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PEKELILING AKADEMIK BILANGAN 12 TAHUN 2018

PEMAKAIAN KERANGKA KELAYAKAN MALAYSIA (*MALAYSIAN QUALIFICATIONS FRAMEWORK) (MQF)* EDISI KEDUA DI UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM)

Pejabat Pendaftar
18 September 2018

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1.0 TUJUAN

Pekeliling Akademik ini bertujuan untuk memaklumkan kepada semua staf dan pelajar mengenai Pemakaian Kerangka Kelayakan Malaysia *(Malaysian Qualifications Framework) (MQF)* Edisi Kedua Di Universiti Teknikal Malaysia Melaka (UTeM).

2.0 LATAR BELAKANG

2.1 Kerangka Kelayakan Malaysia (KKM) atau lebih dikenali dengan *Malaysian Qualifications Framework (MQF)* merupakan instrumen yang membangun dan mengklasifikasikan kelayakan berdasarkan satu set kriteria yang dipersetujui di peringkat kebangsaan dan ditanda aras dengan amalan antarabangsa dan menjelaskan tahap pembelajaran, hasil pembelajaran dan sistem kredit yang berasaskan beban pembelajaran pelajar. Kriteria ini diterima dan digunakan pakai bagi semua kelayakan yang dianugerahkan oleh pemberi pendidikan tinggi. Justeru, MQF mengintergrasi dan menghubungkan semua kelayakan negara.

2.2 MQF juga menyediakan laluan pendidikan yang menghubungkaitkan kelayakan-kelayakan secara sistematik. Ini membolehkan individu memajukan diri dalam pendidikan tinggi melalui pemindahan kredit dan pengiktirafan pembelajaran terkumpul yang diperoleh daripada

pembelajaran formal, tidak formal dan informal tanpa mengira masa dan tempat dalam konteks pembelajaran sepanjang hayat.

2.3 MQF Edisi Pertama telah dikuat kuasakan pemakaiannya pada 1 Januari 2011. Bagi memastikan MQF kekal relevan, unggul dan berkesan di peringkat kebangsaan dan antarabangsa, kajian semula terhadap MQF Edisi Pertama telah dijalankan.

2.4 Tujuan utama MQF Edisi Pertama disemak semula adalah untuk mengukuhkan dan mengambil kira keperluan, akses, sambutan, keperluan kemahiran baru dan pengetahuan serta koordinasi **di antara pendidikan tinggi dan sektor *Technical Vocational Education and Training* (TVET)**.

2.5 Agensi Kelayakan Malaysia atau *Malaysia Qualification Agency (MQA)* melalui Pekeliling MQA Bil. 2/2018 bertarikh 20 Mac 2018 telah mengeluarkan makluman bagi pemakaian MQF Edisi Kedua.

3.0 PEMAKLUMAN MENGENAI MQF EDISI KEDUA

3.1 MQF Edisi Kedua dihasratkan menjadi instrumen yang berupaya menghasilkan graduan yang holistik, memperkasakan program akademik dan pendidikan dan latihan teknikal dan vokasional (TVET) serta menyokong pengukuhan budaya pembelajaran sepanjang hayat.

3.2 Penambahbaikan ini telah mengambil kira *ASEAN Qualifications Reference Framework (AQRF)* agar sejajar dengan kerangka tersebut.

3.3 Ciri-ciri utama MQF Edisi Kedua ialah:

i. Mengurangkan **tiga (3) sektor** (pendidikan tinggi, kemahiran dan teknikal dan vokasional) **kepada dua (2) sektor** (Akademik dan TVET);

ii. Mengekalkan lapan (8) tahap pendidikan dengan satu (1) nomenklatur bersesuaian untuk setiap tahap;

iii. Menambah baik dan menyusun semula lapan (8) domain hasil pembelajaran ke dalam lima (5) *cluster* hasil pembelajaran yang sesuai untuk akademik dan TVET dalam konteks pembelajaran dan pekerjaan;

iv. Memperluaskan peluang pembelajaran sepanjang hayat; dan

v. Memperbaiki mobiliti pelajar, perpindahan kelayakan dan kredit, memastikan keterbandingan, mempromosikan pengiktirafan kelayakan kualifikasi Malaysia di peringkat nasional dan antarabangsa, dan untuk menjadi rujukan dan jajaran dengan kerangka kelayakan di ASEAN.

4.0 TARIKH KUAT KUASA PEMAKAIAN MQF EDISI KEDUA

4.1 MQF Edisi Kedua merupakan kerangka rujukan utama Universiti dalam jaminan kualiti untuk membangun dan menawarkan program pengajian tinggi negara. Justeru, penggunaan dan pematuhannya adalah terpakai seperti berikut:

BIL.	TARIKH	PERKARA
1.	01 April 2019	• Bagi **program baharu yang memohon akreditasi sementara** perlu menggunakan MQF Edisi Kedua sepenuhnya.
2.	01 April 2020	• Bagi **program yang memohon akreditasi atau melalui audit pematuhan** perlu menggunakan MQF Edisi Kedua sepenuhnya.

4.2 Perubahan utama yang perlu diambil maklum pihak Universiti adalah pemetaan semula lapan (8) domain hasil pembelajaran ke dalam lima (5) *cluster* hasil pembelajaran seperti yang dilampirkan di dalam Appendix 2 dokumen MQF dan seterusnya menyesuaikan dengan Objektif Pendidikan dan Hasil Pembelajaran Program. Jadual berikut menunjukkan perubahan daripada lapan (8) domain kepada lima (5) *cluster.*

MQF EDISI KEDUA (KLUSTER)	**MQF EDISI PERTAMA**
1. Knowledge and understanding	*1. Knowledge*
2. Cognitive skills	*2. Problem solving and scientific skills*
3. Functional work skills with focus on:	
Practical skills	*3. Practical skills*
Interpersonal and Communication skills	*4. **Social skills** and responsibilities* *5.**Communication**, leadership and **team skills***
Digital skills and Numeracy skills	*1. Knowledge*
Leadership, autonomy and responsibility	*4. Social skills and **responsibilities*** *5. Communication, **leadership** and team skills*
4. Personal and entrepreneurial skills	*6. Information management and lifelong learning skills* *7. Managerial and entrepreneurial skills*
5. Ethics and professionalism	*8. Values, attitudes and professionalism*

4.3 Kerangka Kelayakan Malaysia Edisi Kedua adalah seperti di **Lampiran.**

5.0 TARIKH KUAT KUASA

Pemakaian Kerangka Kelayakan Malaysia *(Malaysian Qualifications Framework)* (MQF) ini berkuat kuasa mulai **1 Ogos 2018.**

Sekian, terima kasih.

"KOMPETENSI TERAS KEGEMILANGAN"

Saya yang menurut perintah,

MASDZARIF BIN MAHAT
Ketua Pegawai Operasi
Universiti Teknikal Malaysia Melaka

Agensi Kelayakan Malaysia
Malaysian Qualifications Agency

MALAYSIAN QUALIFICATIONS FRAMEWORK (MQF)

2nd EDITION



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FOREWORD

Qualification Frameworks are not static statements in perpetuity. They are dynamic and would require periodic revisions, to serve their purpose in higher education systems that are constantly changing. It is true for Malaysia as it is for most countries, in the world, where higher education systems are constantly striving to keep abreast of societal changes. These changes affect the daily lives of citizens in one way or another and include the changing industrial structures, the result of global trade practices, the pressures to innovate to remain competitive, sustainability considerations and the philosophical desire to ensure equality and equity for all groups to actively participate and benefit from national development and wealth.

The revised Malaysian Qualifications Framework (MQF) is a response by the Malaysian Qualifications Agency (MQA) to the call by Malaysians to make the framework more responsive to better, higher quality and relevant post-secondary education. A series of engagements with the stakeholders, i.e. higher education providers, skills training centres, MQA and Department of Skills Development's panel of assessors, professional bodies, ministries/policy makers and industries were conducted.

This revised MQF brings together a modest alignment to serve three expectations. The framework desires to enhance competencies and potential of learner regardless of sectors for themselves and national needs to quality talent and citizen; to eliminate as much as it is possible the perceived divide between academic and Technical and Vocational Education and Training (TVET) qualifications in terms of quality, relevance, standards and rigour; and finally to establish a strong relationship between the two and lifelong learning. This relationship forms the central core of the revised framework's direction. The Framework recognises prevailing tensions, especially between academic and TVET and presents a unified approach to learning outcomes especially up to Advanced Diploma (Level 5) and recognises the specific demands of the two sectors beyond that.

Frameworks are only as good as the vigour with which they are applied. This requires the full support and cooperation of all those actively involved in the promotion and sustenance of the systems. This will include government, policy makers and higher education providers. MQA has full confidence that this will be done, just as it was done when the first edition of the MQF was introduced in 2007 and implemented in 2011.

