



# **STANDARDS: MASTER'S AND DOCTORAL DEGREES OF PROFESSIONAL PRACTICE**

**2025 EDITION**

**Standards: Master's and Doctoral Degrees of Professional Practice**

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## FOREWORD

The mission of the Malaysian Qualifications Agency (MQA) is to ensure the quality of higher education qualifications that are awarded by higher education providers (HEPs) in Malaysia. In order to fulfil this mission, MQA has published various quality documents, such as the Malaysian Qualifications Framework (MQF), Code of Practice for Programme Accreditation (COPPA), Code of Practice for TVET Programme Accreditation (COPTPA), Programme Standards (PS) and Guidelines to Good Practices (GGP), ensuring the quality of design and delivery of higher education programmes.

The demand for advanced educational standards tailored to the needs of industry practitioners has grown significantly. The Standards: Master's and Doctoral Degrees of Professional Practice (hereinafter called Standards) is specifically designed for Technical and Vocational Education and Training (TVET) pathway. Unlike academic pathways that prioritise fundamental research, this Standards adopts an industrial problem-solving methodology. The adopted methodology ensures a versatile and pragmatic framework, better suited to addressing real-world challenges faced by industrial practitioners in their respective fields. This approach aims to foster a more practical and solution-oriented learning experience, enriching both professional and academic landscapes.

This Standards was developed by an expert panel in collaboration with various public and private HEPs, relevant government and statutory agencies, professional bodies, related industries and students. The Standards incorporates the key features of MQF 2024, which include value-based education, which aims to nurture ethical and socially responsible graduates, as well as flexible learning pathways, which offer adaptable options for learners to tailor their educational experiences; all in alignment with the global sustainability agenda that integrates sustainable development principles into education and practice.

Last but not least, I would like to express my sincere appreciation and gratitude to all panel members and Universiti Teknikal Malaysia Melaka taskforce for their invaluable contributions and cooperative spirit, various stakeholders who have given their inputs and all officers from MQA who have contributed to the development of the Standards: Master's and Doctoral Degrees of Professional Practice.

Thank you.

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2025

**ABBREVIATIONS**

COPPA	Code of Practice for Programme Accreditation
COPPA: ODL	Code of Practice for Programme Accreditation: Open and Distance Learning
COPTPA	Code of Practice for TVET Programme Accreditation
GGP	Guidelines to Good Practices
HEP	Higher Education Provider
MOHE	Ministry of Higher Education
MQA	Malaysian Qualifications Agency
MQF	Malaysian Qualifications Framework
PS	Programme Standards
TVET	Technical and Vocational Education and Training

## THE APPLICATION OF THE STANDARDS

This Standards describes the generic requirements for Master's and Doctoral degrees based on the level descriptors of the MQF. The programme standards may contextualise the minimum requirements expressed in this Standards to the needs of a discipline and profession. In doing so, the specific or programme standards shall not lower the requirements stated in this Standards. Besides that, the programme standards may establish higher and/or additional requirements if it is deemed necessary by the disciplinary and professional practices. It is expected that the programme standards would maintain the minimum requirements set in this Standards for consistency.

Professional practice can be defined as the application of industry-specific skills, knowledge and ethical standards to perform tasks and duties effectively. It includes technical competency, adherence to the standards and practice, ethical conduct, continuous learning, problem solving, teamwork and collaboration. Professional practice in postgraduate studies involves a dynamic combination of work practice, work-related research and the application of practical experience, enabling the candidates to improve their expertise through hands-on, industry-based practice and job settings. It allows the candidates to integrate their vocational or professional work experience with applied research and theoretical knowledge, fostering real-world problem-solving skills.

As a general principle, HEPs have the rights to establish any other conditions or requirements as it deems necessary, guided by the Standards, programme standards and good practices.

## AREA 1: PROGRAMME DEVELOPMENT AND DELIVERY

The vision, mission and educational goals of HEPs guide research planning and implementation and bring together its members to produce graduates of excellence. The general goal is to develop postgraduates with in-depth knowledge at the frontier of a specialised field through the following:

- i. Development of industry-focused knowledge through applied research in professional practice settings
- ii. Enhancement of communications and leadership skills, attitudes, ethics and sense of professionalism for societal advancement within the framework of the institutional and national visions
- iii. Application of analytical techniques and innovative problem-solving skills to evaluate and make informed decisions based on applied research evidence and practical experience
- iv. The quest for expertise through lifelong learning to adapt to the evolving industry demands and technology advancement
- v. Research outcomes that are relevant to the national and international development
- vi. Generation of tangible innovation outcomes that address national and global industrial challenges through industrial-driven knowledge and publications

Postgraduate TVET programmes are the pillar that support the vision, mission and goals of the HEPs. Therefore, the design and implementation of these programmes must consider these institutional goals. In order to align with the industry demands and drive socioeconomic impact, these programmes should empower candidates and graduates to address real-world challenges and contribute to the achievement of **Sustainable Development Goals**.

The quality of the postgraduate TVET programmes is ultimately determined by the capability of graduates to effectively fulfil their expected roles and responsibilities as outlined in the MQF and to meet the industry needs.

### 1.1 Statement of Educational Objectives of the Academic Programmes and Learning Outcomes

The stated objectives and learning outcomes of a programme guide what the candidates should achieve. These objectives and learning outcomes must be explicitly stated and communicated to the candidates, internal stakeholders and external industry partners.

- 1.1.1 The programme must align with and support the vision, mission and goals of the HEP, while addressing the current and industry demands.

- 1.1.2 The department must develop the programme, objectives and learning outcomes in collaboration with the relevant internal stakeholders, external industry partners and other external stakeholders.
- 1.1.3 HEP must clearly define its programme's educational objectives, learning outcomes, teaching and learning strategies and assessment methods, ensuring their alignment with the industry needs and expectations.
- 1.1.4 The programme's objectives and learning outcomes must include provisions for training and support for candidates to acquire the necessary competencies and skills to meet the expectations outlined in the appropriate level and applicable standards of the MQF<sup>1</sup>.
- 1.1.5 The programme's objectives and learning outcomes must be periodically reviewed in consultation with the internal and external stakeholders to ensure their relevance to the industry trends and advancements.

## 1.2 Learning Outcomes

The quality of the postgraduate TVET programmes is determined by the ability of the graduates to carry out the expected roles and responsibilities in society. This requires the programmes to have clear statements of the learning outcomes. These statements should collectively reflect the appropriate level descriptors of the MQF, encompassing five clusters of learning outcomes as shown in **Table 1** and other needs of the HEP.

Table 1: MQF Five Clusters of Learning Outcomes

No.	Clusters		
1	Knowledge and Understanding		
2	Cognitive Skills		
3	Functional Work Skills	3.1	Practical Skills
		3.2	Interpersonal Skills
		3.3	Communication Skills
		3.4	Digital Skills
		3.5	Numerical Skills
		3.6	Leadership, Autonomy and Responsibility
4	Personal and Entrepreneurial Skills		
5	Ethics and Professionalism		

- 1.2.1 The scope of learning outcomes must reflect the knowledge, skills, abilities and attitudes outlined in the appropriate level descriptors of the MQF that candidates should achieve upon completion of their programme and other needs of HEP<sup>2</sup>.

