TVET STANDARD

TVETS 01:2023

ICS 03.180

Second Edition

TVET Standard — Competency-Based Education, Training and Assessment (CBETA) — Requirements and guidelines

REVISION OF TVET STANDARDS

In order to keep abreast of progress in industry, TVET Standards shall be regularly reviewed. Suggestions for improvements to published standards, addressed to the Director General, Technical and Vocational Education and Training Authority are welcome.

TVET STANDARD

TVET Standard — Competency-Based Education, Training and Assessment (CBETA) — Requirements and guidelines

Technical and Vocational Education and Training Authority
(TVETA), Utalii house, 8th floor,
P.O. Box 35625 - 00100, Nairobi, Kenya

+254 020 2392140

info@tveta.go.ke

TVET AUTHORITY KENYA @ TVETAKenya

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Foreword

Development of the Technical and Vocational Education and Training (TVET) Standards has been necessitated by the need for establishing requirements governing quality of training services in the TVET sector. It is envisaged that through standardization, service delivery disparities that are encountered when services are rendered within the TVET sector will be removed.

Technical and Vocational Education and Training Authority (TVETA) has established a Technical Standards Committee mandated to develop standards through consultations with stakeholders and Kenya Bureau of Standards (KEBS). The Committee is composed of representatives from the TVETA Standards Development Department, public and private sector organizations in the TVET sector.

TVET Standards are developed through a Technical Committee in consultation with key stakeholders and professional experts representing government, regulatory and professional bodies, curricula development and assessment agencies, academia, consumer groups, public and private colleges, universities and other interested parties.

Draft TVET Standards are circulated to stakeholders. The comments received are discussed and incorporated before finalization of the standards, in accordance with the principles and procedures for development of training Standards. Once finalized, the public are then notified through Government gazette.

TVET Standards are subject to review from time to time. Users of the TVET Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

Attention is drawn to the possibility that some of the elements of this document may be subject to patent rights. TVETA shall not be held responsible for identifying any or all such patent rights.

CBETA standard was first gazetted in the year 2019. Since its initial publication in 2019, CBETA Standard has been scrutinized by key stakeholders among them the curriculum developers and assessment bodies where several inconsistencies have been identified. This 2nd Edition, 2023 has addressed those inconsistencies.

During the development of this standard, reference was made to the following documents:

TVET Act, 2013.

TVET Regulations, 2015.

KNQF Act, 2014

Quality Assurance Criteria and Guidelines for the Caribbean Vocational Qualification, March 2009.

FSK Foundation Skills Training Packages © Commonwealth of Australia, 2023.

Philippines TVET Training Regulations – TESDA.

Scottish Qualification Authority Assessment Guide 2015.

Acknowledged is hereby made for the assistance derived from these sources.

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1 Scope

This TVET Standard prescribes requirements and guidelines for development of training standards and curricula for Competency-Based Education, Training and Assessment (CBETA).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

TVETS 02, *TVET Standard — Recognition of prior Learning — Requirements and guidelines*

TVETS 03, *TVET Standard — Trainers Qualification Framework*

ISCED-F 2013, *International Standard Classification of Education (ISCED) — Fields of education and training*

Kenya National Qualification Framework (KNQF), 2014

TVETS 07, *TVET Standard — CBET assessment centre - Requirements and guidelines*

TVETS 08, *TVET Standard — Competence-based assessment (CBA) tools — Requirements and guidelines*

TVETS 09, *TVET Standard - Industrial Attachment — Requirements and Guidelines*

KS 2277-2, *Schools and colleges — Safety for design and technology —Part 2: Planning and services — Guidelines*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
basic competencies
range of set of skills that are essential for successful participation in work and life. They include but not limited to reading, numeracy, communication and employability skills

3.2
core competencies
specific skills and knowledge needed in a particular area of work-industry sector/occupation/job role

3.3
curriculum
structured document that describes the expected learning outcomes, learning experiences, instructional resources and assessments that comprise a specific educational program. Additionally, it represents an articulation of what trainees should know and be able to do and supports trainers in knowing how to achieve these goals

3.4
diagnostic assessment
assessment aimed at identifying a trainee's strengths and weaknesses in order to take necessary action to enhance training

3.5
elements of competency
major tasks that make up each unit of competency

3.6
industry experts
highly experienced incumbent worker in a specific occupation

3.7
occupational profile
overview of the occupation, typical job titles and a set of duties

3.8
occupational standard (OS)
statements of the ideals of performance an individual shall achieve when carrying out the functions of an occupation in the workplace, together with specifications of the underpinning knowledge and skills

3.9
performance criteria
assessable statements which specify the required level of performance for each of the element

3.10
training standards
specifications for knowledge and skills an individual is required to possess to undertake job tasks

3.11
unit of competency
smallest component of a training programme that can be assessed and certified

3.12
unit description
provides general information and describe the competencies to be achieved after completion of a unit

4 Requirements

4.1 National occupational standard development

A national occupational standard shall meet the following requirements:

a) be developed in liaison with the industry;

b) be based on a clear occupational profile setting out the duties carried out by employees in the occupation including the skills, knowledge and work behaviours which will be applied in the workplace and are derived directly from the duties;

c) be aligned with regulatory requirements and professional recognition;

d) validated and approved by industry; and

e) have components that include the following:

4.1.1 Occupational Standard Title

Title of an Occupational Standard reflecting the occupational area, stated as a noun and specifying the level of the Occupational Standard as per the Kenya National Qualifications Framework (KNQF:

Examples

1. Textile Processing Technician Level 6

2. Aquaculture Technician Level 6

3. Plumber Level 3

4.1.2   Occupational Standard Code

The code shall be aligned with the International Standard Classification of Education (ISCED) framework.

4.1.3   Occupational Standard Description

An Occupational Standard shall provide a description of a specified job and:

a)   indicate the skills, knowledge and behaviour necessary to perform a specified job.

b)   reflect the core duties in the specified job.

4.1.4   Occupational Standard Units

An Occupational Standard shall be organized in Competency Units that describe the core and foundational competencies required for the performance of a specific job.

The number of core units of competency shall range between 3 to 12 core units as follows:

a)   Level 6 – minimum of 6 core units

b)   Level 5 – minimum of 4 core units

c)   Level 4 – minimum of 3 core units

d)   Level 3 – minimum of 3 core units

Each Competency Unit shall have the following components:

4.1.5   Competency Unit Title

The title of a Competency Unit shall:

a)   reflect a duty within the specified job.

b)   be written in a language that is:

   i. precise and consistent with the appropriate grammatical structure.

   ii. clear; using active verb(s) to describe the action required.