Overall the changes are modest in addressing the developments in academic and TVET at national and regional levels, and to bring the Framework up to date of the development since its implementation.

We would like to acknowledge that in revising MQF, a number of national qualification frameworks and the regional framework, i.e. the ASEAN Qualifications Reference Framework (AQRF) were referred and benchmarked to.

Thank you.

Dato' Prof. Dr. Rujhan Mustafa
Chief Executive Officer
Malaysian Qualifications Agency
2017

Introduction

1. BACKGROUND

1. The social, economic, political, competitive and sustainable development of nation states is highly dependent on the strengths and quality of its people and of its educational systems from early childhood to continuous lifelong learning. In higher education, among the many policies and related initiatives during the last decade, the framing of national qualifications, globally, has been seen as an important and key initiative in improving learning, skills and competencies in supporting national policy and development goals.

2. In Malaysia, the importance of the role of higher education and training institutions is to contribute to the nation's social, economic and political development through the production of quality citizens, a highly skilled and talented workforce and new knowledge has been unambiguously acknowledged. These developments have been guided broadly by the National Education Philosophy. Empowering the actualization of the policy is the Malaysia Education Blueprint 2015-2025 (Higher Education)[1] which outlines the strategies, plans, key performance indicators, responsible departments, institutions and agencies within a number of strong enabling legal frameworks. The Malaysian Qualifications Framework (MQF)[2] which was approved under the Malaysian Qualifications Agency (MQA) Act, 2007, has a key role within these complex arrangements, i.e. to set qualification standards for all qualifications in the higher education and training sectors.

3. The milestone decision agreed by all stakeholders was made in 2007, to develop a national qualifications framework and establish the MQF. The MQA Act 2007 sets MQF as an overarching framework for all post-secondary qualifications, with a set of objectives to be served and serviced by MQA. The Framework is 'development-oriented', and enabled by strong government policies and regulations, centrally mandated for MQF, its stakeholders and in partnership with higher education and training institutions.

[1] Ministry of Education Malaysia (2015), *Malaysia Education Blueprint 2015-2025 (Higher Education)*. Putrajaya, Malaysia.
[2] Malaysian Qualifications Agency (2007), *Malaysian Qualifications Framework*. Petaling Jaya, Malaysia.

4. All programmes and qualifications within the higher education and training sectors are expected to be in compliance with the MQF as required by relevant national policies since 2011. This Framework is the instrument which sets national classifications of qualifications, levels of learning achievements based on learning outcomes, prescribed academic load at each level and is associated with the title of a named qualification. *"No programme will be accredited unless it is in compliance with the Framework"* as set in the legislation. The legislation underpins the quality assurance (QA) system practised by MQA, and acting as the guardian and custodian of MQF.

5. Since the establishment of the MQA and its creation of the first edition of the MQF in 2007, major changes have taken place at the learning and workplace globally. These changes and challenges include

   i. the sensible management of QA of professional programmes;
   ii. digitization and the rapid changing nature of jobs;
   iii. the focus on individual competencies;
   iv. shifts in higher education itself with the massive use of educational technologies for teaching and learning;
   v. delivery of services especially, and even importantly, responses to the demand for greater internal efficiencies of systems;
   vi. meeting market expectations especially taking note of graduate unemployment due to mismatch between curriculum and employment;
   vii. greater demand for employability skills;
   viii. recognition of diversity and differential missions of Higher Education Providers (HEPs);
   ix. requirements of standards for the Technical and Vocational Education and Training (TVET) sector all called for continuous engagement with key users of qualifications including the learners themselves;
   x. lack of understanding and the required capabilities to implement the learning outcomes effectively by the academic community;
   xi. absence of integration pathways of the basic learning outcomes of different sectors; and
   xii. comparability with qualifications from other jurisdictions.

   Acknowledging that change is and will always be a constant, requires the MQF to undergo periodic reviews, taking stock of changes in the ecosystem, the shifts in higher education purposes and their delivery services including

the need for developing global competencies of labour as well as the high expectations of citizens for better quality of higher education and its products.

6. The purpose of the review is not to revise the MQF fundamentally but strengthen and address the developing needs, access, responsiveness, emerging skills or knowledge needs and coherency within the higher education and TVET sector. This review revisits MQF as a unified and comprehensive framework to enhance the standards of qualifications and to serve the Malaysian community better. At the same time, with the experience of over ten years of implementation of the first edition of the MQF, interpretations on specifics of the Framework must now be updated and incorporated in the revised Framework.

7. The review seeks to ensure MQF continues to serve the National Education Philosophy (Preamble of Education Act 1996) as well as the various policy goals stated in the Malaysia Education Blueprint 2015-2025 (Higher Education). In particular, the development of the integrated Cumulative Grade Point Average (iCGPA) instrument is to ensure effectiveness and consistency in the achievement of learning outcomes. The revisit also intends to address the directives in the 11th Malaysian Development Plans for stronger quality TVET workforce with qualifications to be driven by the requirements of the industry. Another area this review will address is the external comparability and recognition of Malaysian qualifications especially with the increasing mobility of our students and workers in the skills and services sectors across borders.

8. A further reason for the review and revision of the MQF is the added responsibility entrusted upon the MQA to undertake the recognition of “all qualifications” granted by Malaysian post-secondary institutions. Such an undertaking is expected to also fit in with the ASEAN Qualifications Reference Framework (AQRF) designed to promote the harmonisation of qualifications, across ASEAN thereby helping to facilitate the mobility of workers and their integration within the region, besides the relevance of qualifications and learners to current industry, business and broader society.

9. The Framework may be reviewed and amended from time to time by consulting, collaborating and coordinating with a broad range of stakeholders

as well as the professional bodies. These changes must be approved by the MQA Council and subjected to the approval of the Minister responsible.

2. MALAYSIAN QUALIFICATIONS FRAMEWORK AND QUALITY ASSURANCE SYSTEM

10. MQF is an integral part of the QA practice of MQA. The programme design, objectives and learning outcomes, teaching, learning and assessment methodologies, support resources and systems for delivery and improvement are embedded in the quality assurance standards. Learning outcomes are verified and evaluated when higher education providers (HEPs) submit their programmes for provisional accreditation, full accreditation and continuous maintenance through the periodic audit cycles. (COPPA)

11. In addition, a number of programme standards have also been developed by different teams of experts as a part and parcel of the QA system. This also includes the construction of learning outcomes and competencies statements for TVET qualifications which require special attention to technical knowledge and industry occupational standards. For the purpose of guiding HEPs to enhance understanding of the MQF and develop good internal quality systems, MQA also introduced several Guidelines of Good Practices.

Malaysian Qualifications Register

12. All accredited qualifications are registered on the Malaysian Qualifications Register (MQR). Basic information of the qualifications, programmes and awarding institutions are stated in the Register to assist students and other parties, local and abroad, to obtain key information of a programme.

Malaysian Qualification Statement

13. Malaysian Qualification Statement (MQS) provides detailed information of a programme including the learning outcomes, accreditation status, QA system, awarding institution and is issued by HEPs to the student on successful completion of the programme. It informs learners and users of qualifications of the learning achievement and competencies of the learners and this facilitates assessment of qualifications by interested parties.

Roles and responsibilities of Malaysian Qualifications Agency

14. MQA derives its powers from an Act of Parliament (Act 679) which gives it powers to implement the Malaysian Qualifications Framework, to accredit higher educational programmes and qualifications, to supervise and regulate the quality and standards of higher education providers, to establish and maintain the Malaysian Qualifications Register and to provide for related matters. Thus it proposes, advises, guides, administers and regulates the higher education and training sectors with specific reference to quality assurance.

1. DEFINITION

15. The main protocol mandated is the implementation of the MQF through subsection 35(1) *"The Agency shall be responsible for the implementation of the national framework to be known as the 'Malaysian Qualifications Framework', consisting of qualifications, programmes and higher education providers based on a set of criteria and standards, including learning outcomes achieved and credits based on students' academic load."* (MQA Act 679, 2007).

16. The framework is defined as *'...an instrument that develops and classifies qualifications based on a set of criteria that is agreed nationally and benchmarked with international practices, and which clarifies the academic levels learning outcomes and credit system based on student academic load'.* (MQF, 2007). It is an intended as a comprehensive, overarching and integrated national qualifications framework. The Framework provides a set of levels and descriptors covering all sectors, which uses the set of levels and outcomes with the intention to bring progression and pathways together, and accommodate all forms of learning. They are related to study and/or work context to make it applicable for academic and TVET type qualifications and purposes.

