# Briefing by the Department of Higher Education and Training (DHET) and the Quality Council for Trades and Occupations (QCTO) on progress in the review of the TVET and CET sector's curriculum to respond to industry needs and review of the TVET examination cycles

## QCTO PRESENTATION

## 21 October 2020

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# Legislative Mandate

- The Quality Council for Trades and Occupations (QCTO) is mandated by the National Qualifications Framework Act (2008) as amended,
  - to oversee the development and maintenance of the Occupational Qualifications Sub-Framework (OQSF) in the National Qualifications Framework (NQF), and
  - advise the Minister of Higher Education, Science and Technology on all matters of policy concerning the OQSF, occupational standards and qualifications.
- The Skills Development Act (2008) as amended, which enabled the establishment of the Quality Council for Trades and Occupations (QCTO), also provides for
  - the establishment and maintenance of occupational standards and qualifications for example; Historically Registered Qualifications, Occupational Qualifications, Part Qualifications and Skills Programmes in and for the workplace.
- The National Qualifications Framework Act (2008) as amended, mandates the QCTO to provide quality assurance for qualifications on the OQSF and registered on the NQF.
- QCTO therefore responsible for the macro framework.

# Key policy imperatives

- The QCTO is geared towards the implementation of key policies and strategies over the next five years:
    - White Paper for Post-School Education and Training
    - National Skills Development Plan
    - National Plan for Post-School Education and Training
    - New SETA landscape
    - Implementation of Service Level Agreements (SLAs) to Revoke the quality assurance functions delegated to SETAs
    - Absorption of NAMB into the QCTO
    - Implementation of Workplace-Based Learning Regulations
    - Implementation and expansion of occupational qualifications, part qualification and skills programmes by accredited skills development providers in the PSET sector (for example; TVET and CET colleges (expansion of Centres of Specialisation), Universities of Technology, and Comprehensive Universities.

# Strategic Plan (2020-2025)

- The QCTO mandate as espoused in its Strategic Plan (2020-2025), the Annual Performance Plan (2020/21), its policies and strategies like the revised OQSF policy together with the implementation of a National Quality Assurance System, will further strengthen the QCTOs resolve to support national imperatives (MTSF 2019-2024) (Priority 2: Education, Skills and Health) as well as the Department of Higher Education and Training (DHET) outcomes (Strategic Plan 2020-2025) in collaboration with the Department of Science and Innovation (DSI):
    - Expanded access to PSET opportunities
    - Improved success and efficiency of the PSET system
    - Improve quality of PSET provisioning and
    - A responsive PSET system

# QCTO 2020-2025 Strategic Imperatives

- In respect of achieving its full legislative mandate, over the next five years, the QCTO will be directed by the following strategic imperatives adopted by its Council:
  - Creating a dynamic OQSF
  - Adopting a special focus on TVET and CET Colleges and
  - Creating a QCTO that is a learning organisation

# The Implementation of a National Quality Assurance System (NQAS)

- The implementation of a National Quality Assurance System will amongst others,
  - ensure a well-coordinated and integrated quality assurance regime across SETAs, Approved Workplaces, Skills Development Providers, (including TVETs and CETs), Assessment Partners (which include the DHET), etc. that will lead to QCTO issuing certificates to qualifying learners (occupational qualification types in line with the nomenclature of the revised OQSF policy), that will make them more employable and which may lead to self-employment.