NOTE   Unit title should be written following the rule: Verb (Action Word) + Modifier (Adjective/Adverb, Qualifier) + Noun (Person, Place or Thing) or Verb + Object + Condition.

Examples of Competency unit title:

1. Test textile materials.

2. Manage beauty parlour.

3. Install solar water heating system.

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4.1.6 Competency Unit Code

4.1.6.1 A Competency Unit shall be assigned an identification code as per the International Standard Classification of Education (ISCED) framework.

4.1.6.2 The unit code based on ISCED shall be as follows:
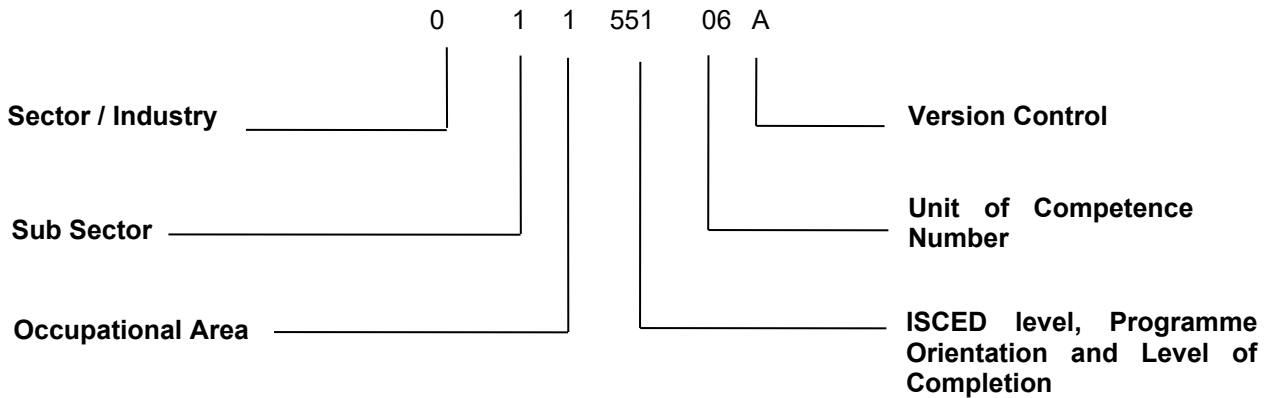
Figure 1 — Programme Identification code for CPA III would be 0411 651A

a) The first two numbers refer to the ISCED Broad Field / sector or industry, such as "04" for Business, administration and law.

b) The next one number refer to ISCED Narrow field / sub sector, such as 04"**1**" Business and administration.

c) The next one number refer to last ISCED Detailed field/occupational area; such as 041"**1**" Accounting and taxation.

NOTE 1   (a)-(c) form the full (ISCED-F 2013) detailed field 0411.

a) The next set of three numbers indicate the ISCED level, programme orientation and level of completion and access to higher ISCED level.

b) The next two numbers refer to the Unit competence number (01, 02, 03 etc.).

c) The letter at the end is a version control code indicating which iteration of the standard is contained.

NOTE 2   Programme code shall comprise of all of the above except (e).

Unit Identification code **0411651/6/A**

04 (Broad Field) – Sector is Business, administration and law

1 (Narrow Field) –Sub Sector is Business and administration

1 (Detailed Field) – Occupation Area is Accounting and taxation

5 (ISCED level) - Diploma level (2 to 3 years)

51 (Program orientation, Level completion) - Professional; Part completion of programme (CPA Section VI)

06 (Unit Number of Competency) – Section VI

A (Version control) – First version (of the programme)

Unit identification Code for CPA Section VI is 0411 551 06A

4.1.7 Competency Unit Description

A Competency Unit description shall provide information on the skills, knowledge and behaviour necessary to perform a specified duty.

The Competency Unit description shall:

    a)   represent a discrete and measurable unit of work; and

    b)   reflect the core tasks in the specified duty.

4.1.8 Competency Unit Elements

A Competency Unit shall have elements that constitute major tasks performed in a specified duty.

Each unit shall comprise a minimum of three and a maximum of twelve elements of competency which shall

    a)   reflect a measurable task performed by a worker;

    b)   have an outcome as either a product, service or decision;

    c)   be written in the form of a statement beginning with a verb;

    d)   describe the object on which the action is performed; and

    e)   describe conditions of the action regarding the object.

NOTE   An element should be written following the rule: Verb (Action Word) + Modifier (Adjective/Adverb, Qualifier) + Noun (Person, Place or Thing) or Verb + Object + Condition.

Examples of competency unit elements:

    1.   Test textile fibres

    2.   Prepare masonry blocks

    3.   Develop communication strategy

4.1.9 Performance Criteria

A Competency Unit element shall have a minimum of three Performance Criteria which shall

    a)   outline steps followed when carrying out a particular job task;

    b)   be demonstrable, measurable and assessable;

    c)   bold and italicise terms and phrases that require specification of scope in a range statement;

    d)   be precise and phrased in a simple language that is easy to understand;

    e)   be written in present simple passive voice; and

    f)   indicate required standard of performance that is recognized in the specific sector/industry.

(See Annex A).

4.1.10 Range Statement

The identified bold and italicised terms and phrases in the Performance Criteria shall be elaborated using a range statement which shall

    a)   describe the tools, equipment, materials, methods and processes significant to the training for work activity.

    b)   describe significant variations which require different skills, methods or processes as required by industry.

    c)   reflect current and future requirements for flexibility and breadth in order to show full competence.

NOTE   The range statement shall apply to the duty as a whole and not to individual tasks and performance criteria.

4.1.11 Required Knowledge

A competency unit shall have specifications for knowledge that a worker shall possess to undertake job tasks to required level of performance.

The required knowledge shall:

    a)   only be included if it refers to knowledge applied in the workplace; and

    b)   indicate type and depth required to meet expected level of job task performance.

NOTE   Required knowledge may include theories, methods, concepts and principles to be understood and applied in a workplace.

4.1.12 Required Skills

A competency unit shall have specifications for skills that are not core to the performance of a job but are necessary to enable a worker undertake job tasks to required level of performance.

NOTE   Required skills shall include basic and common skills that a worker must possess in order to safely and effectively perform job tasks.

4.1.13 Evidence Guide

A competency unit shall have an evidence guide that provide information about how the competency may be demonstrated, such as conditions and context of assessment, suitable methods of assessment and resource implications.