The Objectives of Malaysian Qualifications Framework

17. The objectives of the MQF provided under Section 36 MQA Act 2007 are as follows:

i. to secure standards of qualifications and reinforce policies on quality assurance;
ii. to promote accuracy and consistency of nomenclature of qualifications;
iii. to provide mechanisms for the progression or inter relation between qualifications, including non-degree to degree qualifications;

iv. to encourage collaboration between public and private sector higher education providers and skills training providers;
v. to encourage parity of esteem among academic, professional, technical, vocational, and skills training providers;
vi. to establish a credit system to facilitate credit accumulation and transfer which is acceptable within and outside Malaysia;
vii. to provide clear and accessible public information on programmes or qualifications in higher education;
viii. to promote where applicable, the presentation of qualifications in forms that facilitate their evaluation by any person, including government agencies, higher education providers, students, academic staff, quality assurance and accreditation bodies, professional bodies, examination bodies and employers; and
ix. to articulate links with qualifications from outside Malaysia.

Key Features of Malaysian Qualifications Framework 2nd Edition

18. The MQF 2nd edition remains as an overarching framework for all qualifications from diverse sectors which is based on, and maintains, the structure of the previous framework. The key features are as follows:
    i. It is a unified and single framework of qualifications which recognises the qualifications progression routes namely the academic and TVET sectors and as an instrument to inform learners, employers and society of the learning acquired.
    ii. It maintains the eight levels of learning with a single qualification title (nomenclature) for each level.
    iii. It sets generic learning outcomes descriptors for each level which is applicable to academic and TVET type qualifications described in the context of “study and/or work”.
    iv. It provides flexibility and option for variant within specific qualifications, for example bachelor programme which may have general academic and professional orientations.
    v. It provides a credit rating system that determines the quantitative minimum-learning load at each level, and is supported by credit transfer/exemption policies.
    vi. It provides better coherency in the academic and TVET sectors, improves efficiency on articulation, learning pathways and supports lifelong

learning for learners to progress through clear linkages between qualifications and levels and with better collaboration between different institutions and sectors.

vii. It supports initiatives toward widening access and progression in lifelong learning with flexible learning and Accreditation of Prior Experiential Learning (APEL) or recognition of prior learning for the workers with skills set and supports the provisions of alternative credentialing for career and employment as well as further education; provides equivalency assessment for professional and skills' competency certifications.

viii. It supports curricula transformations which take into account global perspectives and labour market requirements.

ix. It intends to improve mobility of learners, portability of qualifications and credits, ensures comparability, and promotes recognition of Malaysian qualifications at national and international levels, and to be referenced and aligned to regional qualifications frameworks.

x. It continues to prove the basis for standards development, quality assurance and accreditation system to ensure quality learning, builds trust and confidence, and supports recognition.

xi. It is imperative that MQF 2nd edition operates as a single comprehensive integrated framework for the different sectors and institutions and applies to all qualifications offered in Malaysia. It must remain as a dynamic instrument that develops according to priority and national changes for improvement in the higher education and training systems.

2. SCOPE OF FRAMEWORK

2.1 SECTORS AND QUALIFICATIONS

19. The first edition of MQF recognised three awarding sectors which were the academic, the vocational and technical (mainly the Polytechnics and Community Colleges regulated by the Ministry of Higher Education) and the skills (training centres under the Ministry of Human Resource) sectors.

20. With the 11th Malaysian Development Plans (2015-2020), the scope of MQF refers to qualifications types from two sectors, i.e., academic and TVET sectors. The Framework, a single and unifying framework of all qualifications

in Malaysia, describes the levels of learning, generic learning outcomes, level descriptors, credits and single qualification title for each level to be applied in both academic and TVET type qualifications.

Academic Qualifications

21. For the purpose of MQF, academic qualifications are qualifications which include general education or discipline-oriented programmes from level 1 to 8 for the purposes of advancement to higher education, career, and professional practice and employment opportunities in various sectors. They are offered by various HEPs. The bachelor degrees and a few diploma qualifications which are recognised by the various statutory professional bodies in Malaysia, enable graduates to be registered as professionals to practise their professions.

Technical and Vocational Education and Training Qualifications

22. The Framework addresses post-secondary TVET type qualifications within the higher education and training sector. The qualifications are mainly issued by HEPs which are both public and private universities/colleges, polytechnics, community and the recently established vocational colleges, and are governed by the Education Act 1996 and the Private Higher Educational Institutional Act 1996. In addition, the accredited skills training institutions, regulated under the National Skills Development Act 2006, also issue qualifications to trainees while others deliver training programmes with qualifications incorporating specific National Occupational Skills Standard (NOSS) with certifications conferred by the Department of Skills Development of the Ministries of Human Resource to the trainees. There are also other awarding sectors such as the *Majlis Amanah Rakyat* (MARA) and State Skills Development Centres.

23. TVET education and training in Malaysia has an emphasis on industry practices with its main objective to produce industry relevant competent work force to buttress the country's socio-economic objectives. The generic learning outcomes clusters that apply to all TVET qualifications include knowledge and cognitive skills, functional and work skills and specific

industry-appropriate competencies. The differences in the various programmes and levels include specialised technical and vocational knowledge as well as agreed occupational standards of specific industries. At least 60% of the programmes will be made up of practical components which emphasise psychomotor skills strengthened further through industrial exposure and training as part of the curriculum.

24. At levels 4 and 5, learners should be able to continue with their education, in a similar or related TVET field programme, at an HEP offering higher technical/vocational programme of study.

Note: Professional Qualifications, Skill Certifications and Partial Qualifications

25. Programmes and qualifications of HEPs designed for the purpose of obtaining professional recognition, are subjected to or guided by, programme/accreditation standards, where available/applicable, set by professional statutory bodies in Malaysia. In principle, the expected outcomes and competencies contain the essence of the level, learning outcomes and comply with credit load of MQF. The learning outcomes may be described in the context of graduates attributes or competencies.

26. Taking note of many new forms of training provided by actors other than colleges, polytechnics and universities, the framework also facilitates assessment for equivalency and/or may provide/support the formal recognition of professional certifications by industry and other non-formal training providers, through new and emerging delivery systems (such as Badges, MOOCs, Nano and Micro degrees) as long as these comply with the Framework's learning outcomes, assessment cultures and expectations.

27. The Framework is also applicable in principle to the issuance of "partial qualifications" to support upgrading and upskilling initiatives of individuals such as short programmes and modular learning, as it may be accumulated and used to obtain full qualifications. However, it is important that the learning outcomes and credits are quality assured.

28. All accredited and quality-assured qualifications fulfil specific requirements of the Framework and it includes qualification type, title, level descriptors, credit requirements as well as admission and pathways of progression at each level.

29. These qualifications are certificates, diplomas or degrees awarded by an HEP or any party that is authorised to confer the qualification, having affirmed that one has been successful in completing the study and training, has satisfied the determined levels of achievement, the credits and is capable to undertake a role, duty or work. The qualifications indicate positive achievement of learning outcomes as prescribed by the specific programme.

30. The award of honorary degrees such as honorary doctorate should be distinguished from the doctoral degrees in the MQF and is not part of the Framework.

2.2 LEVELS AND QUALIFICATIONS

31. The MQF maintains eight levels of learning achievement. These are Certificates (Level 1-3), Diploma and Advanced Diploma (Level 4-5) and Bachelor, Master and Doctoral degrees (Level 6, 7 and 8). Post-doctoral degrees are not included in the Framework. The Level and Qualification type is as indicated in **Appendix 1**.

32. Variants: In cases where there are qualifications from two different sectors at the same level, they must be broadly comparable to the general requirements of the respective levels in MQF. There are also variants of qualifications within specific levels for example at level 6, it accommodates general academic programme as well as professional type programmes; or at Level 7 there are different modes of master's degree, i.e., master by research, mixed mode and coursework.

33. The Framework enables clear vertical progression by the levels, beginning with the base or basic level knowledge and skills to most complex and specialised knowledge and sophistication of practices. It reflects the accumulation of knowledge and skills from each level progressively. On the

other hand, a horizontal reading of a level informs the level's standards of the set of learning outcomes required in a programme designed for that level.

34. Each level in the MQF is provided with generic statements which describes the learning outcomes at that level reflecting its complexities. Therefore, the levels must be read together with the level descriptors which broadly characterize the learning achievement and guide the assessment standards for each level. The various Programme Standards by disciplines /or field of study also explain the learning outcomes in accordance to the need of the discipline or field of study. [3]

2.3 LEVEL DESCRIPTORS AND PURPOSES

35. Each level in MQF is provided with a generic descriptive statement in qualitative terms, which describes the learning achievement at a particular level. The levels' descriptors define the expected knowledge, capabilities and/or competencies of learners on successful completion of the learning programmes in the context of work and study. The broad statements account for the content-free nature of learning standards in the MQF. It is within the specific programme design of the HEPs that the descriptors are translated and contextualized, by the specific subject or discipline, technical and vocational, and professional fields.

36. The level descriptors differentiate the:
    i. depth, complexity and comprehension of knowledge;
    ii. cognitive skills;
    iii. application of functional skills as well as the breadth and sophistication of practice;
    iv. personal skills;
    v. ethics and professionalism; and
    vi. scope and complexity of application, and responsibilities.