<sup>1</sup>HEPs are free to determine the number of PEOs statements as long as the statements address all the skill sets specified in the MQF Five Clusters of Learning Outcomes.

<sup>2</sup>The total number of PLOs is flexible and does not need to be exactly eleven (11). Higher Education Providers (HEPs) have the autonomy to determine the number of PLO statements, provided they address all the skillsets specified in the MQF Five Clusters of Learning Outcomes. These statements should be clearly mapped and measured to ensure comprehensive coverage and may integrate multiple skillsets where appropriate.



Master's Degree of Professional Practice (Level 7, MQF)

At the end of the programme, graduates must be able to:

- i. Demonstrate a mastery of knowledge in specific field of industrial practice
- ii. Critically and creatively apply industry-focused knowledge in one or more fields to resolve complex disciplinary and practical problems
- iii. Conduct rigorous and independent professional-practice problem-solving or investigation with minimal supervision
- iv. Perform professional-practice problem-solving in adherence to legal, ethical, professional and **sustainable** practices
- v. Demonstrate intellectual leadership qualities and management skills
- vi. Communicate effectively in the field/s and interact with specialists and general audience
- vii. Select and use suitable digital and analytical techniques to professional-practice problems
- viii. Demonstrate commitment to lifelong learning and personal development

Doctoral Degree of Professional Practice (Level 8, MQF)

At the end of the programme, graduates must be able to:

- i. Demonstrate most advanced knowledge at the frontiers of a field of industrial practice by generating substantial and original contributions to the field and/or practice
- ii. Synthesise existing and new knowledge in one or more industry technical areas to develop new solutions or interpretations or applications
- iii. Conduct rigorous and independent professional-practice problem-solving or investigation with minimal supervision
- iv. Demonstrate intellectual leadership qualities and management skills
- v. Perform professional-practice problem-solving in adherence to legal, ethical, professional and **sustainable** practices
- vi. Communicate cogently in the field/s and interact with specialists and general audience

- vii. Select and use suitable digital and analytical techniques to professional-practice problems
  - viii. Demonstrate commitment to lifelong learning and personal development
- 1.2.2 HEP is responsible for the effective delivery and achievement of the programme's learning outcomes (to be read together with 7.16).
- 1.2.3 The programme must demonstrate how the planned activities contribute to the fulfilment of the programme's learning outcomes (the department must describe the activities and evidence against each of the programme's learning outcome from admission to graduation) (see Appendix 2).
- 1.2.4 The programme should specify the link between the learning outcomes expected upon completion of studies and those required for careers in professional-practice related field/s.
- 1.2.5 There must be appropriate learning and supervision relevant to the programme's educational objectives and learning outcomes.

### **1.3 Programme Design and Delivery**

For the accreditation of programmes offered by the HEP, the term "Programme" refers to the structured learning of postgraduate TVET within a specified duration and volume of learning for the award of a Master's or Doctoral Degree of Professional Practice.

#### **Academic Autonomy**

An academic institution is expected to have sufficient autonomy over academic matters. Such autonomy should be reflected at the departmental level where the programme is offered.

- 1.3.1 The department must have sufficient autonomy to design the programme structure and to allocate the resources necessary for the attainment of the learning outcomes. The provision, where applicable, must also cover programmes conducted in geographically separated campuses or in collaboration with other HEPs or industry within and outside the country.
- 1.3.2 The academic staff must be given sufficient autonomy to focus on their areas of expertise in the supervision of postgraduate candidates, conducting research in industrial technology, publishing scholarly work, managing academic responsibilities and fostering collaboration with the industry and community engagement.

## Programme Design and Supervision

- 1.3.3 The department must have a defined process by which the programme is established, reviewed and improved with the involvement of the academic staff and other stakeholders.
- 1.3.4 A needs analysis for the programme must be carried out to obtain information from stakeholders, whose feedback should be considered in the design and improvement of the programme.
- 1.3.5 The programme must only be considered after the resources to support the programme have been identified and allocated.
- 1.3.6 The programme structure and supervision system must support the attainment of the programme learning outcomes.
- 1.3.7 The programme must include a variety of academic activities to support the attainment of the learning outcomes and personal development of the candidates (see Appendix 3).
- 1.3.8 HEP must have a formal agreement with the respective industry where the candidates conduct their professional-practice.

## Programme Structure

Typically, the programme structure for Master's and Doctoral Degrees of Professional-Practice programmes is characterised by industry-focused projects conducted over a specified duration, culminating in the creation of practical solutions, portfolios, prototypes, or other professional outputs, which are often accompanied by a comprehensive assessment, practitioner dissertation/thesis and oral defence.

- 1.3.9 The programme must satisfy the following requirements:

### Master's Degree of Professional Practice

- i. The typical duration<sup>3</sup> of study is three years. However, the HEP Senate may allow exemptions for outstanding candidates who complete their study within a shorter duration.
- ii. Throughout the study period, candidates are required to undertake coursework or equivalent in the following subjects:
  - a) Industrial research methodology course (must encompass the broad approaches, methods and analyses in the field)
  - b) Project ideation

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<sup>3</sup>The typical duration should not be understood as allowing a shorter duration for the programme. It should be understood as allowing exceptional graduates to complete their studies within a shorter duration, subject to Senate endorsement.

## c) Data analytic

The candidate may provide evidence of attendance at equivalent courses that support problem-solving in the field to qualify for exemption from the respective courses.

## iii. HEP must address the following requirements:

- a) Relevant prerequisite courses for candidates without related qualifications or relevant work experience or who require updating of knowledge in specified areas before their enrolment in the programme
- b) Maximum period of study in consideration of best practices and the relevance of work undertaken to the industry needs
- c) A guideline or manual that describes a common structure and format for practitioner dissertation/thesis.
- d) Establish the minimum word limit<sup>4</sup>, subject to the guidance in the relevant programme's standards or good practices. The Senate or the equivalent authority in HEP can use its discretion in cases where a practitioner dissertation/thesis or project report does not comply with the word limit but meets all other requirements.

### Doctoral Degree of Professional Practice

- i. The typical duration<sup>5</sup> of study is four years. However, the HEP Senate may allow exemptions for outstanding candidates who complete their study within a shorter duration.
- ii. Throughout the study period, candidates are required to undertake coursework or equivalent in the following subjects:
  - a) Industrial research methodology course (must encompass the broad approaches, methods and analyses in the field)
  - b) Project ideation
  - c) Data analytic
  - d) Design for sustainability

The candidate may provide evidence of attendance at equivalent courses that support problem-solving in the field to qualify for exemption from the respective courses.

## iii. HEP must address the following requirements:

- a) Relevant prerequisite courses for candidates without related qualifications and relevant work experience or who require

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<sup>4</sup>HEP may determine the word limit based on disciplinary requirements.

<sup>5</sup>The typical duration should not be understood as allowing a shorter duration for the programme. It should be understood as allowing exceptional graduates to complete their studies within a shorter duration, subject to Senate endorsement.

updating of knowledge in specified areas before their enrolment in the programme

- b) Maximum period of study in consideration of best practices and the relevance of work undertaken to the industry needs
- c) A guideline or manual that describes a common structure and format for practitioner thesis.
- d) Establish the minimum word limit, subject to the guidance in the relevant programme's standards or good practices. The Senate or the equivalent authority in HEP can use its discretion in cases where a practitioner thesis does not comply with the word limit but meets all other requirements.