The evidence guide shall indicate:

    a)   the critical performance that a worker must demonstrate;

    b)   required resources for the performance of a job tasks;

    c)   appropriate methods of assessing level of performance of job tasks; and

    d)   appropriate context of assessment.

(Sample format for a competency unit in an Occupational Standard is given in Annex A).

4.1.14 Validation of Occupational Standard

An occupational standard shall be validated by a panel of industry experts prior to be used as a benchmark for CBET curriculum development.

4.2 Competency-Based Education and Training (CBET) Curriculum Development

A competency-based curriculum shall:

   a)   be developed by a mandated agency.

   b)   be developed in reference to an occupational standard that is validated by industry.

   c)   provide preliminary information that include the requirements in 4.2.1 to 4.2.12.

   d)   Provide details of curriculum competency units as in Clause 4.2.13.

4.2.1   Curriculum Title

A curriculum title shall:

   a)   reflect a given occupation and level of training as per KNQF
   b)   be clear and concise.

See Annex B.

4.2.2   Programme Qualification Level

4.2.2.1   A curriculum shall have the programme qualification level indicated on its cover page.

4.2.2.2   The programme qualification level shall:

   a)   match the prescribed Kenya National Qualification Framework (KNQF) Level descriptors; and
   b)   reflect the duration of training as per the KNQF as given in Table 1.

Table 1 — Minimum training duration as per KNQF

Minimum credits to be accumulated (1 credit is equivalent to 10 notional hours)	Type of qualification	Level
480	Bachelor of Technology	7
240	Diploma	6
120	Crafts	5
60	Artisan	4
30	National Vocational Certificate	3

4.2.2.3   The total course duration shall be broken into basic, common and core units of competencies and industry attachment hours.

4.2.2.4 Prior learning shall be considered in determining the training duration at each level depending on prior learning assessment or credit transfers from previous level of study.

NOTE 1   CBET has no fixed timelines to gain the competencies of a given training programme; however, the Kenya National Qualifications Framework (KNQF) provides for a minimum duration expected for an average trainee to attain a specific competence. The specification of time also allows planning for the programme coverage.

NOTE 2   Duration for practical and theory as well as break down of elements durations (for a training programme) shall be provided. The Training Programme shall also indicate the competences to be developed during the attachment.

4.2.3   Curriculum code

A curriculum shall be assigned an identification code as per the International Standard Classification of Education (ISCED) framework and shall be the same as the respective occupational standard code.

4.2.4   Curriculum description

4.2.4.1 A curriculum shall provide a description of competencies to be developed by a trainee in line with requirements for performance of a specified job.

4.2.4.2 The curriculum description shall:

a)   indicate skills, knowledge and behaviour necessary to perform a specified job.

b)   reflect core duties to be performed by a trainee upon successful completion of training.

4.2.5   Curriculum copyright statement

A curriculum shall have a copyright owner and a copyright statement indicated in one of the preliminary pages.

4.2.6   Foreword and Preface

The foreword and the preface shall be signed.

4.2.7   Trainee entry requirements

A curriculum shall provide trainee entry requirements as per the KNQF *(Refer to Annex C)* and adhere to:

a)   set cluster subjects requirements; and

b)   professional body and/ or regulator's requirements.

4.2.8   Gender and diversity inclusion in training

Each training programme shall

a)   take into account gender and diversity inclusion in the development of curricular, training/ learning materials, training delivery and conduct of assessments; and

b)   make necessary accommodation for training and assessment of Persons with Disabilities (PWDs).

NOTE   An accommodation shall be aimed at eliminating or reducing training and assessment bias for candidates with special needs and providing them with an equitable access to training and assessment. However, the accommodation shall not fundamentally lower the quality of the assessment or alter the skills or knowledge being assessed.

4.2.9   Trainers' qualification

4.2.9.1 A curriculum shall provide qualification of trainer(s) that would be involved in implementing the curriculum in accordance with TVETS 03.

4.2.9.2 The trainer shall:

    a) possess a higher qualification than that of the curriculum being implemented;

    b) possess pedagogical training from a recognized institution; and

    c) be licensed by TVETA.

4.2.10 Competency assessment requirements

4.2.10.1 A curriculum shall provide clear guidelines for:

    a) conduct of diagnostic, formative and summative assessments.

    b) weighting of formative and summative assessments in the overall assessment score.

    c) assessment performance rating (Refer to Annex D).

    d) assessment process (See Annex E for assessment principles and process).

    e) RPL assessment as per TVETS 02.

4.2.10.2 Competency assessments shall be conducted in accordance with TVETS 07 and TVETS 08.

4.2.11 Competency certification

4.2.11.1 Assessment and certification shall be conducted by a recognized Qualification Awarding Institution (QAI).

4.2.11.2 A Certificate of Competence (COC) indicating partial qualification shall be issued to individuals who satisfactorily demonstrate competence in a competency unit.

4.2.11.3 A full qualification shall be awarded when a candidate has demonstrated competence in all competency units that comprise a qualification.

NOTE   Recognition of Prior Learning (RPL) may lead to award of a Certificate of Competence (COC) or full qualification.

4.2.12 Industrial attachment

4.2.12.1 A curriculum shall provide guidelines on the conduct of industrial attachment.

4.2.12.2 Industrial attachment shall:

    a) form an integral part of the training programme;

    b) be of a duration as prescribed by KNQF and/or relevant professional bodies; and

    c) be conducted in reference to TVETS 09.

4.2.13 Curriculum competency units of learning

4.2.13.1 A curriculum shall be comprised of basic, common and core competency units of learning.

4.2.13.2 A curriculum competency unit of learning shall:

    a) be aligned to a competency unit in the respective Occupational Standard;

    b) be the smallest component of a training programme that will be assessed for certification;

    c) form the basis for award of Certificate of Competence (COC) for successful completion of a Competency Unit; and

    d) comprise the details in 4.2.13.2.1 to 4.2.13.2.9.

4.2.13.2.1   Curriculum competency unit of learning title

The title of a curriculum competency unit of learning shall:

    a) be concise and clear statement;

    b) reflect the competencies to be developed; and

    c) be referenced to a Competency Unit in an Occupational Standard.

4.2.13.2.2   Competency unit of learning code

A Competency Unit of learning shall be assigned an identification code as per the International Standard Classification of Education (ISCED) framework and be as in a respective Occupational Standard unit.