# Revised OQSF

- It is envisaged that through the approval, by Minister Nzimande, for publication of the Determination of the Occupational Qualifications Sub-Framework (OQSF) and the reinstatement of the Revised Occupational Qualifications Sub-Framework (OQSF) Policy, (Gazette no. 43062) by the QCTO, will pave the way for a well-articulated OQSF that will ensure parity of esteem, articulation and recognition of prior learning across sub-frameworks.
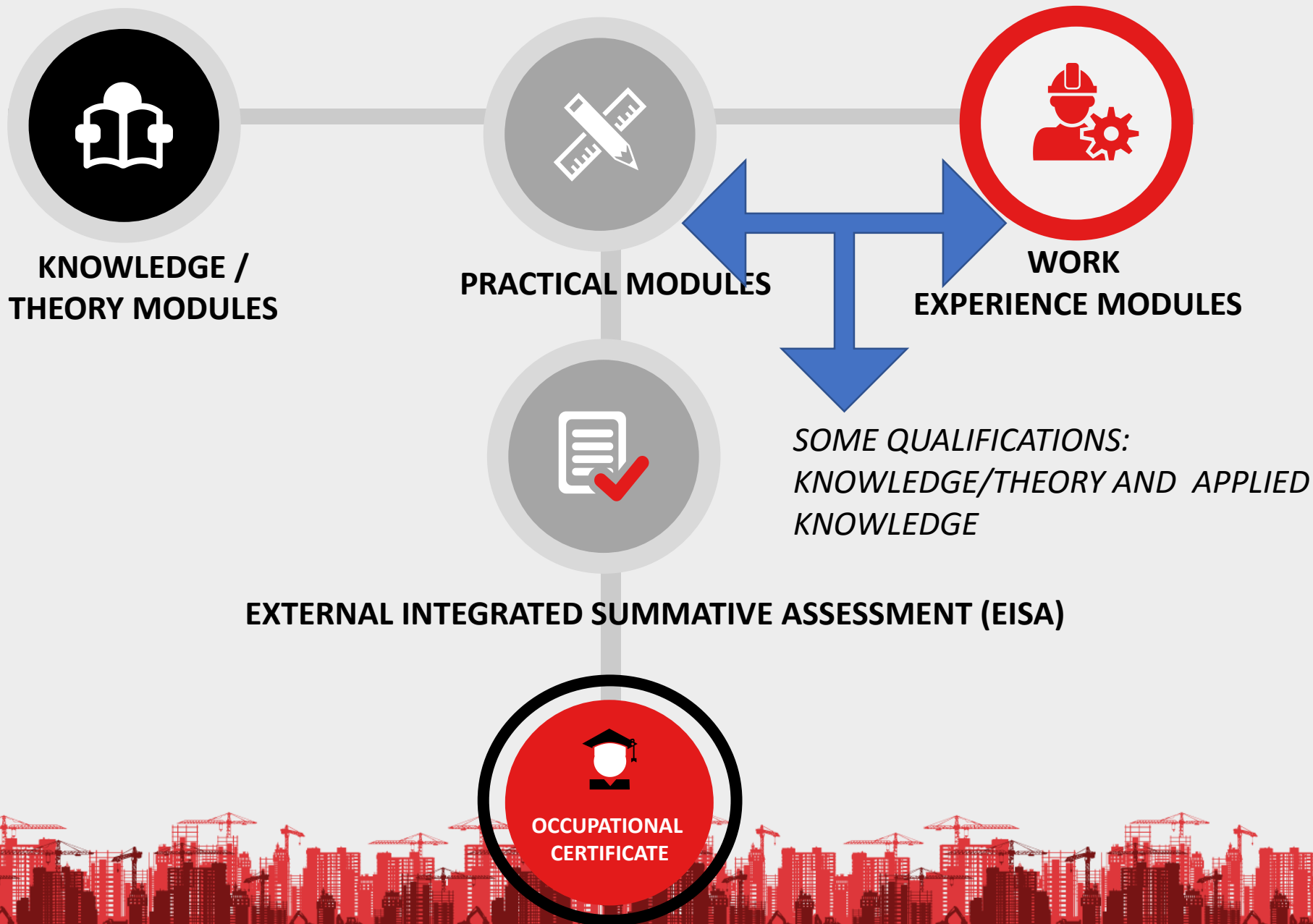
| NQF Sub-Framework/ Quality Council | NQF Level | NQF Sub-Framework and Qualification Type | | NQF Sub-Framework/ Quality Council |
|---|---|---|---|---|
| Higher Education Qualifications Sub-Framework (HEQSF)/ Council on Higher Education (CHE) | 10 | Doctoral Degree<br>Doctoral Degree (Professional) | | Occupational Qualifications Sub-Framework (OQSF) Quality Council for Trades and Occupations (QCTO) |
| | 9 | Master's Degree<br>Master's Degree (Professional) | | |
| | 8 | Bachelor Honours Degree<br>Post Graduate Diploma<br>Bachelor's Degree | Specialised Occupational Diploma | |
| | 7 | Bachelor's Degree<br>Advanced Diploma | Advanced Occupational Diploma | |
| | 6 | Diploma<br>Advanced Certificate | Occupational Diploma<br>Advanced Occupational Certificate | |
| | 5 | Higher Certificate | Higher Occupational Certificate | |
| General and Further Education and Training Qualifications Sub-Framework (GFETQSF)/ Umalusi | 4 | National Certificate | National Occupational Certificate | |
| | 3 | Intermediate Certificate | Intermediate Occupational Certificate | |
| | 2 | Elementary Certificate | Elementary Occupational Certificate | |
| | 1 | General Certificate | General Occupational Certificate | |