1.3.10 The programme must incorporate appropriate problem-solving knowledge and skills essential to undertake original and independent study or investigation in the field.

1.3.11 The programme must be periodically reviewed and improved to keep abreast of knowledge in the discipline and with the needs of the candidates, industry and society.

## AREA 2: ASSESSMENT OF STUDENT LEARNING

Assessment of learning is a critical element of quality assurance in postgraduate TVET programmes as it directly influences candidates' learning and demonstrates the achievement of learning outcomes. The results of the assessment form the foundation for awarding qualifications. Therefore, assessment methods must be clear, consistent, relevant, effective and in line with the industry's best practices. It must reliably measure the achievement of learning outcomes.

Given TVET's practical orientation and focus on the workplace, both formative and summative assessment methods must confirm that the candidates can competently perform specific skills or competencies based on the industry practices.

HEP holds the responsibility for managing the assessment system as the awarding body of the conferring qualification. Ensuring the robustness and security of the assessment processes and procedures, alongside accurate documentation of TVET learning achievements, is essential to inspire confidence in the qualifications awarded by the HEP.

In the context of an industry project, the robustness of assessment reflects to the resilience and reliability of the processes and systems to perform effectively under various conditions, including unforeseen challenges, ensuring consistent quality and outcomes. It encompasses well-defined methodologies, thorough planning and adaptability to changes while maintaining the project's objectives.

### 2.1 Relationship between Assessment and Learning Outcomes

- 2.1.1 Assessment principles, methods and practices in postgraduate TVET programmes must be constructively aligned with the program learning outcomes and appropriately mapped to the levels of skills and competencies defined in the MQF.
- 2.1.2 A diverse range of assessment methods should be employed in alignment with the program's learning outcomes and content, ensuring the effective evaluation of the practical and applied theoretical components.
- 2.1.3 Formative assessment in postgraduate TVET programmes should include continuous monitoring of project progress through methods like regular project progress reports, project proposal defences and participation in industry-related presentations, industrial forum, workshop or seminars. These activities provide ongoing feedback, foster skill development and enhance workplace-relevant competencies.
- 2.1.4 Summative assessment in postgraduate TVET programmes is designed to evaluate the achievement of all learning outcomes at the Master's and Doctoral degrees. The following must be included:
  - i. Successful completion of prescribed courses
  - ii. Practitioner dissertation/thesis

- a. Portfolio
  - b. Technical report or project report
  - c. Conspectus or equivalent
- iii. Oral defence
- 2.1.5 The department must monitor the progress of candidates through the following means:
  - i. Regular consultation with the supervisory panel (academic and industrial supervisors)
  - ii. Project defence
  - iii. Presentation, industrial forum, colloquium, seminar, or workshop
  - iv. Other appropriate mechanisms
- 2.1.6 HEP must ensure the inculcation of appropriate attitudes, including the value of ethical principles in problem-solving and **sustainable development**.
- 2.1.7 HEP shall implement mechanisms to ensure that all submitted assessments are the original work of the candidates, representing their individual efforts. HEP must also verify that the submissions are free from plagiarism, unauthorised assistance, or any form of academic dishonesty.
- 2.1.8 The relationship between assessment and learning outcomes must be periodically reviewed and improved to ensure their continued effectiveness.

## 2.2 Assessment Methods

- 2.2.1 The methods, processes and procedures of assessment must be documented and communicated to the supervisors and candidates in a timely manner.
- 2.2.2 Supervisors must continuously engage with the candidates to hold in-depth discussion and validate their project progress.
- 2.2.3 HEP must ensure that the assessment methods used are aligned with internationally recognised best practices for postgraduate programme.
- 2.2.4 An examination committee must be established with clear guidelines on its composition, roles, responsibilities, procedures, decision-making processes and communication. This ensures a fair, reliable, rigorous, systematic and transparent assessment of the practitioner dissertation/thesis or equivalent work in line with the particular discipline, as part of the postgraduate TVET assessment framework.

- 2.2.5 HEP must have a mechanism in place to periodically review the assessment processes, procedures and outcomes. This review should take into account feedback from both internal and external stakeholders and involve an external assessor<sup>6</sup> to ensure the quality and effectiveness of postgraduate TVET assessment.

## 2.3 Management of Candidate Assessment

- 2.3.1 HEP is responsible for the assessment policy to ensure fairness, integrity, reliability and validity of all assessments carried out in the postgraduate TVET programme.
- 2.3.2 Academic supervisors must be supported and given sufficient autonomy to supervise their candidate's project to successful completion based on the study plan. An industrial supervisor, when appointed, plays a vital role in improving the efficiency and effectiveness of the supervision process at the workplace<sup>7</sup>.
- 2.3.3 HEP must have appropriate guidelines and mechanisms for candidates to appeal their results.
- 2.3.4 HEP must ensure the confidentiality and security of candidates' assessment and academic records.
- 2.3.5 The assessment outcomes must be provided to candidates through appropriate mechanisms in a timely manner and remedial assistance is provided when significant gaps are identified.
- 2.3.6 HEP must establish the criteria for the selection of examiners, including their responsibilities and code of conduct.
- 2.3.7 The requirements of examiners for postgraduate TVET programme must be clearly stated to include the following:

Table 2: Requirements for Postgraduate TVET Examiners

	<b>Master's Degree</b>	<b>Doctoral Degree</b>
<b>Academic Examiner</b>	i. Must have a minimum three years of full-time equivalent	i. Must have a minimum five years of full-time equivalent industry-related experiences  ii. Must have the minimum qualification of no less than the supervisor

<sup>6</sup>In COPPA, the term "external examiner" is used. The use of "external assessor" in the Standards is to avoid confusion with external examiners involved in the evaluation of dissertation or thesis.

<sup>7</sup>A workplace encompasses both physical environments and virtual settings in cyberspace, which allow employees to perform their job duties remotely using digital technology.



	<b>Master's Degree</b>	<b>Doctoral Degree</b>
	<p>industry-related experiences<sup>8</sup></p> <p>ii. Must have the minimum qualification of no less than the supervisor</p> <p>iii. Must be from the field/s related to the industrial project or TVET programme of the candidate under evaluation</p> <p>iv. Have supervised candidates at the relevant level of studies</p> <p>v. Must be engaged in research and have produced credible publications or equivalent works</p>	<p>iii. Must be from the field/s related to the industrial project or TVET programme of the candidate under evaluation</p> <p>iv. Have supervised candidates at the relevant level of studies</p> <p>v. Must be engaged in research and have produced credible publications or equivalent works</p>
<b>Industrial Examiner</b>	<p>i. Must possess at least a Bachelor's degree (or equivalent MQF Level 6)</p> <p>ii. Must have a minimum of three years of experience in the relevant field at an appropriate job position</p>	<p>i. Must possess at least a Bachelor's degree (or equivalent MQF Level 6)</p> <p>ii. Must have a minimum of five years of experience in the relevant field at an appropriate job position</p>
<b>Composition of Examiner</b>	<p>i. Two examiners (one internal examiner and one industrial examiner)</p> <p>ii. More than two examiners may be necessary in the case of a multidisciplinary field.</p>	<p>i. Three examiners (one internal examiner, one external examiner and one industrial examiner)</p> <p>ii. More examiners may be necessary in the case of a multidisciplinary field.</p>

2.3.8 The department must ensure that examiners are well-informed about all aspects of the examination process to maintain clarity, consistency and fairness. This includes providing detailed information on the following:

<sup>8</sup>Industry-related experience includes work experience or various forms of collaborative work with industry partners, such as consultations, industrial grants, joint research projects and other forms of cooperation.