4.2.13.2.2.3 Competency unit of learning training duration

A Competency Unit of learning shall provide the training duration required to successfully undertake the training. The training duration shall

    a) be stated in notional hours; and

    b) include both trainer-trainee contact hours and hours for undertaking training assignments.

4.2.13.2.2.4 Competency unit of learning description

A Competency Unit of learning description shall provide information on the skills, knowledge and attitude to be acquired by a trainee at the end of training.

The Competency Unit of learning description shall:

    a) represent a discrete and measurable unit of work;

    b) be aligned to the description of respective Occupational Standard unit; and

    c) reflect training learning outcomes.

4.2.13.2.2.5 Learning outcomes

A Competency Unit of learning shall have a minimum of three learning outcomes which shall:

    a) be aligned to a respective element in an Occupational Standard;

    b) reflect the knowledge, skills and attitudes that a trainee need to acquire; and

    c) clearly indicate a measurable task that a trainee should be able to perform as a result of training.

NOTE   A learning outcome should be written following the rule: Verb (Action Word) + Modifier (Adjective/Adverb, Qualifier) + Noun (Person, Place or Thing) or Verb + Object + Condition.

4.2.13.2.2.6 Training content

The training content shall:

    a) be aligned to learning outcomes;

    b) provide for development of skills, knowledge and attitudes needed to achieve respective learning outcomes;

    c) adequately address performance criteria of all the elements of competency in the respective Occupational Standard; and

    d) be organized logically.

4.2.13.2.2.7 Assessment methods

A curriculum shall provide suggested method(s) of assessing attainment of respective learning outcomes. Suggested assessment method(s) shall:

a) be those that adequately measure ability of trainees to perform job tasks reflected in respective learning outcomes; and

b) provide for assessment of acquired skills, knowledge and attitude necessary for performance of job tasks.

4.2.13.2.2.8 Training delivery method(s)

A curriculum shall provide training delivery method(s) for each unit of competency. The selected delivery method shall:

a) enable a trainee to achieve intended learning outcomes;

b) cater for different learning experiences;

c) promote individualized and self-paced learning; and

d) allow for clear identification of training and learning activities.

NOTE   Multiple training delivery methods should be suggested in the curriculum.

4.2.13.2.2.9 Required training resources

Each programme shall provide the range of training resources required for successful curriculum implementation. The training resources shall:

a) include a list of tools, equipment and machines, materials and services;

b) include theory rooms, workshops, laboratories and/ other structures such as demonstration fields that would be needed for training delivery while considering space requirement in accordance with KS 2277-2;

c) be relevant to the expected learning outcomes; and

d) be adequate for a maximum of 25 trainees per training session for programmes requiring workshop and/or laboratory and 30 trainees for those programmes that do not require workshop and/or laboratory such as business programmes.

(See Annex F for a sample format of a CBET curriculum).

4.2.14 Validation of CBET curriculum

CBET curriculum shall be validated by a panel of industry and subject experts prior to submission to TVETA for approval.

5 Guidelines for the development and/or review of CBET programmes

5.1 The programme shall be designed to operate within the Kenya National Qualification Framework and shall allow for lifelong education and training.

5.2 The programme shall fulfill the following requirements of the TVET Act Section 32:

a) innovativeness and creativity;

b) continuation of training for improvement of professional qualifications and updating of knowledge, skills and understanding;

    c)   complementary education for those receiving technical, vocational and education training in the form of on-the-job training or other training in institutions or other facilities;

    d)   the special needs of persons with disabilities, minorities and marginalized groups.

5.3 Introduction of new and/or review of CBET programme shall follow the following steps:

Step 1: Submit a proposal to TVETA in a prescribed format (*See Annex G*) seeking approval for development or review of a training programme that satisfies an occupation training gap as per TVET Regulations 2015 Paragraph 15. The proposal shall be accompanied by a training needs assessment report.

Step 2: Upon approval of development or review of a programme, the curriculum developers shall use Occupational Standard to develop the training programme and assessment tools.

Step 3: Curriculum developer submits the developed or reviewed programme to TVETA for approval.

Step 4: KNQA registers the TVETA approved programme as a qualification.

Step 5: TVETA accredits the approved programme for roll out.

Step 6: The curriculum developer pilots the approved programme in a TVETA accredited TVET institution and adjusts the curriculum as necessary.

Step 7: TVETA monitors the implementation of the curriculum.

(See Annex H for a flow chart on introduction of new or reviewed CBET programme).

6   Competency-based assessment

6.1 The curriculum developer shall:

    a)   develop Occupational Standard Performance Criteria weighting in liaison with industry experts; and

    b)   develop Occupational Standard assessment requirements in liaison with industry experts.

6.2 Competency-based assessments shall be conducted in accordance with TVETS 07.

6.3 Assessment tools for assessing trainee's competence shall be developed in accordance with TVETS 08.

7   CBET curriculum approval

7.1 CBET curriculum shall be approved by the top management of the curriculum development body before it is submitted to TVETA for approval.

7.2 For approval by TVETA, a curriculum developer shall be required to submit the following:

    a)   a forwarding letter indicating curriculum/curricula being submitted for approval;

    b)   evidence of internal approval e.g., council minutes;

    c)   training needs assessment report for the curriculum/ curricula submitted for approval;

    d)   occupational standard (s) used to develop the curriculum/ curricula;

    e)   competency-based curriculum/curricula;

    f)   performance criteria weighting; and

    g)   OS and Curriculum validation reports.

8 Development of CBET training materials

CBET learning materials for specific curriculum shall be:

   a) developed by an entity(s) authorized by the curriculum developer.

   b) verified and approved by the curriculum developer prior to publishing.