# OCCUPATIONAL QUALIFICATIONS MODEL

**KNOWLEDGE / THEORY MODULES**

**PRACTICAL MODULES**

**WORK EXPERIENCE MODULES**

*SOME QUALIFICATIONS: KNOWLEDGE/THEORY AND APPLIED KNOWLEDGE*

**EXTERNAL INTEGRATED SUMMATIVE ASSESSMENT (EISA)**

**OCCUPATIONAL CERTIFICATE**

# Curriculum Development

- Whilst the QCTO is not responsible for curriculum development, it has through its qualification development processes developed a curriculum statement document and assessment framework to assist and guide providers with the development of material to support the implementation of occupational qualifications and skills programmes

- Whilst these document serve as guidelines they are not a panacea in itself as further guidance is required for implementers or providers

- Through the development of the National Occupational Curriculum Content (NOCC), the Department provides further guidance to lectures with the implementation of Occupational Qualifications (13 priority occupational trades)

# Curriculum Development

- As per extract from the Swiss-South African Cooperation Initiative website: "*An important principle in the design of the NOCCs is that they combine all the required theoretical inputs and simulated practice at a college or training centre with on-the-job experience in the workplace in a single, integrated learning programme. This is different from traditional apprenticeships in South Africa, where knowledge of trade theory is often presented, assessed and certificated separately from workplace experience and applied competence. It also differs from learnerships and other unit-standard-based learning programmes in which atomised skills can be developed and qualifications awarded at different levels, without necessarily implying an ability to do the whole job. By contrast, each NOCC leads to certified competence to practise the target trade or occupation.*" https://www.ssaci.org.za/our-work/tvet-system-support/occupational-curriculum-development

# A: QCTO's response in terms of review of the TVET and CET sectors curriculum to respond to industry needs:

- The White Paper for Post-School Education and Training, noted the following key objectives in strengthening colleges amongst other;
    - *A curriculum that responds to local labour market needs or that responds to particular requests from SETAs, employers or government to meet specific development goals will result in a differentiated college system with various niche areas of specialisation.*

- QCTO: Qualifications for Industry by Industry

# Reconstruction of TVET programmes

- In response to this, the QCTO has embarked on the reconstruction of all programmes offered at TVET colleges

- This project started with the reconstruction of all Business Studies Programmes into Occupational Qualifications are available for uptake since their registration

- However, the implementation and roll out of these Occupational Qualifications have not taken traction as these are not part of the Programme Qualification Mix (PQM) for TVETS.

- The norms and standards for TVET and CET colleges will hopefully open up these blockages to allow for funding of Occupational Qualifications that will further support the implementation at TVET and CET colleges

- The Engineering programmes are currently being reconstructed to Occupational Qualifications but due to the COVID pandemic and funding constraints, progress is hampered.

- The QCTO's model of qualification development allows for the development of qualifications that are relevant to industry as it involves processes of consultation with industry bodies and a broad range of constituency stakeholders including social partners.