- i. Structure of the programme: A clear outline of the programme's framework, including the areas of focus, the sequence of modules or phases and how the assessment aligns with the intended learning outcomes
- ii. Modes and formats: Specific details on the types of assessment involved, such as written project reports, technical reports, prototypes, or presentations and the format of submission
- iii. Expected outcomes: The learning outcomes and practical competencies that candidates are expected to demonstrate, ensuring examiners understand the academic and practical benchmarks to evaluate
- iv. Purpose of the assessment: The overarching goals of the evaluation process, such as assessing the candidate's mastery of the technical area, contribution to knowledge and ability to conduct independent industrial research or solve practical problems
- v. Rules for oral defence: Comprehensive guidelines for conducting the oral defence, including its purpose, structure, time allocation and protocols for interaction between the candidate and the examiners

By providing this information, the department ensures that examiners have a uniform understanding of their roles and responsibilities, contributing to a rigorous and equitable assessment process for postgraduate TVET programme. This distinction is crucial to differentiate the expected outcomes of postgraduate TVET programme from conventional programme.

### AREA 3: CANDIDATE SELECTION AND SUPPORT SERVICES

In general, admission to postgraduate TVET programme must comply with the prevailing policies of the Ministry of Higher Education (MOHE). HEPs must establish a transparent and credible candidate selection system to ensure the selection of suitable candidates with the required technical knowledge, work experience and academic qualification. The admission and selection of candidates must be conducted based on up-to-date and accurate information and must adhere to the relevant standards, criteria and processes.

The number of candidates to be admitted to these programmes must align with the capacity of the HEP and the number of qualified applicants. In cases where an HEP operates geographically separated campuses or collaborates with industry partners, the selection process for candidates must remain consistent with the national policies.

Candidate support services and cocurricular activities (where applicable) must facilitate experiential learning and holistic professional development, contributing to the achievement of programme learning outcomes. Support services should include tailored amenities and resources, such as suitable insurance, academic advice, counselling, digital resources, health services, safety and transport.

#### 3.1 Candidate Selection

##### Master's Degree of Professional Practice

Table 3: Requirements for Candidate Selection for a Master's Degree

<b>Bachelor's degree TVET</b> or <b>Bachelor's degree with work-based learning/2u2i</b> (Minimum of a one-year placement in the industry)	<b>Bachelor's degree non-TVET</b>
i. Bachelor's degree in a related field with a minimum CGPA of <b>2.5</b> or equivalent, as recognised by the HEP Senate; <b>OR</b>  ii. Bachelor's degree with CGPA of <b>2.00 to 2.49</b> and at least <b>two</b> years of relevant work experience <sup>9</sup> ; <b>OR</b>	i. Bachelor's degree in a related field with a minimum CGPA of <b>2.5</b> and at least <b>one</b> year of relevant work experience, as recognised by the HEP Senate; <b>OR</b>  ii. Bachelor's degree with CGPA of <b>2.00 to 2.49</b> and at least <b>three</b> years of relevant work experience; <b>OR</b>
Candidates with Bachelor's degree, without a related qualification in the field/s must have at least five years of relevant work experience, subjected to rigorous internal assessment by the HEP.	
Admission through Accreditation of Prior Experiential Learning (APEL) is available for candidates with significant work experience and relevant credentials.	

<sup>9</sup>**Relevant work experience** refers to professional experience that aligns with the relevant job role and encompasses the required levels of responsibility, skills and competencies within the specific field of study.

Doctoral Degree of Professional Practice

Table 4: Requirements for Candidate Selection for a Doctoral Degree

<b>Master's degree TVET</b>	<b>Master's degree non-TVET</b>
i. Master's degree in the field or related fields accepted by the HEP Senate; <b>OR</b>  ii. Master's degree not in the related field accepted by the HEP Senate and three years of relevant work experience; <b>OR</b>  iii. Master's degree not in the related fields accepted by the HEP Senate and less than three years of relevant work experience, with rigorous internal assessment by HEP; <b>OR</b>	i. Master's degree in the field or related fields accepted by the HEP Senate and three years of relevant work experience; <b>OR</b>  ii. Master's degree in the field or related fields accepted by the HEP Senate and less than three years of relevant work experience, with rigorous internal assessment by HEP; <b>OR</b>  iii. Master's degree not in the related fields accepted by the HEP Senate and five years of relevant work experience; <b>OR</b>  iv. Master's degree not in the related fields accepted by the HEP Senate and less than five years of relevant work experience, with rigorous internal assessment by HEP; <b>OR</b>
Other qualifications equivalent to a Master's degree recognised by the Government of Malaysia and must have at least five years of relevant work experience; <b>OR</b>	
A Bachelor's degree with the following prerequisites: <ol style="list-style-type: none"> <li>Bachelor's degree in the field or related fields with First-Class Honours (CGPA of 3.67 or higher) or its equivalent from TVET programme</li> <li>Undergo rigorous internal assessment</li> <li>Any other requirements of the HEP</li> </ol>	
Admission through Accreditation of Prior Experiential Learning (APEL) is available for candidates with significant work experience and relevant credentials.	

Master's degree candidate may apply to convert to the Doctoral degree programme subjected to the following conditions:

- Within one year of candidature
- Have shown competency and capability in conducting professional-practice problem-solving at doctoral level through rigorous internal evaluation by the HEP
- Approval of the HEP Senate

HEP must determine the minimum language proficiency of the candidates. It must be consistent with the applicable programme standards or based on the needs of the programme, specifically the learning outcomes and the medium of instruction.

### **3.2. Articulation Regulations, Credit Transfer and Credit Exemption**

#### Master's and Doctoral Degrees

- 3.2.1 Information on policies, regulations and processes of articulation practices, credit transfer and credit exemption must be documented in the HEP's policies and regulations for the programme.
- 3.2.2 The document must be made accessible to all staff and candidates.
- 3.2.3 HEP should continually update the processes of articulation, credit transfer and credit exemption, including national and international collaborative provision.

### **3.3 Candidate Transfer**

#### Master's Degree

- 3.3.1 HEP must clearly define and effectively disseminate policies, regulations and processes concerning the following:
  - i. Articulation practices for transfer of candidates from one programme to another
  - ii. Articulation practices for the transfer of candidates from one HEP to another

### **3.4 Candidate Support Services**

- 3.4.1 HEP<sup>10</sup> must have an organisational unit that manages support services and cocurricular activities. The following support services are essential for the well-being of the candidates:
  - i. Health services
  - ii. Recreation and sports facilities
  - iii. Security
  - iv. Counselling services
  - v. Internet service
  - vi. Health insurance for international candidates
  - vii. Documentation services
- 3.4.2 HEP must have policies and procedures in place to handle candidates' grievances.