Annex A
(informative)

Sample format for a Unit of Competency in an Occupational Standard

(Showing unit title, code, description, elements and performance criteria, range, required knowledge and skills and evidence guide)

Competency Unit Title: TEST TEXTILE MATERIALS

Unit Code: 0723 551 09 A

Competency Unit description

This unit describes competencies required by a Textile Processing Technician to test textile materials. Competencies under the unit include ability to test textile fibres and yarns, inspect gray fabric and test finished fabric. The elements and performance criteria under this unit are as outlined in the table below:

ELEMENTS AND PERFORMANCE CRITERIA

ELEMENT These describe the key outcomes which make up workplace function	PERFORMANCE CRITERIA These are assessable statements which specify the required level of performance for each of the elements. *(Bold and italicized terms are elaborated in the Range)*
1. Test textile fibres	1.1 ***Personal protective equipment (PPEs)*** is worn according to job requirement. 1.2 ***Test environment*** is conditioned according to International Textile Testing Standards. 1.3 ***Fibres tests*** are selected according to job requirements. 1.4 ***Fibre testing equipment*** are selected and set up according to test specification. 1.5 ***Fibre samples*** are obtained according to test specification. 1.6 Fibre samples are conditioned according to test specification. 1.7 Prescribed test is carried out according to International Textile Testing Standards. 1.8 Test results are recorded according to International Textile Testing Standards.
2. Test textile yarn	2.1 PPEs is worn according to job requirement. 2.2 Test environment is conditioned according International Textile Testing standards. 2.3 Yarn samples are obtained according to test specification. 2.4 ***Yarn tests*** are selected according to the job requirements. 2.5 ***Yarn testing equipment*** are selected and set up as per test requirements. 2.6 Yarn samples are conditioned according to International Textile Testing Standards for yarn testing. 2.7 Prescribed test is carried out according to International Textile Testing Standards. 2.8 Test results are recorded according to International Textile Testing Standards.
3. Inspect gray fabric	1.1 PPEs is worn according to job requirement. 1.2 Gray fabric samples are obtained according to organizational test procedures. 1.3 ***Fabric test*** is selected according to customer requirements 1.4 ***Fabric testing equipment*** are selected and set up according to International Textile Testing Standards. 1.5 Fabric samples are conditioned according to International Textile Testing Standards. 1.6 Prescribed test is carried out according to International Textile Testing Standards. 1.7 Test results are recorded according to International Textile Testing Standards.
4. Test finished textile	4.1 **PPEs** is worn according to job requirement. 4.2 Finished textile are obtained and selected according to International Textile Testing Standards. 4.3 Finished textile are inspected according to International Textile Testing Standards. 4.4 ***Finished textile defects*** are identified according to organizational procedures. 4.5 Finished textile test results are documented according to organizational procedures.

RANGE

This section provides work environments and conditions to which the performance criteria apply. It allows for different work environments and situations that will affect performance.

Variable	Range	\
1. **PPEs** may include but not limited to:	• Dust coats • Nose mask • Gloves	
2 **Test environment** may include but not limited to:	• Temperature • Humidity	
3 **Fibre** tests may include but not limited:	• Staple length • Fibre fineness • Fibre maturity • Fibre strength • Trash content	
4 **Fibre testing equipment** may include but not limited to:	• Fibro graph • Trash analyser • Comb sorter • High volume instruments (HVI)	
5 **Fibre samples** may include but not limited to:	• Tuft • Fleece • Lap • Sliver • Roving	
6 **Yarn tests** may include but not limited to:	• Tensile strength • Twist • Naps • Evenness • Count	
7 **Yarn testing equipment** may include but not limited to:	• Beam balance • Strength tester • Evenness tester • Wrap reel	
1. **Fabric tests** may include but not limited to:	• Tearing • Dimensional stability • Density • weight	
2. Finished textile defects may include but not limited to:	• Tearing tester • Washing machine • Light fastness tester (Zeno tester) • Perspiration • Crockmeter • Abrasion tester • Foreign materials • Missing ends • Missing picks • Thick and thin places • Stains • Starting marks • Reed marks • Colourfastness • Abrasive resistance • Absorbency • Colour variation • Holes • Stains • Foreign materials	

REQUIRED KNOWLEDGE

The individual needs to demonstrate knowledge of:

- Specified textile standards
- Sampling techniques
- Documentation
- Textile processes

REQUIRED SKILLS

The individual needs to demonstrate skills in:

- Communication
- Data collection
- Analytical
- Team building
- Innovative

EVIDENCE GUIDE

This provides advice on assessment and must be read in conjunction with the performance criteria, required knowledge and skills and range.

1. Critical Aspects of Competency.	Assessment requires evidence that the candidate:
	1.1 Selected fibre tests according to job requirements
	1.2 Collected fibre samples according to test specification
	1.3 Conditioned fibres samples according to test specification
	1.4 Carried out prescribed tests according to international textile standards
	1.5 Selected yarn tests according to the organisational requirements
	1.6 Selected yarn testing equipment according to organisational requirements
	1.7 Selected fabric test according to customer requirements
	1.8 Selected fabric testing equipment according to international textile testing standards
	1.9 Tested finished fabrics according to international standards of textile testing
2. Resource Implications.	The following resources should be provided:
	2.1 Access to relevant workplace where assessment can take place
	2.2 Simulated environment
	2.3 Resources relevant to the proposed activity/ task
3. Methods of Assessment.	Competency may be assessed through:
	3.1 Practical
	3.2 Portfolio of evidence
	3.3 Third Party Report
	3.4 Interviews
	3.5 Written assessment
	3.6 Oral Questioning
4. Context of Assessment.	Competency may be assessed in the workplace or in a simulated workplace environment

Annex B
(informative)

Examples of Occupational Standards and Curriculum Titles

S/No.	Occupational Standard Title	Curriculum Title
1.	Textile Processing Technician Level 6	Textile Processing Technology Level 6
2.	Aquaculture Technician Level 6	Aquaculture Technology Level 6
3.	Plumber Level 3	Plumbing Level 3

Annex C
(normative)

Entry to various levels of TVET as provided by the KNQF

KNQF Level	Qualification description	Minimum entry requirements
7	Bachelor's Degree/Management Professional/Master Craft Person I Qualifications/KNQF level 7	Person I Qualifications/KNQF level 7 KCSE C+ or equivalent or A level two principals or equivalent in relevant subjects or CPA II/CPS II/CIPS II or equivalent for commerce and art and should have attained an aggregate of C- (minus) in KCSE or O-level division III or completion of KNQF 6
6	Diploma certificate /Technicians/ Skilled Supervisors/Master Craft Person II Qualifications	KCSE C- (Minus) or KCE division III, KACE 1 Principal and 1 Subsidiary or General Certificate of Education (Advanced level) UK or an equivalent qualification of KNQF 5
5	Craft certificate /Vocational Training Certificate IV (VTC IV)/Master Craft Person III/Advanced Operator qualifications /KNQF level 5	KCSE D (plain), KCE Div. III or equivalent qualifications or completion of KNQF level 4
4	Artisan Certificate/Vocational Training Certificate III (VTC III)/ Skills Certificate I (SC I)/Trade Test I (TT I)/Skilled Operator qualifications /KNQF Level 4	Primary level qualification, junior secondary qualification, KCSE E, KCE Div. IV, or completion of KNQA level 3
3	Skills Certificate II (SC II)/Trade Test II (TT II)/Vocational Training Certificate II (VTC II)/ Semi-Skilled Operator qualifications/KNQF Level 3	Primary Education, junior secondary education, Or completion of KNQF level 1 & 2
2	Secondary certificate/ SC III/TT III/VTC I/Pre-Vocational	Primary certificate (KNQF1)
NOTE 1 Prior learning shall be considered for entry at various levels after assessment for competence. NOTE 2 Special and inclusive education shall be considered.		