# NATED programmes approved by QCTO

**2020**

29

29 NATED subjects revised and updated by DHET and approved by QCTO

44

**2018**

13 NATED programmes (N4-N6)_reconstructed into six Occupational Qualifications

**2013**

8

Reviewed eight N4 – N6 subjects

# Registered qualifications from reconstruction project

| NATED SUBJECTS | Occupational Qualification Registered |
|---|---|
| National N Diploma: Financial Management | Occupational Certificate : Bookkeeper, NQF Level 5, Credits 364 (SAQA QUAL ID 98959) |
| National N Diploma: Business Management<br>National N Diploma: Human Resource Management<br>National N Diploma: Marketing Management<br>National N Diploma: Public Management<br>National N Diploma: Public Relations | Occupational Certificate : Office Administrator , NQF Level 5, Credits 445 (SAQA QUAL ID 102161) |
| National N Diploma: Legal Secretary<br>National N Diploma: Management Assistant<br>National N Diploma Medical Secretary | Occupational Certificate: Management Assistant, NQF Level 5 , Credits 316 (SAQA QUAL ID 101876) |

# Registered qualifications from reconstruction project

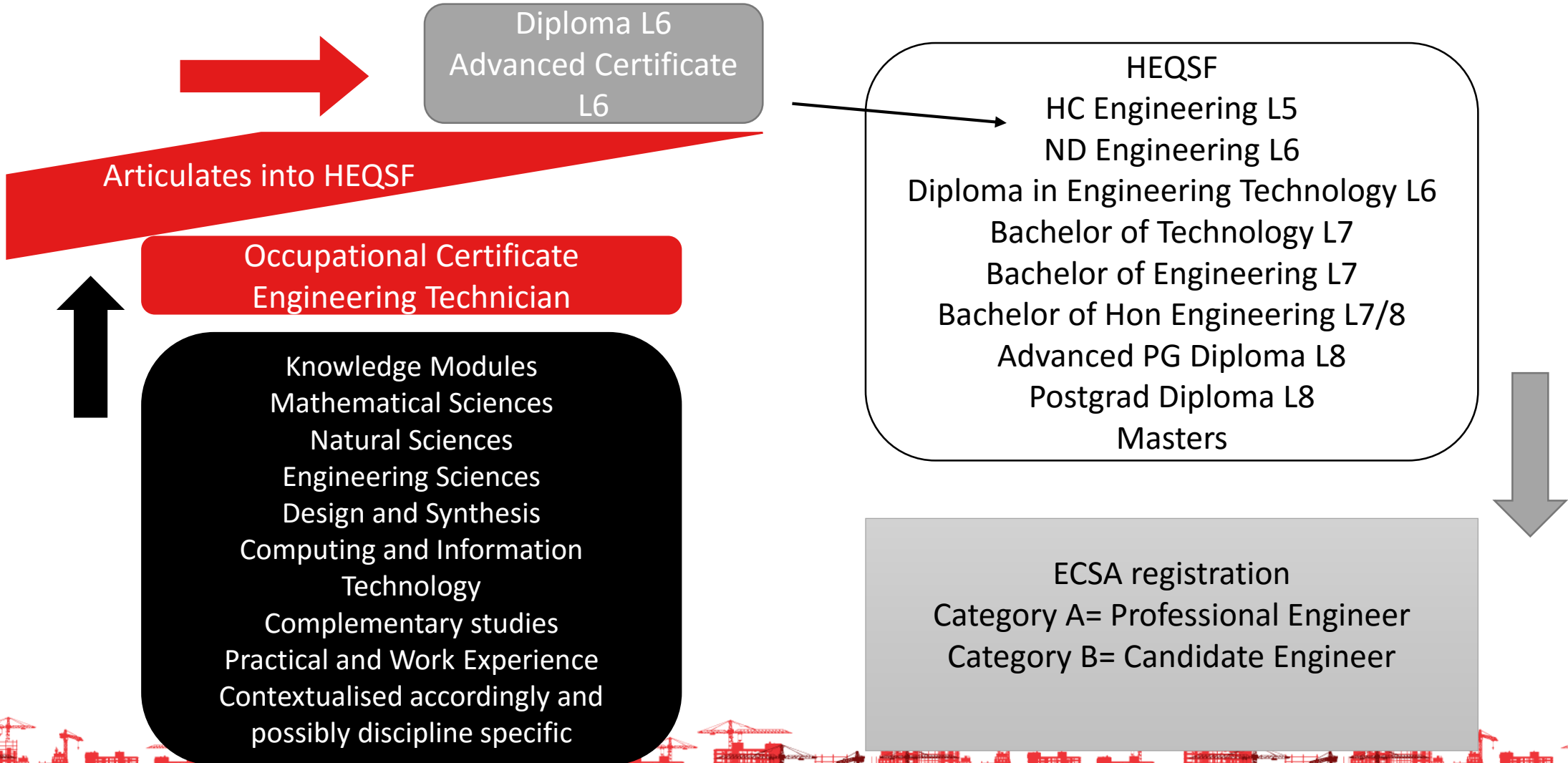| NATED SUBJECTS | Occupational Qualification Registered |
|---|---|
| National N Diploma Educare | Occupational Certificate: Early Childhood Development Practitioner, NQF Level 4, Credits 131 (SAQA QUAL ID 97542) |
| National N Hospitality and Catering Services | Occupational Certificate : Events and Conference Organiser , NQF Level 5, Credits 277 (SAQA QUAL ID 102944) |
| National N Diploma: Tourism | Occupational Certificate: Tourist Information Officer, NQF Level 5 , Credits 280 (SAQA QUAL ID 101865) |
| Computer related courses and subjects | Occupational Certificate: Computer Technician , NQF Level 5, Credits 282 (SAQA QUAL ID 101408) |