37. The main purposes of the level descriptors are to:
    i. guide writing learning outcomes of programmes, support assessment criteria, as well as assigning levels to programmes and qualifications against the Framework;

[3] Refer quality assurance documents at www.mqa.gov.my.

ii. provide a set of overarching and generic level descriptors from the learning outcomes clusters which are intended to fit and accommodate the variety of different learning contexts such as academic, professional, technical and vocational, and work;

iii. build / provide common and shared understanding of the qualifications and assist broad comparison of qualifications of various fields as well as in equivalency assessment of qualifications and certifications;

iv. apply as a key reference point in the recognition of qualifications against the Framework;

v. apply in referencing of MQF to other external frameworks;

vi. apply in wide variety of learning settings such as conventional classroom to work-based learning (WBL), computer mediated learning, apprenticeship programmes, field work, various forms of practical/industrial training, practice-based learning, clinical and so forth as found in the various programmes and institutions;

vii. apply in the assessment of prior experiential learning, for both admission and credit award purposes and for institutional and programme specific transfer or advanced standing provisions.

The level descriptors are provided in **Appendix 2**.

2.4 LEARNING OUTCOMES

38. The learning outcomes of MQF 2nd edition build on the existing domains, principles and practices of MQF edition 1. Learning outcomes are 'statements on what students should know, understand and can do upon successful completion of a period of study, which generally lead to a qualification or part of a qualification'.

39. The generic learning outcomes are intended to provide a framework to reduce the gap between the world of education, work and responsible global citizenship and to further harmonise/integrate the systems. This is demonstrable by the skills and knowledge of learners to successfully perform in professional, educational, and other life contexts.

40. Thus the levels, clusters of specific learning outcomes and credits are external standards and guide the inputs by institutions into the curriculum,

teaching, learning and assessment. Many of the learning outcomes are critical-cross field outcomes, generic and relevant in different types of programmes. It will create an impact on the teaching and learning activities and strategies in assessments.

41. It is expected that the approach to teaching-learning and assessment supports the personal growth and progress of broader capabilities or competencies; more knowledge, better cognitive skills, obtaining new work and personal skills. The broader expectation is that the learners are expected to be able to continue to perform and improve these competencies in their working life and further education.

2.5 DOMAINS/CLUSTERS OF LEARNING OUTCOMES

42. A set of eight domains of generic learning outcomes and 16 specific learning outcomes was established and operationalised in MQF edition 1. These continue to remain relevant and universally comparable. In MQF 2nd edition, they have been clustered, re-profiled and retained. The listed outcomes resonate and mostly align with the aspirations of the National Education Philosophy (1961), the Malaysia Education Blueprint 2013-2025 as well as the Malaysia Education Blueprint 2015-2025 (Higher Education). The MQF 2nd edition is linked to, and a continuum of, the educational outcomes from basic education to higher education as set in the national blueprints.

43. It also is comparable to other national qualifications framework and to other regional qualifications frameworks [4].

44. These learning outcomes clarify the demands and complexities of learning by each level. It is within the context of study and/or work/practice situations, where for example, knowledge and understanding is required concurrently as these traits are dominant and important in pursuing higher education and advanced skills training. The **five clusters of learning outcomes** are:

[4] At another level, MQF 2nd edition is benchmarked against the AQRF and the learning outcomes. The AQRF prescribes 4 domains of applied competencies such as the cognitive, functional, personal and ethical competencies but defines the learning outcomes into 2 types: Knowledge and Skills, and Application and Responsibility. The personal and ethical skills are to be determined by the national system.

i. Knowledge and understanding
ii. Cognitive skills
iii. Functional work skills with focus on:
    a. Practical skills
    b. Interpersonal skills
    c. Communication skills
    d. Digital skills
    e. Numeracy skills
    f. Leadership, autonomy and responsibility
iv. Personal and entrepreneurial skills
v. Ethics and professionalism[5].

2.5.1 Application of the Learning Outcomes in Context

45. The application of the learning outcomes in each level is situational-based, and depends on the complexity of tasks, study and work to be performed. The level descriptors explain the context of application of the learning outcomes broadly and are often influenced by levels of autonomy and responsibility. The levels build the knowledge, various skills and learners' development progressively and incrementally.

46. As a general practice, individual programmes design should address the clusters of learning outcomes appropriately. It describes the general and specific content for knowledge and skills in a subject(s) and related field(s), the level of cognitive skills, and where relevant the specialised technical skills. The other generic skills are capabilities that all learners should develop in the course of further study and training, whether by specialised courses or integrated in the teaching and learning strategies including WBL options and co-curricular activities.

[5] Embedded within the five clusters are clear expectations that learners will demonstrate ethical and civic responsibilities through contributions to their local and global communities.

2.5.2 Description on Learning Outcomes Clusters and Application Context

i. Knowledge and Understanding

47. Knowledge and understanding refers to a systematic understanding of facts, ideas, information, principles, concepts, theories, technical knowledge, regulations, numeracy, practical skills, tools to use, processes and systems.

48. It may relate to a subject, a field of study or discipline as well as to technical and occupational or workplace aspects of knowledge and understanding. It starts with basic general knowledge and progress to varied, broader, specialised and advanced knowledge including those relating to sustainable practices, rules and regulations, health and safety, especially relevant to TVET type and even professional programmes.

49. The scope of knowledge should include the common everyday knowledge within the learners' environment. This may also be acquired through formal, informal, and non-formal learning circumstances-experiences. Developing personal values and ethics may derive from knowledge and experiences.

50. Knowledge and understanding enables the learners to relate to their prior knowledge in the course of learning or work as well as to expand to related fields. Knowledge provides the basis for applications of all other learning outcomes.

ii. Cognitive Skills

51. This relates to thinking or intellectual capabilities and the ability to apply knowledge and skills. The capacity to develop levels of intellectual skills progressively begins from understanding, critical/creative thinking, assessment, and applying, analysing, problem solving as well as synthesizing to create new ideas, solutions, strategies or new practices. Such intellectual skills enable the learner to search and comprehend new information from different fields of knowledge and practices.

iii. Functional Work Skills

a. Practical work skills

52. These are generally work skills and operational skills applicable in common employment environment such as planning; organisational skills; selection of tools, material, technology methods and procedures, while in study context, it may include study skills and preparations, undertaking procedures, scientific skills, designs, research and so forth. It also includes specialised skills which are set by specific subject, discipline, technical or occupation-related work skills and professional practice which enhance professional competence. It should include safe and sustainable practices.

b. Interpersonal skills

53. Interpersonal skills refer to a range of skills which, amongst others, include interactive communications; relationships and collaborative skills in managing relationships in teams and within the organisations; networking with people of different cultures; as well as social skills/etiquette.

c. Communication skills

54. Communication skills refer generally to the ability to communicate/convey information/ideas/reports cogently and professionally in appropriate language. The communication must be effective and in appropriate forms, in various medium, to a range of audience and different situations. The ability to communicate in more than one language is encouraged.

d. Digital skills

55. Digital skills generally refer to the ability to use information/digital technologies to support work and studies. The skills include sourcing and storing information, processing data, using applications for problem solving and communication, as well as ethics in applying digital skills.

e. Numeracy skills

56. These are the quantitative skills that require learners to acquire increasingly higher levels of numerical abilities. It is acknowledged as an important living skill relevant in study, work and daily life. Within the MQF levels, this learning outcome may not be specifically mentioned for every level but it is expected that numerical skills are required as an outcome ought to be indicated for every specific programme. It may include understanding of basic mathematics, symbols relating to statistical techniques and etc.

f. Leadership, autonomy and responsibility

57. This cluster of skills refers to an individual's ability to build relationships and work with teams made up of peers or in managerial capacities with varying degrees of autonomy to make decisions or setting goals at organisational/unit/team levels; to take responsibilities and provide accountability; to be confident, knowledgeable, articulate, honest, professional, concerned, resilient, a risk taker and possess other intrapersonal skills including working in, and leading teams.

iv. Personal and Entrepreneurial Skills

58. Personal skills are life skills that learners are expected to use daily. They are normally portrayed through enthusiasm for independent learning, intellectual and self-development; by demonstrating confidence, self-control; social skills and proper etiquette; and commitment to professionalism in the work place. It also includes capability to plan for career development or further education. Aspects of character such as honesty, punctuality, time management, keeping to and maintaining deadlines that are important in a work environment are also important personal skills.

59. Entrepreneurial skills require relevant knowledge, skills and expertise in key areas of an enterprise. Important personal qualities will include creativity, grit and drive. The learning outcomes describe incremental development of these skills. The drive to be an entrepreneur is set as personal skills but also requires the requisite of relevant knowledge, cognitive and functional skills.

v. Ethics and Professionalism

60. Ethics and values are important at personal, organisational, societal/community and global settings as they guide personal actions, interactions, at work and within the community at large. Awareness/understanding and respect of ethical, social and cultural differences and issues are important in the exercise of professional skills and responsibilities: integrity, professional conduct (professionalism), and standards of conduct such as upholding regulations, laws and codes of good practices or code of professional conduct. A sensitive approach in dealings with other cultures adds value to this learning domain.

