materials and manager quality control at construction sites following standard procedures.
CODE	3112-U5- L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Perform Testing and Quality Control of Construction Materials	1.1 Conduct construction materials test at work site. 1.2 Perform slump test on fresh concrete to verify workability. 1.3 Interpret test results and implement quality controls. 1.4 Maintain material test registers and prepare summary test reports for client and consultant review.
2. Maintain construction quality standards, specifications and contractual agreements	2.1 Monitor compliance with drawings and specification. 2.2 Perform quality induction for all site personnel. 2.3 Inspect materials based on specifications and contractual agreements. 2.4 Inspect workmanship based on approved design and drawings. 2.5 Verify compliance with codes, regulations and standards.

	<p>2.6 Maintain compliance register tracking all approvals, inspections, and certifications.</p> <p>2.7 Report non-conformances and take corrective and preventive actions.</p>
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RANGE STATEMENT	
Construction Materials Tests may include but not limited to:	
<ul style="list-style-type: none"> • Liquid limit • Plastic limit 	<ul style="list-style-type: none"> • Plasticity index
Critical Aspects	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Soil classification systems • Types of Tests • CBR test procedure • Material standards • Concrete mix design • Steel reinforcement grades • Codes, standards and regulations 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation

UNIT TITLE	Manage Construction Activities and Projects
DESCRIPTOR	This unit covers the competencies required to manage construction activities and projects following standard procedures at all times.
CODE	3112-U6-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Prepare workplan and allocate resources	1.1 Prepare work plan based on project scope. 1.2 Develop milestones for key deliverables. 1.3 Allocate resources based on work requirement. 1.4 Optimize resource utilization to ensure efficiency and cost effectiveness. 1.5 Review and update work plan and resource allocation as required.
2. Supervise construction activities and projects	2.1 Communicate work instructions, drawings and specification to the team. 2.2 Monitor compliance with safety, quality and environmental requirements. 2.3 Monitor construction activities and ensure adherence to work plan and specifications. 2.4 Resolve site issues and implement corrective actions. 2.5 Maintain proper documentation and reporting of daily activities.

	2.6 Coordinate with relevant stakeholders to support smooth project execution.
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RANGE STATEMENT	
Resources may include but not limited to:	
<ul style="list-style-type: none"> • Manpower • Plant 	<ul style="list-style-type: none"> • Equipment
Critical Aspects	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Materials and its specifications • Workmanship – Quality, alignment • Commissioning and project closure • Basic Research and Development • Precedence diagramming method • Critical path method • Earned Value Management • RFI management • NCR management • Project management 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation • Leadership

UNIT TITLE	Carry out Construction Site Works
DESCRIPTOR	This unit covers the competencies required to perform construction site operations in accordance with regulatory compliance following standard procedures at all times.
CODE	3112-U7-L4
ELEMENTS OF COMPETENCE	PERFORMANCE CRITERIA
1. Interpret engineering drawings and designs	<p>1.1 Identify and interpret design requirements and project specifications.</p> <p>1.2 Verify dimensions, levels and site measurements for accuracy.</p> <p>1.3 Interpret technical drawings, symbols and construction specification.</p> <p>1.4 Review and coordinate drawings and design documents prior to execution.</p> <p>1.5 Ensure compliance of drawings with applicable codes and standards.</p>
2. Prepare construction site	<p>2.1 Perform site layout, leveling and site preparation activities of construction sites.</p> <p>2.2 Perform setting out of temporary and basic site facilities to ensure site readiness.</p> <p>2.3 Mobilize manpower, materials, equipment and site resources efficiently.</p> <p>2.4 Coordinate site logistics and storage of construction materials.</p>

	2.5 Maintain site readiness in accordance with project requirements and safety standards.
3. Execute concrete, structural and civil construction works	<p>3.1 Perform concrete and reinforcement works based on specifications.</p> <p>3.2 Perform masonry and block works in compliance with quality standards.</p> <p>3.3 Perform wood works for construction activities.</p> <p>3.4 Perform roofing related works based on approved drawings and specifications.</p> <p>3.5 Perform water supply and plumbing systems.</p> <p>3.6 Monitor structural safety and compliance with quality requirements.</p> <p>3.7 Perform curing, finishing and surface treatment activities.</p> <p>3.8 Inspect completed works and rectify defects where required.</p> <p>3.9 Ensure proper use of constructions materials and equipment.</p> <p>3.10 Maintain housekeeping and safety practices during construction activities.</p>

RANGE STATEMENT

Construction sites may include but not limited to:

- | | |
|-------------------------|--------------------------------------|
| • Building construction | • Irrigation and water supply system |
|-------------------------|--------------------------------------|

<ul style="list-style-type: none"> • Road and drainage construction 	<ul style="list-style-type: none"> • Bridge and culvert
Critical Aspects	
<ul style="list-style-type: none"> • Follow Safety procedure at workplace. • Follow standard procedure for all the tasks. 	

UNDERPINNING KNOWLEDGE	UNDERPINNING SKILLS
<ul style="list-style-type: none"> • Ethics and Integrity • OHS regulations • Basic First Aid • Materials and its specifications • Quality control of construction works • Document control • Inspection and test plan • Warranty management • Building drawing interpretations • Foundation Design principles • Pile construction methods • Formwork design principles • Reinforcement detailing • Post-tensioning principles • MEP coordination principles • Waterproofing systems • Building code requirement • Finishing tolerances 	<ul style="list-style-type: none"> • Team Work • Communication • Problem Solving • Interpersonal Relationship • Time Management • Innovation

ANNEXURE

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 the 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.