### **3.5 Candidate Representation and Participation**

- 3.5.1 HEP must clearly define and effectively disseminate policies, regulations and processes concerning candidates' representation and participation.

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<sup>10</sup>For Open and Distance Learning (ODL) institutions, refer COPPA: ODL (2019).

### **3.6 Alumni**

- 3.6.1 HEP must foster active linkages with the alumni to develop, review and continually improve the programme.

## AREA 4: ACADEMIC STAFF

The quality of academic staff is one of the most important components in assuring the quality of higher education. Every effort must be made to establish proper and effective recruitment, service, development and appraisal policies that are conducive to supporting and enhancing staff quality and productivity. Every postgraduate TVET programme must have a sufficient number of qualified academic staff. HEPs must provide a conducive work environment that encourages recruitment and retention of the best talent.

Teaching, research, consultancy services and community engagement are core interrelated academic activities. It is recognised that the degree of engagement of academics in these areas varies from one institution to another institution. However, HEPs must ensure a fair and equitable distribution of work and the implementation of robust and open system of recognition and reward that acknowledge and appreciate excellence, especially for the promotion, remuneration and other incentives.

Sufficient mechanisms should be put in place to provide academic staff with the necessary training in supervision skills and to ensure that they are exposed to best practices.

### 4.1 Recruitment and Management

- 4.1.1 HEP must have a clearly defined plan for the needs of its academic staff that are consistent with institutional policies and programme requirements.
- 4.1.2 HEP must have a clear and documented academic staff recruitment policy, where the criteria for selection are primarily based on academic merit and/or relevant experience.
- 4.1.3 The terms and conditions of service must be clearly stated or referred to in the offer letter and reviewed periodically.
- 4.1.4 HEP must establish the maximum ratio of candidates to supervisors, taking into account the total responsibilities of the supervisors and the needs of the candidates guided by the applicable programme standard.
- 4.1.5 HEP must establish a policy for the appointment of academic staff to ensure the quality and sustainability of the programme.
- 4.1.6 HEP<sup>11</sup> must have adequate and qualified academic staff responsible for implementing the programme. The expected ratio of full-time and part-time academic staff is 60:40.
- 4.1.7 The qualification requirements of a supervisor must be clearly stated:

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<sup>11</sup>For Open and Distance Learning (ODL) institutions, refer COPPA: ODL (2019).

Table 5: Requirements for a Postgraduate TVET Supervisor

	<b>Master's Degree of Professional Practice</b>	<b>Doctoral Degree of Professional Practice</b>
Principal Supervisor	<ul style="list-style-type: none"> <li>i. The principal supervisor must have a Doctoral degree and at least three years of full-time equivalent industry-related experience.</li> <li>ii. In the case where the principal supervisor has a Master's degree in the field, the principal supervisor must have the following: <ul style="list-style-type: none"> <li>a) At least three years of full-time equivalent industry-related experience</li> <li><b>AND</b></li> <li>b) Has co-supervised Master's degree candidate</li> </ul> </li> <li>iii. The supervisors undergo an onboarding process for the supervision programme.</li> <li>iv. The HEP Senate may impose other criteria it deems necessary.</li> </ul>	<ul style="list-style-type: none"> <li>i. The principal supervisor must have the following: <ul style="list-style-type: none"> <li>a) A Doctoral degree and have at least five years of full-time equivalent industry-related experience</li> <li><b>AND</b></li> <li>b) Has supervised Master's degree or Doctoral research candidate to completion</li> </ul> </li> <li>ii. The supervisors undergo an onboarding process for the supervision programme.</li> <li>iii. The HEP Senate may impose other criteria it deems necessary.</li> </ul>
Industrial Supervisor	The supervisor must possess at least a Bachelor's degree (or equivalent MQF Level 6) and have a minimum of three years of work experience in the relevant field at an appropriate job position.	The supervisor must possess at least a Bachelor's degree (or equivalent MQF Level 6) and have a minimum of five years of work experience in the relevant field at an appropriate job position.



Co-Supervisor	<ul style="list-style-type: none"> <li>i. Must have a Master's degree</li> <li>ii. In the case where the co-supervisor has only a Bachelor's degree in the field, the co-supervisor must have at least three years of full-time equivalent industry-related experience and one year of experience in teaching.</li> </ul>	<ul style="list-style-type: none"> <li>i. Must have a Doctoral degree</li> <li>ii. In the case where the co-supervisor has a Master's degree, the co-supervisor must have extensive experience in research and five years of full-time equivalent industry-related experience, subject to the approval of the HEP Senate.</li> </ul>
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4.1.8 A supervisory committee must include at least one principal supervisor and one industrial supervisor. Co-supervisor may be appointed if necessary.

4.1.9 The principal supervisor must be a full-time staff of the conferring HEP.

4.1.10 HEP must establish guidelines for the supervisory committee, including the following:

- i. Delineate the roles and responsibilities of principal supervisor and industrial supervisor
- ii. Prescribe ethical principles to assist supervisory committee in the identification and resolution of ethical issues that may arise during the course of their research
- iii. Ensure that the supervisory committee conduct all activities with academic integrity and industry good practices, in compliance with the code of conduct as well as relevant laws, rules and regulations
- iv. Take into account the total responsibilities of the supervisory committee and the needs of the candidates guided by the applicable programme standards and good practices for the determination of the maximum ratio of candidates to supervisor

4.1.11 The research skills, experience and specialisations of the supervisory committee must be aligned with the professional-practice field of the candidate.

4.1.12 HEP must establish a mechanism for monitoring the supervision process.

## 4.2 Research Expertise

Research expertise refers to staff who have been trained in their respective disciplines or with adequate knowledge and experience in the research areas, methodologies and matters related to research activities. They advise and assist whenever there are problems and provide training in research processes and

activities. Research expertise can be provided internally by the HEP or acquired from an external source.

4.2.1 HEP must provide adequate research expertise to run the programme.

4.2.2 HEP must have policy or guidelines on the roles of research experts.

4.2.3 HEP must have policy or guidelines on the development and management of research expertise.

### **4.3 Service and Development**

4.3.1 HEP must encourage academic staff to engage in scholarly activities in order to attain national and international recognition.

4.3.2 HEP must provide opportunities for academic staff to focus on their respective areas of expertise.

4.3.3 HEP must have clear policies on conflicts of interest and professional conduct, including procedures for handling disciplinary cases among academic staff.

4.3.4 HEP must provide academic staff the opportunities to participate in professional, academic and other relevant activities at national and international levels, allowing them to obtain professional qualifications for enhanced learning-teaching experience.

4.3.5 HEP must encourage and facilitate its academic staff to play an active role in the community and industrial engagement activities.

## AREA 5: EDUCATIONAL RESOURCES

A professional-practice environment provides candidates the opportunities to practise and engage in industry. Exposure to an environment of innovation and critical thinking encourages candidates to develop skills and competencies, advanced practical problem-solving, hands-on project execution and continuous updating of industrial knowledge.