Annex D
(informative)

Rating Scale

A rating scale is a scoring tool that lists the criteria for making judgments on competence. It also articulates gradations of quality for each criterion, from not yet competent to mastery competent. A rating scale clarifies expectations of instruction and assessment and is a useful tool for the trainer and the assessor. It can also be used by the trainee to monitor and improve overall performance.

Example

Score (%)	Rating	Narrative	Competence Level
80 - 100	**5.**	Mastery of technical and related knowledge and skills; Can perform the task demonstrating mastery, autonomy, responsibility and control in a wide range of working condition.	**Mastery**
65 - 79	**4.**	Good working technical and related knowledge and skills. Can perform the task in a wide range of working conditions, demonstrating good working knowledge of the skill, initiative, and adaptability to problem situations.	**Proficient**
50 - 64	**3.**	Satisfactory technical and related knowledge and skills; Can perform the task demonstrating sufficient knowledge of the skill, and an ability to operate satisfactorily displaying **some** initiative and adaptability to problem situations.	**Competent**
49 and below	**2.**	Insufficient technical and related knowledge and skill, Can perform limited parts of the task satisfactorily but require considerable assistance	**Not Yet Competent**

Annex E
(informative)

Assessment Principles and Process

| Assessment Principles: | Assessment shall only be conducted by registered assessors. Assessors shall be subject matter experts and trained in RPL Assessment and preferably have industry experience. The following are key aspects proposed to be followed when assessing candidates:

• Following the review of all the assessment components (Portfolios of Evidence, Competence Interviews and/or practical tasks), the assessor decides whether evidence presented provides full and ample proof that the unit standards have been met;
• The assessor records assessment marks and makes recommendation to the moderator;
• All RPL assessment procedures should be consistent with national assessment procedures.

To ensure assessment are of high quality and integrity, assessors and moderators shall diligently apply the following accepted assessment principles:

✓ **Systematic**: Assessment activities shall follow a practical and natural sequence, be easy to administer and easy for the trainee to follow.
✓ **Consistent:** Assessment is consistent where, given similar evidence and circumstances, an assessor would make the same judgements again; or where assessment by other assessors would lead to the same judgement;
✓ **Open:** Trainees are given the opportunity to contribute to the assessment planning and collecting of evidence. The assessment process is transparent;
✓ **Flexible:** Flexible assessment allows for easy entrance into appropriate levels of education and training and for multiple pathways to the same learning ends in a manner, which facilitates progression. It also uses a variety of assessment approaches, methods and instruments;
✓ **Appropriate:** The method of assessment is suited to the competencies being assessed as stipulated in the registered unit standard;
✓ **Manageable:** The assessment shall be easy to arrange, cost-effective and practical. It should take into consideration available facilities, equipment and time;
✓ **Fair:** Assessment shall be unbiased and not hinder or advantage a trainee in any way. Assessors shall make sure that the chosen approach, methods and instruments support the principle of fairness. They shall avoid influences not related to the matters being assessed; for example, arising from differences related to race, gender and assessment method.
✓ **Integrated**: Assessment should be an integral part of standard setting and curriculum, not something added on afterwards. The teaching and learning elements of each program should be designed in the light of the types of assessment trainees undertake and evidence required, and vice versa, so that trainees can demonstrate what they have learned and provide the evidence required by the unit standard(s). The assessment shall be in line with what the trainee has to do at work. (Ideally, the assessment takes place during normal working processes.)
✓ **Valid:** Validity in assessment refers to an assessment measuring what it is supposed to. If a unit standard requires observation as evidence of performance, then a written examination alone will not be valid. Assessment procedures, methods, instruments and materials have to match what is being assessed. To be fit for its purpose, assessment shall use evidence directly related to the type and level of performance required in a specified standard;
✓ **Authentic:** The assessor shall be satisfied that the work being assessed is the trainee's own work. In the case of RPL, evidence like certificates and testimonials may have to be referenced for authenticity.
✓ **Current**: The evidence shall reveal what the trainee is currently able to do. The evidence, standards and training material shall be up to date with current technology and other industry-specific developments.
✓ **Sufficient:** 'Sufficient means that the assessor shall make sure that the evidence |

	collected meets all requirements of the performance criteria of the unit standard. Sufficient evidence also implies that the trainee can repeat the required performance consistently; ✓ **Reliable:** 'Reliable' evidence is evidence that will be acceptable by all assessors and which can be repeated in various circumstances. Reliability in assessment is about consistency.
NOTE Where evidence gaps in the Portfolio of Evidence of a candidate are evident, assessors should, during the competence interview and the practical assessments, determine if the evidence gaps still exist. If they still exist, candidates will be declared not yet competent in these unit standards. All the gaps identified should be recorded and detailed in the final assessment report.	

Post-Assessment Review	
Moderation:	The *post assessment review* process comprises of moderation and external verification. Moderation of trainee assessment is a process aimed at ensuring that marks and grades are as valid, reliable, and fair as possible for all trainees and all markers. Moderation strategies may differ depending on the number of trainees studying the unit and the number of training staff involved. However, the process usually involves collaborative decision making by trainers/assessors about assessment criteria and expectations. Double assessment is usually carried out when a candidate received a fail grade. Moderation is more than the checking of assessment marks; it is the checking of assessments to ensure that the whole assessment process is fair, valid and reliable enabling equivalence and comparability. Assessments conducted are moderated with the aim of enhancing the quality and integrity of assessment in the TVET sector. Registered moderators need to validate that assessments were done consistently based on approved guidelines, best practices and principles of assessment. The moderator should indicate through a form provided in the portfolio of evidence that the assessment outcomes are a clear reflection of the candidates' competence and either endorse, or adapt the assessment of the assessor. In extreme circumstances, a moderator could request re-assessments or additional assessments.
External Verification:	External verification is done to ensure that the approved standards for awarding a qualification are met. External verification is also organized to maintain the overall credibility of the Assessment practices and processes in compliance with the Authority's Standards and Guidelines. External verifiers determine whether the moderator has correctly evaluated the evidence supplied by the assessor. Once the verifier has established that the moderation process was adequately conducted, he or she endorses the candidate's achievement. However, if the verifier identifies irregularities in the moderation and/assessment process, the candidates achievement may not be endorsed. Some examples of irregularities are: • Insufficient or no records of candidate's achievement are available, due to missing records; • Insufficient evidence of assessment or learning was supplied; • Assessor incorrectly interpreted the evidence supplied by candidate and judged the candidate to be competent when unit standards or specific outcomes have not been met.
Certification (Issuing of certificates)	

After the moderator and external verification processes have been completed, the candidate is informed of the outcome of the assessment by the Certification Agencies following the Recognition of Prior Learning (RPL) procedure.