3. QUALIFICATION TITLES (NOMENCLATURE)

61. The MQF sets a single qualification title for each qualification, provided it fulfils the qualifications standards determined for that level. In the case of master's qualifications, due to the type of learning modalities, the award bearing the master's award title will also indicate master's degree by research, mixed mode, coursework and Specialist Masters which is unique to the field of Medicine.

62. Generally, Certificate and Diploma nomenclature will indicate one field of study/discipline only, without any specialisation, for example Diploma in Business Studies or Certificate in Social Work.

63. In the case of bachelor's programmes, the award may use the designated field as a qualifier e.g. Bachelor of Accounting. Knowledge of the designated field will account for 70% of the total knowledge of the programme. A programme with specialisation is indicated in parentheses, where the specialisation component accounts for 25-30%, e.g. Bachelor in Computer Science (Programming). For double major programmes that contain fundamental components of two main fields with the percentage of 50-50, the qualification is named using the connector 'AND', e.g. Bachelor of Commerce and Finance. A major-minor programme that contains at least 25-30% component in other fields of study is named using the connector 'WITH', e.g. Bachelor of Biology with Psychology.

4. CREDIT SYSTEM

64. Provision for credit system is stated in MQA Act 2007 section 36(f), 'to establish a credit system to facilitate credit accumulation and transfer which is acceptable within and outside Malaysia'. Credit system plays an increasingly important role in higher education, both at national and international levels. Its key importance lies in its ability to quantify and record student-learning achievements. Credit system :

i. helps to measure student learning and programme transparency;
ii. provides flexibility to HEPs in programme design and delivery;
iii. helps to achieve common understanding and secure standards of qualifications;
iv. facilitates credit transfer and recognition within, and among the skills, technical and vocational, academic and professional sectors;
v. facilitates comparability of qualifications locally or internationally by comparing credit load;
vi. aids access and credit transfers based on assessment of prior formal, informal and non-formal learnings; and
vii. promotes mobility of students and workers between institutions, regionally and globally.

65. Credit has both qualitative and quantitative value overall. MQF is also seen as Credit-Reference Qualifications Framework as mandatory minimum credit accumulation for each level and transferable credits are prescribed and regulated. At the institutional and programme levels, policies and requirements on credit exemptions and transfers between programmes and between institutions locally and abroad, must be provided.

66. Key elements to be observed on the credit system:

i. The MQA Act 2007 defines a credit as 'a representative measure to reflect the academic load'. Within the MQF (2007), 'credit is a quantitative measure that represents the volume of learning or academic load to attain the set of learning outcomes.' It is a measure of the total academic/learning load or volume of learning a student must undertake to achieve a defined group of learning outcomes.
ii. In this aspect, 'academic load' is a quantitative measure of all the learning activities required to achieve a defined set of learning

outcomes: lectures, tutorial, seminar, practical, clinical practice, self-study, retrieval of information, studio work, research, field work, WBL as well as preparing and sitting for an examination.

iii. The Malaysian credit value is 1 credit equivalent to 40 Notional Learning Hours (NLHs). This took into consideration the semester system and assumption of availability of learning hours of average students, various learning activities, guided or independent learning and non-face to face learning.

iv. Credit(s) may also be acquired by learners through assessment and validation of prior experiential learning in other settings.

v. The minimal credit load for each level is defined by the Framework (and is independent of the mode of delivery of learning). However, higher credit requirements for specific qualifications are established, indicated based on fields of study or for professional programmes accordingly.

vi. Credit transfer is subject to the policy and framework set to enable learners to accumulate credits and to transfer credit.

vii. Credit exemption allows a student to be granted credit on application for exemption for a course(s) based upon learning achieved in another programme. However this does not preclude institutions from requiring, of those granted credit transfers or exemptions, obligations to meet all graduation requirements including the satisfactory completions of the minimum number of courses of that institution.

Appendix 1 lists graduating credit requirement for each qualification type.

5. QUALIFICATION PROFILE BY LEVELS OF MQF

67. The qualifications in the MQF are defined by their purposes, levels, level learning outcomes, credits, field or discipline, nature of programme, minimum entry requirement, and typical duration for full-time or part time. The descriptors at Level 1 to 5 of MQF provide for both TVET and academic (general) learning pathways and use the same qualification titles. The distinction for TVET programmes is association of more specialised technical knowledge and skills, industry/occupational standards-oriented and a higher practical component evinced in the programmes. The entry requirements are as prescribed or subject to specific Programme Standards and professional

requirements or via APEL. Pathway indicates generally the next level of progression in academic/TVET or employment.

Malaysian Qualifications Framework, Level 1 Certificate

68. Level 1 is regarded as initial preparatory programme to prepare learners of any age for future learning and/or work. In essence, this level is an access programme to facilitate future undertaking. It carries a minimum of 15 credits learning load and provides access to learners to acquire elementary knowledge in the form of understanding some basic facts and ideas of a subject or field of study and simple processes to perform unsophisticated and highly routine tasks as well as understanding the consequences.

Malaysian Qualifications Framework, Level 2 Certificate

69. Level 2 Certificate sets a minimum of 30 credits learning load. Learners demonstrate understanding of factual knowledge, and basic principles and processes in a subject or field of study. They should be capable to undertake learning and/or perform a limited range of familiar routine tasks, solve simple problems, and take some responsibilities. It is also regarded as preparatory programme to prepare learners to undertake future learning and/or work.

Malaysian Qualifications Framework, Level 3 Certificate

70. Level 3 Certificate sets a minimum of 60 credits learning load. Learners demonstrate understanding of main basic facts, theories, principles, processes and skills in a subject or discipline for further study and work. The learner in the case of TVET type qualification must be capable to demonstrate technical knowledge and acquisition of variety of technical skills and processes. They are expected to perform a wider range of work activities with increasing complexity, some autonomy and responsibilities within the related context.

Foundation and University Preparatory Programme

71. Foundation and university preparatory programmes as well as *Sijil Tinggi Pelajaran Malaysia,* Matriculation and foreign qualifications such as A Level are entry qualifications to tertiary education/bachelor's programmes at universities. However, they are not in the Framework. Nonetheless, MQF determines the standards for these qualifications to ensure comparability and standardisation of students' abilities. The minimum credit requirement is 50 and typically conducted within the period of 1 to 2 years.

72. The learners demonstrate understanding of facts, principles and processes in a specific field of study, source and process data/information with basic digital technology applications, able to analyse information, identify and solve problems as well as develop communication and learning skills.

Malaysian Qualifications Framework, Level 4 Diploma

73. The diploma qualifications at Level 4 apply to both academic and TVET. The minimum credit requirement is 90 credits and minimum duration is two years of full-time study or as determined by the discipline or professional requirements.

74. The breadth and depth is wider in terms of knowledge in one or more area of study or discipline of the main theories, principles, concepts, facts and ideas. The learners develop higher cognitive skills, acquire varied generic work and higher level technical skills to perform complex and semi-professional work. They also develop leadership, collaborative, managerial and interpersonal skills, as well as accountability appropriate to the functions performed. The scope of learning and skills leads to employment and career development in services, technical and vocational sectors, regulated occupations as well as in para-professional fields.

Malaysian Qualifications Framework, Level 5 Advanced Diploma

75. The Advanced Diploma qualification carries 40 credits learning load which generally requires one year full-time study. It is intended to provide learners the opportunity to demonstrate advanced specialised knowledge associated

with a subject or field of study/discipline, critical, analytical and creative thinking skills, generic and specialised technical or professional practice as well as leadership skills. This will enable learners to undertake substantial responsibility to deal with wide and unpredictable work contexts. It leads to better opportunities for higher managerial, technical/vocational or professional field positions and responsibilities or to pursue higher education.

Malaysian Qualifications Framework, Level 6 Bachelor's Degree

76. This qualification at Level 6 carries a minimum learning load of 120 credits. It prepares learners for employment in specific careers/occupations or professional fields as well as to pursue postgraduate education.

77. It involves an analytical understanding of broad and comprehensive knowledge in a specialised field(s) of study and requires demonstration of strong intellectual and problems-solving skills, research skills, acquisition of various work skills, appropriate applications and technologies; as well as professional practices. The learners also develop effective interpersonal, communication skills, as well as leadership and managerial skills to lead and make decisions with social, ethical and scientific considerations and professionalism in taking additional responsibilities in various organisational settings. These outcomes of broad application of learning are generally evidenced through various forms of formative and summative assessments including in the form of final capstone project, case study, field work, and clinical training and/or project reports.