As part of the professional-practice environment, appropriate, safe and adequate resources, including care for the needs of persons with disabilities, must be provided. These include physical and online facilities, technical and support staff, financial allocation, online and digital resources and network and collaboration. The quality, relevance, accessibility, availability, sustainability and delivery of such resources and services, as well as their actual utilisation by the candidates are also equally important.

In providing the resources and facilities, HEPs are encouraged to be resourceful and creative. In the case where resources and facilities are to be shared or provided through a collaboration with the industry, consortium, or outsourced services, HEPs must ensure that the candidates have adequate and reasonable access to these facilities and resources.

### 5.1 Physical Facilities

The physical facilities of a postgraduate TVET programme are largely guided by the needs of the programme and the specific field of work. These include appropriate space, equipment and support facilities for professional-practice problem-solving activities. For postgraduate TVET programmes, studies are typically conducted in a workplace setting.

- 5.1.1 The programme must provide candidates the access to adequate and appropriate physical facilities that support their studies related to professional-practice activities.
- 5.1.2 The physical facilities must comply with the relevant laws, including those pertaining to health and safety regulations.
- 5.1.3 HEP must have guidelines regarding the budget allocation of physical facilities.
- 5.1.4 HEP must have a policy for the effective use of information and communication technology (ICT) in the programme.
- 5.1.5 The library or resource centre must have adequate and up-to-date reference materials and qualified staff that meet the needs of the programme and research among academic staff and candidates.
- 5.1.6 The physical facilities must be maintained and periodically reviewed to improve quality and appropriateness.

5.1.7 HEP must provide training in the usage of relevant learning facilities to academic staff and candidates.

5.1.8 HEP must have a clear policy<sup>12</sup> that supports and sustains workplace learning with adequate facilities and resources.

## **5.2 Financial Resources**

Financial resources refer to the funds for the management and sustainability of the programme.

5.2.1 Financial resources must be adequate to support the programme.

5.2.2 HEP must have budgetary and procurement procedures to ensure that its resources are sufficient and that it is capable of utilising its finances efficiently.

## **5.3. Online Resources**

Online resources refer to resources such as e-journals, e-books, patent databases, support software, data repositories and search engines that support applied research activities. Such resources should enable access to technical papers, technical manuals and standards.

5.3.1 Online resources must be made available to support applied research activities.

5.3.2 HEP must provide adequate, credible and reliable online resources.

5.3.3 Candidates must have access to and be trained in the use of online resources.

5.3.4 HEP must have a policy or guidelines on the usage of online resources.

5.3.5 HEP must provide mechanisms for procuring, disseminating and monitoring the usage of online resources.

## **5.4 Networks and Collaborations**

Networks and collaborations refer to the participation in and sharing of intellectual knowledge, facilities and services among researchers, institutions and industries at the national and international levels.

5.4.1 HEP must facilitate networking and collaboration among academic staff, researchers, institutions and industries at national and international levels, leading to possible, where applicable, resource sharing.

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<sup>12</sup>Policy for workplace learning includes but not limited to setting priorities and objectives for applied investigation, funding arrangements, use of learning facilities, publication and authorship policies, intellectual property rights, research ethics and innovation commercialisation.

## **AREA 6: PROGRAMME MANAGEMENT**

Although ways of administering an educational institution and the methods of management differ between HEPs, the governance should reflect effective leadership, emphasising excellence, scholarship and competence. At the departmental level, the leadership provides clear direction, builds relationships based on collegiality and transparency, manages finances and resources with accountability and fosters partnerships with stakeholders in educational delivery, research and consultancy.

### **6.1 Programme Management**

- 6.1.1 The programme must have an appropriate programme leader who is responsible for planning, implementing, monitoring, evaluating and improving the programme.
- 6.1.2 HEP must provide candidates with a supportive learning environment that fosters the development and application of work practice relevant to the industry needs.
- 6.1.3 Candidates must be provided with current and up-to-date information on the objectives, learning outcomes, design and structure and assessment in the programme.
- 6.1.4 The programme must be regularly reviewed with feedback from related stakeholders and involve an external assessor with experience in the design and structure of the programme implemented (to be read together with 2.2.4).
- 6.1.5 HEP must have linkages with external stakeholders for programme development, research support and placement.
- 6.1.6 The department must clarify its management structure and function, as well as the relationships between them and these must be communicated to all parties involved based on the principles of responsibility, accountability and transparency.
- 6.1.7 The academic board of the department must be an effective decision-making body with an adequate degree of autonomy.
- 6.1.8 HEP must establish mechanisms to ensure functional integration and comparability of research quality for programmes conducted in campuses or industries that are geographically separated.

### **6.2 Programme Leadership**

- 6.2.1 The criteria for the appointment and responsibilities of the programme leader must be clearly stated.

- 6.2.2 The programme leader must have appropriate academic and industry-related experience<sup>13</sup> that enable effective planning and monitoring of the programme in relation to industrial practice.
- 6.2.3 There must be mechanisms and processes for communication between the programme leader, department and the HEP on matters pertaining to staff recruitment and training, candidate admission, allocation of resources and decision-making processes.

### **6.3 Administrative Staff**

- 6.3.1 The department must have a sufficient number of qualified administrative staff to support the implementation of the programme and related activities.
- 6.3.2 There must be a regular performance review of the administrative staff.
- 6.3.3 The department must have an appropriate training scheme for the advancement of the administrative staff, as well as to fulfil the specific needs of the programme.

### **6.4 Academic Records**

- 6.4.1 The department must have appropriate policies and practices concerning the nature, content and security of candidates, academic staff and other academic records.
- 6.4.2 The department must maintain and preserve records related to the admission, performance, completion and graduation of the candidates in a practical manner for future reference.
- 6.4.3 The department must implement policies on the rights of individual privacy and the confidentiality of records.
- 6.4.4 The department must continually review its policies on the security of records, including the increased use of electronic technologies and safety systems.

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<sup>13</sup>Appropriate academic and industry-related experience encompasses expertise in academic management, coupled with substantial engagement in industry collaboration.

## **AREA 7: PROGRAMME MONITORING, REVIEW AND CONTINUAL QUALITY IMPROVEMENT**

Quality is the responsibility of the HEP. An effective and robust internal quality assurance mechanism must be in place to ensure and sustain a quality culture. This requires the department to monitor, review and evaluate the structures and processes, curriculum components, as well as the progress, employability and performance of candidates using the feedback from all stakeholders.

### **7.1 Mechanisms for Programme Monitoring, Review and Continual Quality Improvement**

- 7.1.1 The department must have clear policies and appropriate mechanisms for regular programme monitoring and review.
- 7.1.2 The department must have a Quality Assurance (QA) unit for internal quality assurance and work hand-in-hand with the QA unit of the HEP.
- 7.1.3 The department must have an internal programme monitoring and review committee with a designated head responsible for continual review of the programme to ensure its currency and relevancy.
- 7.1.4 Various aspects of candidates' performance, progression, attrition, graduation and employment must be analysed for the purpose of continual quality improvement.
- 7.1.5 The findings of the programme review must be presented to the HEP for its attention and further action.
- 7.1.6 HEP must analyse and review the overall attainment of the programme's learning outcomes and objectives (to be read together with 1.2.2).
- 7.1.7 The department must regularly review its programmes and implement continual improvement processes based on the industrial partners' feedback to ensure that the programmes remain effective, relevant and aligned with evolving standards and needs.