Candidates shall be found competent (C) if they comply with the competence requirements specified by the Certification Agencies for all the unit standards of a qualification.

If candidates are found competent in some or none of the unit standards, they shall be declared Not Yet Competent (NYC). However, candidates shall receive credits for those unit standards in which they were found competent.

Appeal Procedures	
Legal instruction:	Candidates should be informed of their right to appeal during their induction or mentoring. Candidates may appeal if they do not agree with the outcome of their assessments. The appeal should be lodged within 15 days after having been notified of the assessment results.
Mitigation:	It is recommended that candidates first discuss their concerns with the assessor and if still not satisfied, follow the Certification Agencies appeal procedures.

Gap (Top-up) Training
Candidates, who want to, shall be given an opportunity to receive gap (top-up) training in those unit standards where they are found to be not yet competent to enable them to achieve a full qualification.

Re-assessment
Once candidates have successfully completed the top-up training, they shall be re-assessed in the unit standards which they were found not yet competent. This shall be followed by certification.

Record Keeping
- Certification Agencies shall maintain a national database of trainee records and assessment results;   - Assessment providers shall keep record of all assessment information in line with the Certification Agencies procedures;   - Portfolios of Evidence and other relevant assessment documents shall be kept in a safe place;   - Assessment records and documents shall be made available to the Authority on request;   - Records and marks should be handled in accordance to the Certification Agencies' policies and procedures.

Annex F
(informative)

Sample format for a Competency Unit in a CBET Curriculum

(Showing unit title, code, description, learning outcomes, content, suggested assessment methods, suggested methods of training delivery and recommended training resources for 25 trainees)

Competency Unit Title: TEXTILE TESTING

Unit Code: 0723 551 09 A

Relationship to Occupational Standards

This unit addresses the Unit of Competency: Perform Textile Testing

Duration of Unit: 140 hours

Unit description

This unit describes competencies required by a Textile Processing Technician to test textile materials. Competencies under the unit include ability to test textile fibres and yarns, inspect gray fabric and test finished fabric. The learning outcomes, training content and suggested assessment methods under this unit are as outlined in the table below:

Summary of Learning Outcomes

1. Perform textile fibre testing
2. Perform textile yarn testing
3. Inspect gray fabric
4. Test finished fabric

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Test textile fibres	• Introduction to fibres • Sources of textile fibres • Textile fibres classification • Textile fibre properties • Fibre testing equipment • Fibre sampling methods • Fibre testing: - • Textile fibre reference standards • Documentation of testing results	• Practical test • Project • Portfolio of evidence • Third party's report • Written tests • Oral questioning
2. Test textile yarn	• Safety operations • Textile yarn testing equipment • Yarn testing equipment operation • Textile yarn properties • Yarn defects	• Practical test • Project • Portfolio of evidence

Learning Outcome	Content	Suggested Assessment Methods
	• Yarn testing • Textile yarn reference standards • Sampling methods • Documentation of testing results	• Third party's report • Written tests • Oral questioning
3. Inspect gray fabric	• Safety operations • Gray fabric testing equipment • Equipment operation • Gray fabric properties • Gray fabric defects • Fabric defect mending • Gray fabric grading • Documentation of inspection results	• Practical test • Project • Portfolio of evidence • Third party's report • Written tests • Oral questioning
4. Test finished fabric	• Safety operations • Finished testing equipment • Equipment operation • fabric properties • Finished textile defects • Finished textile reference standards • Sampling methods • Documentation of testing results	• Practical test • Project • Portfolio of evidence • Third party's report • Written tests • Oral questioning

Suggested Methods of Training Delivery

- Practical
- Projects
- Demonstration
- Group discussions
- Industrial visits

Recommended Resources for 25 Trainees

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
A	**Learning Materials**			
1.	Textbooks		5 pcs	1:5
2.	Textile testing equipment manuals			
3.	Charts			
4.	Powerpoint presentations	For trainer's use		

S/No.	Category/Item	Description/ Specifications	Quantity	Recommended Ratio (Item: Trainee)
5.				
B	**Learning Facilities & infrastructure**			
1.	Lecture/theory room		1	1:25
2.	Workshop		1	1:25
3.	Laboratory		1	1:25
C	**Consumable materials**			
1.	Textile raw materials			1:5
2.	Textile yarns, threads, twines			1:5
3.	Textile fabrics			1:5
4.				
D	**Tools and Equipment**			
1.			25 pcs	1:1
2.			25 pcs	1:1
3.			25 pcs	1:1
4.			25 pcs	1:1

Annex G
(normative)

Application form for programme development

SECTION A: PROGRAMME DEVELOPER PARTICULARS

Name of Institution				
TVETA Registration Number (where applicable)				
Postal Address	P.O Box		**Code:**	**Town:**
Physical Address	**Location/Building**			
	Road/Street:			
Telephone No.				
e-mail and website				
Contact Person	Name:		Designation:	
	Tel.:		Email:	

SECTION B: PROPOSED PROGRAMME(S)

S/No.	Programme Title	Qualification Level	Assessment Body
1.			
2.			
3.			
4.			
5.			

SECTION C: PROPOSED PANELS OF EXPERTS

C.1: INDUSTRY EXPERTS FOR OCCUPATIONAL STANDARD DEVELOPMENT

Notes:

1. An industry expert is a highly experienced incumbent worker in a specific occupation.

2. A panel should have a minimum of **five** industry experts constituted as follows:

    i. A minimum of **three** persons with equivalent qualification level to that of the programme being developed.

    ii. A minimum of **two** persons with qualifications that are one or two levels above that of the programme being developed may also be engaged.

    iii. Experts referred to in (ii) above shall not exceed the number of experts in (i)

3. The industry experts should have a proven industrial experience of at least five years.

OCCUPATIONAL STANDARD TITLE:						
S/No.	Name of industry expert	Qualification title and level	Place of work and designation	Years of experience	Professional body registration (where applicable)	Email address	Mobile phone No.
1.							
2.							
3.							
4.							
5.							
6.							