78. Variants: Level 6 Bachelor's degree requires a minimum of 3 years full-time study. However the duration is subjected to requirements determined by types of programmes, institutional requirements, Programme Standards and/or professional bodies as well as industry requirements. A bachelor's degree that fulfil the professional accreditation requirement set by key Malaysian professional statutory bodies such as the Board of Engineering Malaysia, the Malaysian Medical Council or the Board of Architects Malaysia, and are accredited jointly with MQA, in principle, underpins the recognition of the qualification by the respective professional bodies and MQA.

Malaysian Qualifications Framework, Level 6 Graduate Certificate and Graduate Diploma

79. Graduate Certificate and Graduate Diploma are qualifications that indicate the attainment of competencies at Level 6 set by the MQF. Graduates of this programme will have achieved learning outcomes at Level 6. The credit requirement for a Graduate Certificate is 36 credits with minimum duration of 1 year full-time study. While, learning load for Graduate Diploma is 66 credits and the minimum duration is 1 to 2 years of full-time study.

80. The purpose of the Graduate Certificate and Graduate Diploma is to produce graduates who are capable of applying technical and theoretical concepts in a narrow range of contexts to undertake professional work, and/or to pursue further studies/training leading to a Bachelor's degree. Both qualifications offer a shorter period of study to individuals for purposes of continuing professional development; changing a field of training or expertise and as entry qualification to a higher level of study with permissible advanced-standing credit transfer.

Malaysian Qualifications Framework, Level 7 Master's Degree

81. Master's qualification at Level 7 is typically an extension of study undertaken at bachelor's level in similar discipline area, or one or more disciplines or based on extensive professional practice experience. The master's degree programme may be a research-based, mixed-mode (coursework and research) or coursework/taught type. The minimum credits for the learning load of coursework/taught and mixed-mode master's programme are 40 and normally entails 1 year of full-time study. No credit is provided for master's programme by research and this type normally requires 2 years of full-time study.

82. A master's degree demonstrates an in-depth, and significant advanced specialised theoretical or applied knowledge, which is current and with some at the forefront of a specific field of study or with inter/multi-disciplinary approach; or professional practice. The learners demonstrate critical, evaluative and cognitive skills, and applied research skills or advanced professional practice to solve complex issues and problems with reasonable degree of originality and independence. They demonstrate leadership and

managerial skills which are critical competencies, particularly within a multicultural or transnational work or learning environment. Dependent on the type of programme, the learners are competent to inform, share views on contemporary and new issues in related fields or advise new solutions or improved innovations to a range of audience and to conduct further research besides practicing.

83. The output of master's degree are generally in the form of a thesis/dissertation, long case study, project reports, innovative technical solutions/professional practices and creative art forms.

Malaysian Qualifications Framework, Level 7 Postgraduate Certificate and Postgraduate Diploma

84. Postgraduate Certificate carries a minimum of 20 credits generally requires at least full-time study of 1 semester. Meanwhile, Postgraduate Diploma carries 30 credits and requires between 9 months to 1 year of full-time study. These two qualifications serve learners who must have completed bachelor's programme or equivalent.

85. They enable learners to acquire and extend knowledge and skills gained from a bachelor's programme; acquire knowledge and skills (professional/technical/academic) in a new subject area; or acquire further specialisation within a specific systematic body of knowledge, for the purpose of career development or further study. The learning outcomes must be at least at the master's level. These qualifications are part of the MQF which also support lifelong learning at a higher level.

Malaysian Qualifications Framework, Level 8 Doctoral Degree / PhD

86. This is the highest level of learning in the MQF leading to conferment of a doctoral degree. Generally, a master's degree is required for entry into a doctoral programme, whilst a bachelor graduate is required to initially register for a research-based master programme and upon successfully completing the initial stage, the candidate can be admitted as a full doctoral candidature. The credit requirement for taught component in a doctoral programme by coursework and mixed-mode is 80. The duration of study is normally 3 years

for full-time candidature. No credit is provided for doctoral degree by research.

87. It involves substantial, advanced, independent and original research and scholarship in a most advanced area of knowledge and emerging issues of a specific area of study in a discipline or multidiscipline, assessed against international standards. They demonstrate innovative and advanced research skills, critical reflections, and competent to conceptualise, design and implement projects. They continue to lead, share and contribute new knowledge/innovations/practices in the related field and its emerging issues, and towards the social, technological and cultural progress in the academic and professional contexts, and concurrently deals with complex ethical issues. In addition, the learner must be capable to provide informed judgments and advice to a range of audience.

88. The output generally is in the form of a thesis/dissertation in a specific field(s) of study or professional practice or performance-based/creative art forms. This reflects the various types of doctoral programmes which have been developed in the system and it includes the traditional PhD, practiced based PhD, professional and PhD by publication.

89. The qualifications titles are in the forms of a PhD for research-based programmes and Doctoral Degree for mixed-mode or coursework-based programmes.

90. Post-Doctoral degree is considered as an extended research after PhD and is not prescribed a Level in MQF.

Flexible Pathways and Learning for Lifelong Learning

91. One of the key objectives of MQF is to link the qualifications to provide progression and flexible learning pathways to learners with various needs and backgrounds. The Framework also encourages greater collaboration between public, private and TVET institutions, particularly through articulation arrangements to facilitate advanced placements for their learners. Its common level, level descriptors and credits are key elements in equivalency

assessments of qualifications. It also enables the determination, of parity at the same level, of sector-based accredited qualifications, as there may be more than one type of qualification in the same level awarded by different sectors. It facilitates lifelong learning and stimulates a learning culture.

92. The level descriptors, learning outcomes and credits are applied in the accreditation assessment of APEL for purpose of access, and to attain advanced standing to higher level programme. It reduces learning duplication and learning time. Thus, it widens access and progression to learners who actively seek to upgrade their qualifications, seek advanced skills and competencies for career development, in order to fulfil industry needs and for better life opportunities. Refer to **Appendix 2.**

93. MQF provides alternative pathways with points of entry, opportunities for advanced standing, accreditation of prior learning, flexible learning, and variety of qualifications within the Framework and exits with the framework of linked levels, qualification types, credit and outcomes as indicated below.

The provisions for pathways, articulation and lifelong learning under the MQF which include:

i. A credit transfer system for vertical or horizontal transfers between programmes, institutions and sectors. This includes the articulation policy and mechanisms for mobility between academic and TVET sectors and vice versa. This is usually evidenced by policy and/or agreements on articulation between institutions.
ii. A stackable qualifications for TVET sector from Level 1 to 4 allows multi-entry and multi-exits which also provides credit transfers from Level 1 to 4.
iii. Flexible access to quality assured provisions of flexible, open and online learning.
iv. The accreditation of learning acquired through formal, non-formal and informal learnings can provide access as well as advanced standing in a programme. The accreditation of prior experiential learning is applied to both the academic and TVET sectors, albeit the assessment approach must be fit for purpose.

v. The use of Graduate Certificate, Graduate Diploma, Advanced Diploma, Postgraduate Certificate and Postgraduate Diploma also fosters lifelong learning, training, professional and career development.

vi. The accumulation of credits and learning outcomes is possible through partial qualification, professional certifications, modularisation of programmes, short courses, micro learning and via MOOCs Such credits can be considered for transfer to a full programme. The provision of bridging programme, to suit circumstances where it may be necessary to prepare individuals to undertake higher level programme or where there may be other entry requirements set by the higher education providers.

APPENDIX 1

Malaysian Qualifications Framework (MQF) 2nd Edition

MQF Level	Minimum Graduating Credit	Academic Sector	TVET Sector
8	No credit rating	PhD by Research	
	80	Doctoral Degree by Mixed Mode & Coursework	
7	No credit rating	Master's by Research	
	40	Master's by Mixed Mode & Coursework	
	30	Postgraduate Diploma	
	20	Postgraduate Certificate	
6	120	Bachelor's degree	
	66*	Graduate Diploma	
	36*	Graduate Certificate	
5	40	Advanced Diploma	5
4	90	Diploma	4
3	60	Certificate	3
2	30	Certificate	2
1	15	Certificate	1

* Inclusive of 6 credits from general studies subjects.