**Appendix 1****LIST OF PANEL MEMBERS**

<b>NO.</b>	<b>PANEL MEMBERS</b>	<b>ORGANISATION</b>
<b>1</b>	Prof. Dr. Zulkifilie Bin Ibrahim (Chairman)	Universiti Teknikal Malaysia Melaka
<b>2</b>	Ts. Dr. Ridhwan Bin Jumaidin (Standard Writer)	Universiti Teknikal Malaysia Melaka
<b>3</b>	Prof. Ts. Dr. Kamal Bin Yusoh	Universiti Malaysia Pahang Al- Sultan Abdullah
<b>4</b>	Prof. Ts. Dr. Azremi Abdullah Al-Hadi	Universiti Malaysia Perlis
<b>5</b>	Prof. Dr. Erween Bin Abd Rahim	Universiti Tun Hussein Onn Malaysia
<b>6</b>	Assoc. Prof. Ir. Ts. Dr. Jasrul Jamani Bin Jamian	Universiti Teknologi Malaysia
<b>7</b>	Prof. Dr. Kushsairy Bin Abdul Kadir	Universiti Kuala Lumpur
<b>8</b>	Ts. Dr. Zulsyazwan Bin Ahmad Khushairi	DRB-HICOM University of Automotive Malaysia
<b>9</b>	Prof. Dr. Mohd Rizal Bin Salleh	Universiti Teknikal Malaysia Melaka
<b>10</b>	Ts. Amiruddin Bin Zahamail	Siemens Malaysia Sdn. Bhd.
<b>11</b>	Ir. Ts. Dr. Wan Syakirah Binti Wan Abdullah	TNB Renewables Sdn. Bhd.

**PERMANENT REPRESENTATIVES**

<b>12</b>	Dr. Faudzi Bin Muhammad	Jabatan Pendidikan Politeknik dan Kolej Komuniti
<b>13</b>	Ms Rozhafila Binti Rozali	Kementerian Pendidikan Tinggi
<b>14</b>	Ms Noor Hasniza Binti Mat Salleh	Kementerian Pendidikan Tinggi

**PANEL MEMBERS' REPRESENTATIVES**

1. Assoc. Prof. Dr. Rozyanty Binti Rahman, UniMAP
2. Assoc. Prof. Dr. Norzahir Sapawe, UniKL



## **SPECIAL ACKNOWLEDGEMENT TO THE TASK FORCE FROM UNIVERSITI TEKNIKAL MALAYSIA MELAKA**

1. Assoc. Prof. Dr. Muhammad Herman Bin Jamaluddin (Taskforce Leader)
2. Dr. Mohd Ruzaini Bin Hashim (Area 1 Leader)
3. Assoc. Prof. Dr. Raja Izamshah Bin Raja Abdullah (Area 2 Leader)
4. Vigneswara Rao A/L Gannapathy (Area 3 Leader)
5. Assoc. Prof. Ts. Dr. Choo Yun Huoy (Area 4 Leader)
6. Ir. Ts. Dr. Asriana Binti Ibrahim (Area 5 Leader)
7. Ir. Dr. Siti Nurhaida Binti Khalil (Area 6 Leader)
8. Ir. Ts. Dr. Lailatul Harina Binti Paijan (Area 7 Leader)
9. Dr. Hyreil Anuar Bin Kasdirin
10. Ts. Dr. Sazalinsyah Bin Razali
11. Assoc. Prof. Dr. Hidayat Bin Zainuddin
12. Assoc. Prof. Ir. Ts. Dr. Mohd Shukor Bin Salleh
13. Assoc. Prof. Ts. Dr. Wan Hasrulnizzam Bin Wan Mahmood
14. Prof. Ir. Dr. Gan Chin Kim
15. Ts. Dr. Ahmad Zubir Bin Jamil
16. Assoc. Prof. Ts. Dr. Zuraida Binti Abal Abas
17. Ts. Dr. Mohammad Kamil Bin Sued
18. Ts. Dr. Maizatul Alice Binti Meor Said
19. Mariam Miri Binti Abdullah
20. Ts. Mohd Razali Bin Md Yunos
21. Ts. Dr. Mohd Firdaus Bin Mohd Ab Halim
22. Ts. Dr. Suraya Binti Zainuddin
23. Ts. Dr. Syahrul Azwan Bin Sundi@Suandi

**Appendix 2****Master's and Doctoral Programmes' Learning Outcomes Attainment**

<b>No.</b>	<b>MQF's Learning Outcomes</b>	<b>No.</b>	<b>Programme's Learning Outcomes<sup>14</sup></b>	<b>Evidence of Learning Outcome Attainment</b>
1	Knowledge and Understanding			
2	Cognitive Skills			
3	Functional Work Skills			
	i. Practical Skills			
	ii. Interpersonal Skills			
	iii. Communication Skills			
	iv. Digital Skills			
	v. Numerical Skills			
	vi. Leadership, Autonomy and Responsibility			
4	Personal and Entrepreneurial Skills			
5	Ethics and Professionalism			

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<sup>14</sup> The PLOs must encompass all outcomes from the five clusters in the MQF.

The attached list indicates possible activities that candidates may undertake to demonstrate the attributes or outcomes. The activities undertaken vary according to the discipline, institution and the candidates' personal goals and career aspirations. Other activities not listed here may also provide evidence.

PL01 <sup>15</sup>	PL02	PL03	PL04	PL05	PL06	PL07	PL <sub>n</sub>	Activities <sup>16</sup>
								<b><u>Inception Stage</u></b>
								Meet candidature milestones
								Prepare confirmation of candidature documents and seminar presentation and response to feedback
								Industrial research methodology course
								Industry immersion and partnership setup
								Feasibility study
								Prepare applications to the ethics committees
								<b><u>Middle Stage</u></b>
								Industrial review (Proposal defence)
								Prototype development
								Testing and troubleshooting
								Data collection
								Data analysis/validation
								Prepare mid-candidature review documents and seminar presentation (if required) and response to feedback
								Write and edit manuscripts for publication and response to feedback
								Contribution to preparation of grant applications
								Apply for travel scholarships and other grants
								Training opportunities
								Completion of graduate certificate or graduate diploma in higher education teaching and/or commercialisation
								<b><u>End Stage</u></b>

<sup>15</sup>As many PLOs as applicable to a Master's or Doctoral degree programme. Add or remove column, as necessary.

<sup>16</sup>This is an indicative list of activities that the candidates may be involved in. HEP must list activities that typically occur and are open to their candidates. Assessors can review these activities as evidence of opportunities to achieve the learning outcomes.