# Reconstruction of TVET Engineering Programmes

## Progressive alignment and articulation between OQSF & HEQSF

- Occupational Qualifications developed within Engineering disciplines have been aligned to the Engineering Council of South Africa (ECSA) requirements, in order to comply with professional registration criteria (Still to be finalised)

- Articulation options between OQSF qualifications & HEQSF qualifications have been designed accordingly

- World class qualifications already developed e.g Mechatronics and Welding

# OQSF = HEQSF Articulation & ECSA alignment

Diploma L6
Advanced Certificate L6

Articulates into HEQSF

Occupational Certificate
Engineering Technician

Knowledge Modules
Mathematical Sciences
Natural Sciences
Engineering Sciences
Design and Synthesis
Computing and Information Technology
Complementary studies
Practical and Work Experience
Contextualised accordingly and possibly discipline specific

HEQSF
HC Engineering L5
ND Engineering L6
Diploma in Engineering Technology L6
Bachelor of Technology L7
Bachelor of Engineering L7
Bachelor of Hon Engineering L7/8
Advanced PG Diploma L8
Postgrad Diploma L8
Masters

ECSA registration
Category A= Professional Engineer
Category B= Candidate Engineer

## Table 1: Educational Requirements for registration in professional categories

| Professional Designation (Category of Registration) | Type of Accredited Professional Higher EducationQualification |
|---|---|
| Professional Engineer | BEng/BSc(Eng) – four-year NQF Level 8 |
| Professional Engineering Technologist | BTech – one-year NQF Level 7, having completed a National Diploma |
| Professional Engineering Technician | National Diploma Three year (including one year experiential training) NQF level 6 |
| Professional Certificated Engineer | Government Certificate of Competency[4] |

# Qualifications and skills programmes to be developed in conjunction with MICTSETA

- Robotics Process Automation
- Cyber Security
- Cloud computing
- Quality Engineering (Test Automation)
- Artificial Intelligence
- Data Science
- Business Analytics
- Software development

- e-Waste
- Internet of Things
- Design thinking
- Quality Engineering Automation
- Drone
- Fibre and Mobile Device
- Mobile Devices Repair

# Partnership with DHET

- QCTO together with the Department, through the Dual Systems Pilot Project (DSPP) and the Centres of Specialisation (COS) project, have been able to refine the qualification development process even further to allow for the responsiveness of its occupational qualifications through the inclusion of employer organisations that form part of the consultative forums of the DSPP and COS project through the National Oversight Structure (NOS) of the Department and the National Skills Fund (NSF)

- Whilst QCTO Occupational Qualifications can be offered at both TVET and CET colleges, provided they satisfy the accreditation criteria, infrastructure and capacity constraints are two major challenges due to the high cost associated with such endeavours as well as the funding model of the Department

- The need for closer collaboration and partnership with industry cannot be overstated, in the current tough economic environment as key partners in ensuring the successful implementation and skilling of the workforce

# Challenges with TVET Colleges offering Occupational Qualifications

- Delivery Models.
  - ➤ Occupational Qualifications are modular based but ideally should be offered in an integrated way.
  - ➤ NATED Programmes are largely theory based with little to no practical training.  Students are required to obtain the relevant practical training after completion of the N4-N6 programmes before satisfying the requirements of the qualification – National N diploma.