C.2: SUBJECT EXPERTS FOR CBET CURRICULUM DEVELOPMENT

Notes:

1. A subject expert is a person who has accumulated great knowledge in a particular field or topic.
2. A panel should have a minimum of **five** subject experts.
3. The experts should have a proven training experience in the subject area for at least five years.
4. Demonstrated competency in the subject matter.

CBET CURRICULUM TITLE:							
S/No.	Name of subject expert	Qualification title and level	Place of work	Years of experience	Professional body registration (where applicable)	Email address	Mobile phone No.
1.							
2.							
3.							
4.							
5.							
6.							
7.							

TVETS 01:2023

SECTION D: DECLARATION
(Curriculum Developer)

I, _____ (Full Name)

the undersigned representative of,

(Institution name)
_____

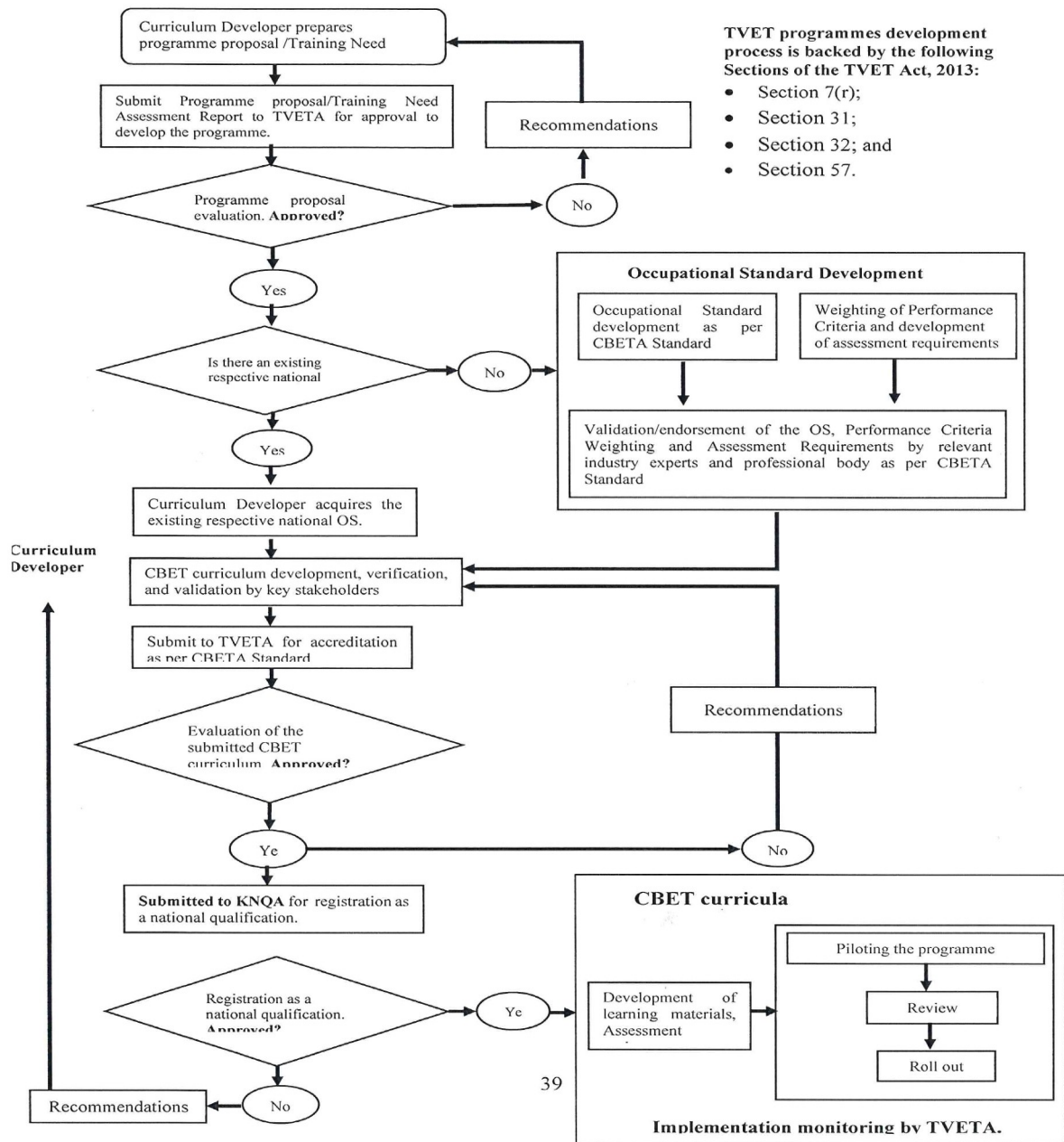declare and acknowledge that the information given in this Application Form is true and accurate to the best of my knowledge.

_____   _____
Signature   Date

(Completed application form to be sent to: info@tveta.go.ke)

Annex H
(normative)

Application form for programme development

TVET programmes development process is backed by the following Sections of the TVET Act, 2013:
- Section 7(r);
- Section 31;
- Section 32; and
- Section 57.

Curriculum Developer prepares programme proposal /Training Need

Submit Programme proposal/Training Need Assessment Report to TVETA for approval to develop the programme.

Recommendations

Programme proposal evaluation. **Approved?**

No

Yes

Is there an existing respective national

No

Yes

Occupational Standard Development

Occupational Standard development as per CBETA Standard

Weighting of Performance Criteria and development of assessment requirements

Validation/endorsement of the OS, Performance Criteria Weighting and Assessment Requirements by relevant industry experts and professional body as per CBETA Standard

Curriculum Developer acquires the existing respective national OS.

Curriculum Developer

CBET curriculum development, verification, and validation by key stakeholders

Submit to TVETA for accreditation as per CBETA Standard

Recommendations

Evaluation of the submitted CBET curriculum **Approved?**

Ye

No

Submitted to KNQA for registration as a national qualification.

CBET curricula

Development of learning materials, Assessment

Piloting the programme

Review

Roll out

Registration as a national qualification. **Approved?**

Ye

39

Recommendations

No

Implementation monitoring by TVETA.