PL01 <sup>15</sup>	PL02	PL03	PL04	PL05	PL06	PL07	PL <sub>n</sub>	Activities <sup>16</sup>
								Technoeconomic impact
								Prepare technical report, project report, conspectus, practitioner dissertation/thesis and response to feedback
								Oral defence
								Seminar presentation and response to feedback
								<b>Ongoing Activities</b>
								Participate in Three Minute Theiss or similar faculty or school events
								Work with professionals and peers
								Supervision and mentoring by the supervisory committee or any related activities, i.e., conference attendance and presentation (oral and poster)
								Participate in and present at seminars and/or journal clubs
								Provide feedback to the oral presentations of others
								Opportunities to perform, display work and receive feedback
								Participate in teamwork and collaborative projects
								Assist supervisors in reviewing journal articles
								Co-supervision/associate supervision for undergraduates, honours and postgraduate coursework students
								Co-teaching or contribution to teaching, especially with members of the supervisory team
								Opportunities to network with international experts in the discipline (e.g., conference attendance, interact with international visitors, international thesis assessors and publish in international journals)
								Industry or organisational placement or part-time employment
								Membership of and participation in professional organisations and committees
								Participate in industrial problem-solving skills programme and other training courses, workshops, seminars, debates, or case studies: <ul style="list-style-type: none"> <li>- Use of audio-visual technology skills</li> <li>- Report writing skills</li> <li>- Oral presentation skills</li> <li>- Preparation of publications</li> <li>- Tutoring skills</li> <li>- Lecturing or teaching skills</li> <li>- Supervision skills</li> <li>- Media presentation skills</li> </ul>

PL01 <sup>15</sup>	PL02	PL03	PL04	PL05	PL06	PL07	PL <sub>n</sub>	Activities <sup>16</sup>
								<ul style="list-style-type: none"> <li>- Advanced library and information search skills</li> <li>- Research skills</li> <li>- Data analytic techniques</li> <li>- Specific technical skills related to project report, technical report, or conspectus area</li> </ul>

**GLOSSARY**

1) Academic staff	Personnel engaged by HEPs who are involved in teaching and research supervision (including research fellows).
2) Administrative staff	Non-academic personnel engaged by HEPs.
3) Alumni	Graduates of a HEP.
4) Candidate	An individual undertaking postgraduate TVET programme.
5) Collaborator	An external entity involved in the programme and/or with the candidates.
6) Conspectus	A critical summary of project or technical report submitted by a Master's or Doctoral degree candidate, which includes and integrates professional-practice solution, creative works or artefacts, or any related works as evidence of advanced knowledge and scholarship to address all aspects of the degree outcomes.
7) Coursework	Identifiable units of study in a field and or practice undertaken by a candidate within a given period, which is assessed as an integral part of the programme.
8) Department	The entity of HEPs responsible for the programme. Examples are college, faculty, school, institute, centre and unit.
9) Doctoral Degree of Professional Practice	MQF Level 8 programme where candidates carry out a professional practice that contributes significantly to new practical knowledge and/or invention/practice in a field of work.
10) Examination committee	Comprises a chairperson and examiner(s) responsible for the evaluation of the practitioner dissertation/thesis or equivalent submission by a candidate.
11) External assessor	An expert in a field of study from outside the HEP who is required to evaluate the assessment system (2.2.4/2.2.5) or the effectiveness of a programme (6.1.4).
12) External examiner	An acknowledged academic expert in the relevant field of study and/or practice from outside of HEP who is appointed to evaluate a candidate's practitioner-dissertation/thesis.

13) External stakeholders	Parties external to the HEP who have an interest in the programme. Examples are alumni, employers, parents, collaborators, fund providers and professional associations.
14) Formal consultation	Organised meeting or discussion with records of the parties in attendance and the proceedings.
15) Fund providers	Financial contributors to the programme and/or candidates.
16) Industrial examiner	An acknowledged industrial expert in the relevant field of practice who is appointed to evaluate a candidate's dissertation/thesis.
17) Industry review	A formal evaluation process in which a project proposal is assessed by an industry panel and academic panel.
18) Industry-related experience	Includes work experience or various forms of collaborative work with industry partners, such as consultations, industrial grants, joint research projects and other cooperative efforts.
19) Industrial supervisor	An individual from the industry or a practitioner with substantial experience or expertise in the relevant areas of the professional-practice field who is appointed to supervise a candidate.
20) Internal examiner	An acknowledged expert in a field who is internally appointed by the HEP to evaluate the dissertation or, thesis of a candidate.
21) Internal quality audit	A self-review exercise conducted internally by the HEP, which generates a self-review report, to determine whether it achieves its goals, to identify strengths and areas of concern and to enhance quality.
22) Master's Degree of Professional Practice	MQF Level 7 programme where candidates carry out a professional practice that contributes significantly to the enhancement of practical knowledge and/or invention/practice in a field of work.
23) Networking and collaboration	The Memoranda of Agreement, Memoranda of Understanding, Letters of Collaboration and Letters of Intention signed between two or more collaborating parties.
24) Oral defence	The oral defence, viva voce, or public defence of a dissertation/thesis by a candidate.
25) Practitioner dissertation/thesis	A compilation of technical reports, project documentation and conspectuses authored by a candidate, accompanied by a comprehensive and cohesive

	summary that synthesises the individual works and provides an in-depth, detailed reflection of the candidate's professional practice and contributions.
26) Principal author	The author with the most substantive contribution to the publication or equivalent work.
27) Professional practice	The methods, processes, or any activities carried out at the workplace to accomplish tasks, fulfil job responsibilities and/or achieve organisational goals.
28) Programme	An arrangement of courses, subjects, or modules that is structured for a specified duration and learning volume to achieve the stated learning outcomes, which usually leads to an award of a qualification.
29) Programme leader	A qualified staff in the field or related fields of study who is responsible for managing the staff, candidates and resources within the framework of the structures, systems, policies and procedures established by HEP and consistent with this Standards and other standards to achieve the goals of the programme.
30) Programme structure	The composition and classification of courses in a coursework or mixed-mode.
31) Progress report	The periodic submission of a report regarding a candidate's progress to the department.
32) Project or technical report	The documentation of professional-practice solution, which is submitted in several stages and may include a proposal, prototype and testing reports, analysis and results and a techno-economic impact assessment or any form of reports related to the professional-practice problem-solving (e.g., impact report, feasibility report, or field report).
33) Prototype development	The iterative process of creating an initial model or version of a product, service, or concept to test and refine ideas, which involves designing, building and evaluating the prototype to gather feedback, identify potential improvements and ensure that the final outcome meets the desired objectives.
34) Relevant work experience	Professional experience that aligns with the relevant job role and encompasses the required levels of responsibility, skills and competencies within the specific field of study.
35) Rigorous internal assessment	A process that evaluates the suitability of an applicant for a programme through the statement of purpose,



interview, portfolio, test or other methods, which may cover the following criteria, but not limited to:

- i. Demonstration of experience in the related field to gauge candidate's knowledge and skills
- ii. Evidence of any achievements, such as consistent career progression and any impact on the organisation to gauge candidate's motivation
- iii. Professional skills developed, such as teamwork, leadership, problem-solving, negotiating and analytical skills

36) Supervisory committee

A panel of supervisors (which can be categorised as principal supervisor, industrial supervisor and co-supervisor) that provides supervision for the research conducted by a candidate.

37) Workplace

Any physical or digital location, where individuals carry out their job responsibilities and professional activities, which include traditional, physical office spaces and facilities and virtual environments like remote work setup, online collaboration platforms and cloud-based workspaces.



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