- Strategy to mitigate
  - ➤ Recurriculate the N4-N6 programmes in line with the modules in the Occupational Qualifications. This will mean TVET Colleges having to offer some form of practical and or simulated training.
  - ➤ Actual workplace experience needed adjusted according to qualification requirements.

# QCTO's response in terms of review of the TVET examination cycles:

- According to the White Paper for Post-School Education and Training: *"Quality Councils should use external assessment to reveal poor performance"*

- The QCTO has as part of its Quality Assurance Framework (QAF), developed a National Quality Assurance System (NQAS) that will see the standardisation of a myriad of assessment and quality assurance approaches and practices deployed by the Sector Education and Training Authorities (SETAs) into one National System with a standardised approach when it comes to assessment and quality assurance standards across the entire value chain

- The QCTO has made significant strides in terms of the implementation of the NQAS for all registered Occupational Qualifications (including Occupational Trade Qualifications) and approved Skills Programmes

- The External Integrated Summative Assessment (EISA) sometimes referred to as the Trade Test, has ensured the implementation of a national external assessment that to confirm competence against the exit level outcomes of all occupational qualifications including trades

- With the standardisation of examination systems across DHET provisioning (TVET, CET and institutions of higher learning), the implementation of an EISA for N1-N6 programmes at the exit level, will greatly standardise processes and allow for less examinations over a period of time and significantly reduce expenditure associated with the administration, conduct, marking, standardisation, resulting and certification of multiple examinations across programmes

# QUALITY ASSURANCE OF NATED PROGRAMMES

- The QCTO quality assurance of the assessments of the NATED programmes currently contains the following elements:

1) Monitoring of DHET examination processes

2) Ongoing sample monitoring of examination sessions conducted at Examination Centres (both public and private)

3) Monitoring of all marking centres appointed by the DHET

# QUALITY ASSURANCE OF NATED PROGRAMMES

- The QCTO quality assurance of the assessments of the NATED programmes for future implementation upon consultation process with DHET also to be introduced:

1) Quality assurance of external examination through sample moderation of examination instruments

2) Approval of results through standardisation meetings with the DHET before certificates are issued (establishing the credibility of the examinations)

3) The introduction of one EISA instead of different subject examinations which will introduce a holistic final competency assessment based on the requirements needed for the occupation and will reduce costs.

# POSSIBLE EISA MODELS:

- The introduction of one EISA to be implemented upon consultation process with DHET:

  Various models for the introduction of one EISA are possible:

  - Either at the end of the N6, including work experience completed, which would mean internalising the N4-N5 assessments administered by a standardised examination distributed by the DHET, but for internal marking and final results. Quality assurance: reports completed by internal markers and moderators.
  - Or at the end of each of the N4, N5 and N6 phases, thus collapsing the subject examinations

  But this would not be without challenges

# CHALLENGES:

- Most programme offerings have one or two compulsory subjects, with a find selection of other elective subjects.  However, this could be resolved by implementing one EISA based on work competencies, and thus not affect the selection of subjects taken.

# E-Assessment

- The QCTO has started with a project of developing an assessment item bank for occupational qualifications. Seeing that the DHET is an Assessment Quality Partner (AQP) of the QCTO, it may want to consider partnering with the QCTO to further expand this data bank to allow for setting occupational standards for occupational qualifications that will be offered at TVET and CET colleges

- The expansion of the use of online assessment methodology for occupational qualifications will go a long way to reduce expenses associated with this function as examination body for the DHET

- The impact of the COVID-19 pandemic has further highlighted the need for innovative solutions around assessment practices for workplace based as well as practical competence assessment

- The development of an on online ecosystem for skills development will go a long way in bringing together the many data sources for provisioning, assessment and certification. This will support the use of big data and data analytics that will lead to improved decision making

# Skills Programmes

- The development of Skills Programmes for the CET sub-sector started in 2018 after a request by Minister Naledi Pandor, to ensure the skilling of unemployed youth that attend CET colleges