APPENDIX 2

Malaysian Qualifications Framework 2nd Edition: Level Descriptors

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
Level 1 **CERTIFICATE**	Learners will have basic, foundational or general knowledge and skills. Perform basic and/or highly routine tasks under guidance, Prepare for further learning and being responsible ethical workers. Awareness of community as well as local and national institutions Curiosity of the world beyond self.	Describe simple, factual and basic knowledge and skills within a narrow range of subjects/fields to undertake highly routine and predictable task(s) and study.	Apply basic knowledge in the context of well-defined, highly routine and predictable tasks with guidance. Demonstrate ability to reflect and improve performance.	Demonstrate simple skills by using a variety of common basic tools and materials for very well defined tasks.	Communicate familiar everyday expressions and simple phrases within a limited range of contexts. Express an interest in at least one other language besides the national language.	Show competency to use basic mathematical tools. [e.g. symbols]. Use a few simple/basic applications, which are adequate to perform given task(s) under guidance.	Work under direct guidance in highly structured activities/tasks with support. Demonstrate capacity to work independently or in a team.	Initiate some responsibility for learning with prompting and guidance. Demonstrate ability to reflect on the tasks undertaken/performed with guidance. Show an ability to identify some applicable personal values in task or learning contexts.	Be a responsible member of the society and show sensitivity to other cultures than own.
Level 2 **CERTIFICATE**	Learners will have factual knowledge and skills to carry out work in a well-defined environment as responsible and ethical workers. Demonstrate interest to undertake	Describe/demonstrate or show factual knowledge of subjects/disciplines to address a variety of routine and non-routine tasks/work or for study.	Apply knowledge and skills to well defined routine tasks and/or study. Apply familiar solutions to solve predictable problems in well-defined	Demonstrate capacity to plan and complete well-defined tasks using common basic tools, methods and materials mostly with guidance.	Communicate within a limited range of contexts requiring simple and direct exchange of information on familiar and routine matters Develop basic proficiency in one	Use a limited range of basic applications and digital tools which are adequate to perform a given set of task(s) under supervision that enables access, and to process simple data.	Work with limited autonomy and substantial support under general supervision in structured activities. Work in a team and exchange views, feedback with others	Initiate some responsibility for learning with guidance. Demonstrate an ability to reflect on tasks and personal actions and values.	Show an ability to apply some personal values in task(s) or learning contexts. Deepen an understanding of cultural diversities by continued exposure to other cultures and

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	further studies as well as make a commitment to lifelong learning. Develop skills to engage with local communities. Develop basic proficiency in one other language [eg. English]		routine tasks or study.		other language besides National language. Take responsibility for and initiate steps to learn further.	Interpret limited simple and familiar numerical and graphical data.	with limited responsibility and accountability.		value systems. Develop political and social awareness.
Level 3 **CERTIFICATE**	Learners will have the fundamental, theoretical and technical knowledge of facts and principles at an intermediate level. Demonstrate balanced operational skills as required. Show an interest in pursuing further studies in specific subjects or disciplines pertaining to their field of interest or work. Acquired elementary proficiency in one additional language [e.g. English].	Describe basic principles, theories and skills, within a significant range of knowledge in a subject and discipline to address well-defined, varied and routine tasks/work.	Apply knowledge, familiar solutions and skills to solve predictable problems of routine tasks and/or study.	Organise, operate and complete, using information appropriate methods, tools, technologies, materials to solve/ address routine and some non-routine tasks/problems within an area of work and/or study under supervision.	Communicate effectively and clearly orally or in writing, ideas, information, problems and solutions, individually or as a team to peers, experts and non-experts. Develop elementary proficiency in at least one other global language, besides the national language.	Use basic digital technology applications to support study/work to seek and process data related to a subject of study/work. Interpret and use familiar and uncomplicated numerical and graphical data.	Demonstrate capacities to work with considerable autonomy and minimal supervision. Provide guidance to others within context of work/study. Undertake considerable responsibility for quality and impact of outputs. Take responsibility for, and reflect on, performance of tasks/work/study.	Initiate self-improvement through study or seek further training with minimal guidance. Show awareness and general knowledge of Malaysia and its ASEAN partners in the region. Demonstrate basic under-standing of entrepreneurship knowledge and skills.	Demonstrate ability to comply with work ethics in task(s) or learning especially in diverse multi-cultural contexts. Pursue active engagement with local civil societies on matters of interest to local and global communities [e.g. environmental issues].

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	Demonstrate age-appropriate local civic engagement and awareness of global issues.								
Level 4 **DIPLOMA**	Learners will have a broad knowledge of the general theories, principles and demonstrate skills in a focused area of study/discipline enabling them to undertake specialized work leading to a career path in technical, professional or management fields. Learners express interest in pursuing further education. Learners will have a commitment for appropriate ethical behavior and express an appreciation of national aspirations within global perspectives.	Demonstrate systematic comprehension (understanding) of a broad range of complex technical and theoretical knowledge and skills to undertake varied, complex, routine and non-routine tasks/ study within a field/discipline.	Identify, interpret, apply and evaluate general concepts, theory and/or operational principles within a well-defined context of a subject/discipline and/or work with minimal supervision. Solve problems of a common and well-defined kind as well as those others of a non-routine nature.	Apply a limited range of practical skills, essential tools, methods and procedures to perform required tasks/work. Reflect and make adjustments to practices and processes, as necessary, related to routine or non-routine tasks.	Communicate clearly, both orally and in writing, ideas, information, problems and solutions, to others including peers, experts and non-experts. Interact effectively, individually or as member of a team with supervisors, peers and subordinates. Demonstrate a high level of proficiency in at least one other language besides the national language.	Use a range of digital applications to support study/work as well as to seek and process data related to work or study. Demonstrate skills to use and interpret routine and complex numerical and graphical/visual data.	Perform work with significant degree of personal responsibility and autonomy under broad guidance and direction on well-defined and non-routine study/work activities performed in a variety of contexts. Lead and manage diverse teams to manage issues at work.	Identify self-improvement initiatives and possibilities for further education. Develop realistic career and professional goals. Explore and engage in activities relating to entrepreneurship. Show interest in and participate at professional and civic activities leading to local and region wide communities building.	Demonstrate ability to understand and comply with, organizational and professional ethics in work environment. Demonstrate ability to apply sustainable practices in the context of local and global work and social environment.
Level 5 **ADVANCED DIPLOMA**	Learners have significant theoretical and	Describe a range of theoretical, conceptual and technical knowledge	Identify, interpret apply, analyze and evaluate detailed	Using a range of practical skills apply essential methods	Communicate and interact effectively and cogently in a comprehensive and	Use a range of information, media and technology applications to	Perform work with substantial degree of autonomy and often carrying significant	Engage in self-directed lifelong learning effectively and participate	Demonstrate ability to exercise social responsibilities; comply with

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	technical knowledge. Can deal with complex situations at work and show an ability to understand and comply with, organizational and professional demands. Learners will have an ability to apply sustainable practices ethically and in the context of local and global work and social environment.	and comprehension within an advanced (specialized knowledge) field to address varied and unpredictable tasks/work /study.	technical, conceptual and theoretical knowledge in a specialized subject/discipline or work. Solve problems/ issues in a broadly-defined complex, routine and non-routine context or under even unpredictable circumstances with a limited range of approaches and independence.	and procedures to a broad range of complex tasks and/or of study. Review and make adjustments and supervise others on related practices and processes.	well-structured manner to convey information, ideas, problems and solutions for social, academic and professional purposes to a range of audiences. Show a high level of oral and written proficiencies in at least two languages.	support study and/or work. Interpret and apply routine and non-routine, complex numerical and graphical/visual data.	levels of responsibilities. Make management decisions independently on resources allocation as well as performance related judgements of others in the workplace. Demonstrate capacities to take responsibility and accept accountability. Demonstrate team leadership in new environments including undefined areas of work.	independently in professional collaborations. Demonstrate entrepreneurial skills in relevant selected situations. Demonstrate competencies working or studying in multicultural, multilingual and multiethnic communities locally and globally.	professional, ethical and sustainable practices. Contribute to the development of sustainable local and global communities.
Level 6 **BACHELOR** **GRADUATE CERTIFICATE/ DIPLOMA**	Learners will demonstrate a thorough comprehension of broad based and coherent body of knowledge and skills for para and full professional work embedding research, innovation and creativity in	Describe advanced and comprehensive, theoretical and technical knowledge and demonstrate relevant skills in a specialized field, or of a multidisciplinary nature related to the field of study, work and/or practice	Demonstrate intellectual independence in the application of knowledge within specific field(s) by applying critical, analytical and evaluation skills in the field of study/work/practice.	Apply a range of essential methods and procedures to solving a broad range of complex problems. Review, make adjustments and supervise related practices and processes	Convey ideas both in written or oral forms using appropriate and different forms of presentation, confidently, accurately and coherently in appropriate context in a well-structured manner to a diversity of audiences.	Use a broad range of information, media and technology applications to support study and/or work. Use and combine numerical and graphical/visual data for study/work.	Work autonomously, and show leadership and professionalism in managing responsibilities within broad organizational parameters. Undertake significant levels of work related	Engage effectively in self-directed lifelong learning and professional pathways. Demonstrate entrepreneurial competency with selected project(s). Demonstrate an appreciation of	Demonstrate adherence, and ability to identify ethical issues, make decision ethically, and act professionally within the varied social and professional environment and practice.