Bhutan Qualifications Framework (BQF)

Bhutan Qualifications Framework is an integrated national framework that outlines all types of qualification in Bhutan. As an established and nationally accepted instrument, the BQF has been benchmarked against international practices in terms of standards. The BQF aims to recognize all forms of learning systems, including formal, non-formal, and informal learning. It acknowledges technological advancements and recognizes contemporary modes of delivery. It covers a broad range of education systems including the TVET education.

Implementation of TVET Qualifications



* RPL = Recognition of Prior Learning

TVET Qualifications Levels

TVET Qualifications have seven levels as per the BQF, as follows:

Bhutan Qualifications Framework 2023

Table 2: Qualification Types and Levels Based on Education Sector.

BQF Level	Community Education	School Education	TVET	Higher Education	Monastic Education
8				Doctoral Degree	<i>Khewang</i> མཁམ་དབང།
7			Master's Degree Postgraduate Diploma Postgraduate Certificate	Master's Degree Postgraduate Diploma Postgraduate Certificate	<i>Tsugla Gongma</i> གཞུག་ལག་གོང་མ།
6			Applied Degree	Bachelor's Degree Bachelor's Degree (Honours) Graduate Diploma Graduate Certificate	<i>Tsugla Wogma</i> གཞུག་ལག་འོག་མ།
5			Advanced Diploma	Advanced Diploma	
4			Diploma	Diploma	
3		Bhutan Higher Secondary Education Certificate	Certificate 3		<i>Dringrim Gongma</i> འགྲིང་རིམ་གོང་མ།
2		Bhutan Certificate for Secondary Education	Certificate 2		<i>Dringrim Barma</i> འགྲིང་རིམ་བར་མ།
1	ALC		Certificate 1		

Level Descriptors

The TVET Qualification levels are set based on the level descriptors, as defined in the BQF. The detail of the qualification level descriptor is as follow:

Level	Knowledge	Skills	Values	Application
	Knowledge that is:	Demonstrate skills that involve:	Demonstrate values that involve:	Applied in contexts that involve:
4	Broad theoretical, technical and operational	<p>Selecting and applying a range of standard processes relevant to varied and sometimes unpredictable tasks</p> <p>Selecting and applying a range of solutions involving formulation of solutions to resolve complex issues</p> <p>Demonstrating a high level of proficiency in English and Dzongkha</p>	<p>Strong level of awareness of self and others; and an appreciation of belief system, role of social norms, and the importance of relationship building</p> <p>Application of ethical norms and legal rules in decision-making; and comprehending the correlation between values and behavior</p> <p>Commitment to own profession and quality of work</p>	<p>Stable tasks with predictable changes</p> <p>Broad guidance with some self-direction that requires sound judgement</p> <p>Taking some responsibility for planning and coordination with others</p>
3	Theoretical with some technical and operational processes	<p>Applying a range of standard processes to known but varied tasks</p> <p>Selecting and applying a range of solutions to familiar</p>	<p>Sound level of self-awareness and beliefs; and ability to apply social norms and</p>	<p>Stable tasks with some aspects of change</p> <p>General guidance and supervision that require</p>

		<p>and unfamiliar problems</p> <p>Communicating effectively and clearly, both oral and written, in both English and Dzongkha</p>	<p>build relationships</p> <p>Application of a set of ethical norms</p> <p>Commitment to own field of interest and apply self-management of learning and performance</p>	<p>discretion and judgement</p> <p>Adapting to own behaviour to work with others</p>
2	Basic, factual and conceptual	<p>Applying standard processes relevant to carry out known tasks</p> <p>Applying a set of known solutions to solve simple and straightforward issues</p> <p>Using simple and direct exchange of information on familiar and routine matters</p> <p>Developing basic proficiency in Dzongkha and English</p>	<p>Some level of self-awareness and beliefs, and appreciation of social norms; and significance of relationships</p> <p>Awareness of ethical norms, and openness to different activities</p> <p>Developing own knowledge and skills</p>	<p>Structured and stable tasks</p> <p>General support and Supervision that require some discretion and judgement</p> <p>Collaboration with others to achieve goals</p>
1	Foundational, every day and general	<p>Applying operational literacy, numeracy skills required to carry out simple tasks</p> <p>Applying simple solutions to solve simple and straightforward everyday issues</p>	<p>Basic awareness of self, beliefs, and social norms; and understand the significance of relationships</p> <p>Basic awareness of</p>	<p>Highly structured tasks with close support and supervision</p> <p>Minimal Discretion and judgement</p>

		Communicating using everyday expressions and simple phrases in Dzongkha and English	fundamental ethical norms, basic civil rights, and responsibilities Willingness to understand tasks and motivated to implement them successfully	Readiness to work together and share knowledge with others
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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 practices. 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 Technical & Vocational Education and Training Management Information System (TVET – MIS) both in terms of economic sector identification and that of the individual standard.

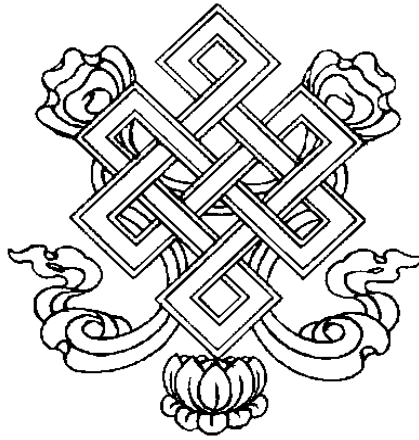
Coding the individual national competency standards

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.



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