- This project resulted in the identification of 24 skills programmes to be developed for the CET sub-sector

- To date the QCTO has developed 21 skills programmes, 14 of which have been approved by the second QCTO Council for implementation at CET colleges or any Skills Development Provider and are accessible on the QCTO website

# Report: Skills programmes for Community Colleges

- Purpose of report:
  - To advise the Minister on the implementation of a suite of skills programmes to be offered at CETCs
- QCTO hosted a Skills Development Symposium, 21 February 2019
  - Theme: Skills Development for Livelihood and Employment
    - Aim was to improve skills programme offerings in CETCs
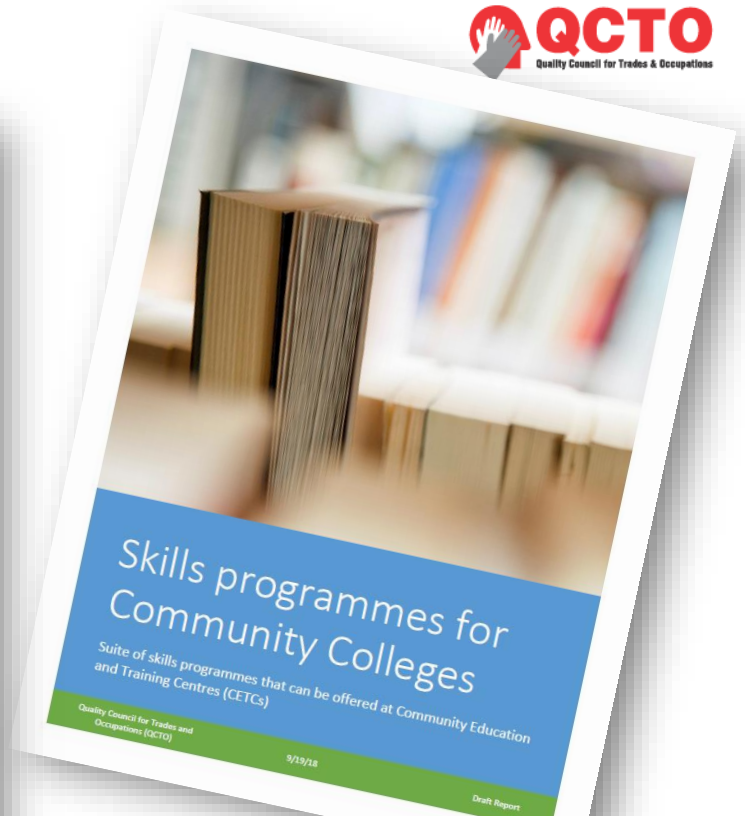




| Welding | Automotive Repair and Maintenance | Sewing | Gardening |
|---|---|---|---|
| Plumbing | Automotive Body Repair | Cooking/Catering | General Merchandising |
| Bricklaying and Plastering | Automotive Basic Spray Painting | Baking | Sales Assistant |
| Carpentry | Bicycle Mechanic | Assistant Chef | Early Childhood Development. |
| Tiling | Basic Electricity | Hairdressing | |

# 14 skills programmes on QCTO website

| No | TITLE | NQF LEVEL | CREDITS |
|---|---|---|---|
| 1. | Assistant Baker (Fermented Dough Products) | 2 | 36 |
| 2. | Domestic Water and Drainage Pipe Repairer | 2 | 49 |
| 3. | Garden Maintenance Worker | 1 | 26 |
| 4. | General Residential Repairer | 3 | 31 |
| 5. | Shielded Metal Arc Welder | 3 | 40 |
| 6. | Animal Health | 3 | 60 |
| 7. | Barber | 3 | 36 |
| 8. | Basic Upholsterer | 2 | 28 |
| 9. | Cook Assistant | 2 | 28 |
| 10. | Eco – Ranger | 4 | 60 |
| 11. | Seamstress | 3 | 38 |
| 12. | Wheel Balancer | 2 | 30 |
| 13. | Workshop Tool Assistant | 2 | 24 |
| 14 | Computer and Digital Support Assistant | 4 | 40 |

https://qcto.org.za/services/skills-programmes

# Thank You