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	specialized areas. Demonstrate professionalism, resilience commitment to an ethical work culture, sustainability issues and an awareness of global citizenship in alignment with national aspirations.		Manage, resolve complex applications and handle unpredictable issues with creative and innovative solution(s). Apply skill/ knowledge to a range of approaches in the field of study/work/practice.	concerning field of specialization.	Work together with different people in diverse learning and working communities as well as other groups locally and internationally.		responsibilities of others as well as self. Demonstrate decision making capacities and professionalism by working towards pre-determined goals and outcomes Demonstrate accountabilities, especially in professional fields.	broader socio-political economic and cultural issues at local/national and regional level.	Demonstrate a deep familiarity and knowledge of local and global issues relating to science, technology, business, social and environmental issues.
Level 7 **MASTERS** **POSTGRADUATE CERTIFICATE/ DIPLOMA**	Learners at this level will demonstrate a mastery of knowledge in specific field/fields of study/work and through further learning, research, and/or professional practice; and Buttressed by a comprehension of strong theoretical knowledge, critical thinking, creative and innovative skills. They will also be able to generate new solutions to problems. They operate with confidence,	Demonstrate originality and independence in undertaking analytical and critical evaluation, and synthesis of complex information, specialized concepts, theories, methods and practice in a field(s) of study/practice as a basis for research. Apply knowledge critically and integratively to manage and resolve complex problems/issues in a	Conduct standard and specialized research methods/ approaches and/or apply practical skills, tools or investigative techniques which are informed by knowledge at its forefront and the latest development in the subject/discipline. Exemplify capacity to solve and manage complex problems or issues in a field(s) of study/practice.	Communicate clearly the knowledge, skills, ideas, critique and conclusion/rationale using appropriate methods to peers, experts, and non-experts in at least one international language. Work together and collaboratively with different people in learning and working communities and other groups and networks, ethically and professionally. Demonstrate competencies to work and undertake	Use a broad range of information, media and technology applications to support study and/or work. Use and combine numerical and graphical/visual data for measurement for study/work.	Competently use a wide range of suitable digital technologies and appropriate software to enhance study, research and/or work/practice. Adapt applications and systems to address defined and new situations/problems. Show skills to design, plan evaluation activities, using quantitative/ statistical tools. Apply mathematical and other	Demonstrate significant autonomy, independence, leadership, and interpersonal skills at work and class. Show substantial responsibility in planning, resource management, supervision and problem solving and managing work within own team and collaboratively with other teams especially in the context of complex application and unpredictable situations.	Exemplify self-advancement through continuous academic and/or professional development. Initiate and/or lead entrepreneurial ventures/ projects.	Demonstrate adherence to legal, ethical and professional codes of practice. Demonstrate confidence to give advice and make decision(s) on complex issues based on critical reflections and ethical considerations. Contribute professionally to social, technological and economic development both nationally and internationally.

MQF LEVEL	Summary of Learners' Profile	CLUSTER 1: Knowledge and Understanding	CLUSTER 2: Cognitive skills	CLUSTER 3: FUNCTIONAL WORK SKILLS				CLUSTER 4: Personal and entrepreneurial skills	CLUSTER 5: Ethics and Professionalism
				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	knowledge and skills both in Malaysia/ASEAN as well as the wider world.	field(s) of study/practice through research, using advance techniques, tools, skills or by a range of approaches or (integrative) combination of approaches for decision making and producing new ideas, and/or innovative solutions or practice.		advanced study in at least one foreign language.		quantitative, qualitative tools to analyze and evaluate numerical and graphical data for study/work.			Demonstrate ability to engage meaningfully on a range of civic and global issues in one's own area of expertise.
Level 8 **DOCTORAL**	Learners will demonstrate critical understanding of the most advanced knowledge at the frontiers of a field of study or professional practice. Independently conduct, manage, and lead advanced research which contributes to substantial, new and original knowledge, and/or professional practice. Produce research	Demonstrate comprehensive, systematic, integrated, new, complex and abstract idea of current critical issues in the most advanced frontiers of knowledge of a field of study, discipline or practice.	Critically analyze, evaluate and synthesize new, complex and abstract ideas and current critical issues in the most advanced frontiers of knowledge of a field of study/discipline/practice and refine existing concepts and practices. Solve complex, abstract and emerging contemporary issues and challenges by	Demonstrate mastery of practical, technical skills/practices and scientific skills which is at the forefront of one or more areas of specialization and to develop new complex skills or techniques and solutions to resolve new highly complex and emerging problems. Demonstrate ability to design and implement or adapt highly advanced,	Communicate effectively research findings to peers, scholarly communities and society at large in the relevant field of expertise. Work to deal with different people in learning and working communities and other groups and networks, ethically and professionally. Convey information, insights, ideas, problems and	Use/select/improve existing or develop new appropriate tools/methodologies to support and enhance research activities. Undertake critical evaluation of numerical and graphical data.	Work with substantial autonomy, independence, and authority in the conduct and management of research and resources, which contribute, to new knowledge, advanced practices, processes and products. Demonstrate leadership, professionalism and management skills, and take full	Integrate knowledge for lifelong learning with development of new ideas, solutions and systems. Take full responsibility for own work and where relevant be accountable for overall management of one's research organization. Initiate and lead entrepreneurial ventures and projects.	Demonstrate adherence to legal, professional and ethically sound codes of practice. Identify emerging ethical and professional issues, its complexities, and implications to advancement of research in the field and its societal impact. Continue to contribute professionally to social, technological and economic development.

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				Practical skills	Interpersonal and Communication Skills	Digital and Numeracy Skills	Leadership, Autonomy and Responsibility		
	outputs in the form of a thesis, patents, products, new advanced professional practice or advanced technologies, creative models or works of art, or music. Demonstrate capacities to present and defend points of view, thesis and ideas in area(s) of expertise with knowledge and confidence.		independently applying advanced research methods, analytical tools and skills to creatively generate new knowledge, theories, novel solutions and/or new practices within the field(s) of study/discipline/practice. Make substantial contribution through the creation of new knowledge/theories/ solutions/practice through originality and independent research, which satisfies peer reviews and international standards.	specialized research methodologies which is at the forefront of one or more area of specialization.	present solutions cogently/coherently to peers, scholarly community and society at large in the field of expertise. Demonstrate advanced/sophisticated leadership skills and abilities to bring effective collaboration with a diversity of partners.		responsibility for own work, and significantly for others in the research team/organization/projects/work. Contribute to the technological, social and cultural progress on academic and professional practice to the society at large on emerging issues at professional/expert/ specialist level.		

APPENDIX 3

Malaysian Qualifications Framework (MQF) 2nd Edition and Lifelong Learning

MQF Level	Minimum Graduating Credit	Academic Sector	TVET Sector	Lifelong Learning/APEL Criteria for APEL(A)
8	No credit rating 80	PhD by Research Doctoral Degree by Mixed Mode & Coursework		Admission criteria: 35 years old Bachelor's degree in relevant field/equivalent 5 years' work experience Passed APEL assessment
7	No credit rating 40	Master's by Research Master's by Mixed Mode & Coursework		Admission criteria: 30 years old STPM/Diploma/equivalent Relevant work experience Passed APEL assessment
	30 20	Postgraduate Diploma Postgraduate Certificate		
6	120	Bachelor's degree		Admission criteria: 21 years old Relevant work experience Passed APEL assessment
	66 36	Graduate Diploma Graduate Certificate		
5	40	Advanced Diploma	5	
4	90	Diploma	4	Admission criteria: 20 years old Relevant work experience Passed APEL assessment
3	60	Certificate	3	Admission criteria: 19 years old Relevant work experience Passed APEL assessment
2	30	Certificate	2	3R
1	15	Certificate	1	3R

GLOSSARY

1.	Academic Load	A quantitative measurement for all learning activities required to achieve the learning outcomes.
2.	Accreditation	A recognition granted by the Malaysian Qualifications Agency after examining and assessing (a) a higher education programme or qualification; or (b) a higher education provider under Chapter 4 or 7 of Part VIII (MQA Act, 2007).
3.	Accreditation of Prior Experiential Learning (APEL)	A systematic process that involves the identification, documentation and assessment of prior experiential learning, i.e., knowledge, skills and attitudes, to determine the extent to which an individual has achieved the desired learning outcomes, for access to a programme of study.
4.	Credit	A quantitative measurement that represents the learning volume of the academic load to achieve the respective learning outcomes.
5.	Higher Education Provider	A body corporate, organization or other body if persons which conducts higher education or training programmes including skills training programmes leading to the award of a higher qualification or which award a higher education qualification and includes the public or private higher education providers, examination or certification bodies or their representatives.
6.	Learning Outcome	Statements on what students should know, understand and can do upon completion of a period of study.

7.	Profile	A specific subject or a field of study for a qualification or features that is different in conglomeration of qualifications of various disciplines, which has a similar emphasis or level.
8.	Qualification	A certificate, diploma or degree, which is awarded by a higher education provider or any party that is authorized to confer or to award the qualification and to affirm the earned learning outcomes.
9.	Qualification Descriptor	A generic statement that explains the main learning outcomes for qualifications at a particular level.
10.	Qualifications Level	An award level described with generic outcomes or a qualification descriptor, which characterises typical qualification.