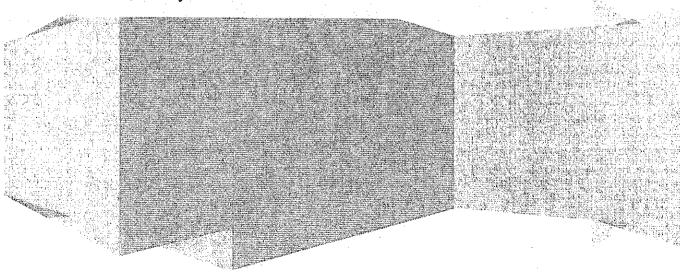


# KINGDOM OF CAMBODIA NATION RELIGION KING

# CAMBODIA QUALIFICATIONS FRAMEWORK

Approved by NTB 07 February 2012



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# Cambodia Qualifications Framework (CQF)

# 1. Introduction

In response to the increasing globalisation and marketisation of education and training, most countries include Cambodia have developed National Qualifications Frameworks that is an instrument for the development and classification qualifications based on a set of criteria that is agreed nationally for specified levels of learning outcome achieved. It is a policy and strategy in the quality assurance of education and training which clarifies the standard of learning outcomes, academic levels and quality of qualifications, and is widely recognized as such as in the international academic and professional communities.

The Cambodia Qualifications Framework (CQF) is intended to ensure equivalency comparison within the Kingdom in the standards of national qualifications and regional qualifications. CNQF will help to provide appropriate points of comparison in academic and training standards for institutions in their planning and self review processes, for external reviewers involved in program accreditation processes and institutional reviews, and for employers, in understanding the skills and capabilities of graduates they may employ.

CNQF provides a comprehensive, nationally consistent yet flexible framework for all qualifications in education and training. The Framework provides for both technical and vocational training and for higher education, two systems of post secondary education and training that have some common characteristics and some important differences that it is most important to recognize and preserve. The distinguishing features of these systems and some relationships between them are described in Section 4.1 of this document and the learning outcomes at each level in each sector are described in Section 3.

Purpose of the establishment of Cambodia Qualifications Framework:

- provides nationally consistent recognition of outcomes achieved in each qualifications of education and training;
- helps with developing flexible pathways which assist people to move more easily between the education and training sectors and between those sectors and the labour market by providing the basis for recognition of prior learning, including credit transfer, experience and current competency;
- offers flexibility to suit the diversity of purposes of education and training;
- encourages individuals to progress through education and training by improving access to qualifications, clearly defining avenues for achievement, and generally contributing to lifelong learning;
- encourages the provision of more and higher quality vocational education and training through qualifications that meet individual, workplace and vocational needs, thus contributing to national economic performance;

- promotes national and international recognition of qualifications offered in the Kingdom of Cambodia; and
- Facilitates the regional mobilization of skills workforce.

#### 2. Structure of CQF

#### 2.1 Elements in CQF:

The principal elements in the CQF there are 4 are : levels, credits, learning outcomes and study/testing pathways.

- Levels: Levels numbered and linked to qualification titles to describe the increasing intellectual demand and complexity of learning expected as students progress to higher technical or academic awards.
- **Credits:** Points allocated to describe the amount of work or volume of learning expected for an academic or technical qualification or for courses, study units or other components of a program.
- Learning Outcomes: The broad categories of types of learning outcomes that a program is intended to develop.
- Study Pathway: helps with developing flexible pathways which assist people to
  move more easily between the Technical and Vocational education and training
  and Higher Education sectors and between those sectors and the labor market
  by providing the basis for recognition of prior learning, including credit transfer,
  experience and current competency.

#### 2.2. Levels of Qualifications

There are eight levels of qualifications for Technical and vocational education and training. The first four of these levels leading to b vocational certificate and technical and vocational certificates 1, 2, and 3 are regarded as equivalent to secondary education in standard. The remaining four levels are considered post secondary education.

The entry level for higher education is the successful completion of secondary education, and the higher education framework has four qualification levels culminating with the doctorate degree. Honorary degrees are not included in the framework but this document provides guidelines for their use based on international conventions and Sub-Decree No. 151 ANK.BK, 06 December 2010, on Doctoral Degree Education about these awards and the degree titles that can be awarded.

Satisfactory completion of studies at any level does not necessarily qualify a person to enter studies at the next level. Entry requirements may be set based on the set of qualifications competency, grades or other criteria to ensure that applicants have a reasonable chance of successfully undertaking the more advanced and complex studies leading to a higher qualification.

The levels for Technical and Vocational Education and training and higher education and their relationship to levels of secondary schooling are shown below.

# Structure of Levels in CQF

Levels	Technical and Vocational Education and Training	Higher Education
1919- <b>8</b> (1919) 1919-1919 1919-1919	Doctoral Degree of Technology/Business Education	Doctoral Degree
Property of the Section of the Secti	Masters Degree of Technology/Business Education	Masters Degree
6	Bachelor of Technology/Business Education	Bachelors Degree
5 5 5 mm	Higher Diploma of Technology/Business Education	Associate Degree
A A	Technical and Vocational Certificate 3	
	Technical and Vocational Certificate 2	
2	Technical and Vocational Certificate 1	
1.1	Vocational Certificate	1

#### 2.3 Credit Hours

For the purposes of this Framework, 15 hours for 1 credit is taken as a measure of the amount of teaching and instruction, 30 hours for 1 credit is taken as a measure of the amount of Laboratory/workshop teaching activities, and 45 hours for 1 credit is taken as a measure of the amount of field work or internship training activities. The credit is taken as a measure of the amount of teaching and instruction normally expected for a full time student at undergraduate levels in a semester and 30 credit hours in an academic year (for detail, see Decision on Credit system and Credit Transfer implementation).

The length of programs (and the number of credit hours allocated) may differ for programs with the same or similar titles. For example a program leading to a degree of bachelor may be four or five (or even six) years in length depending on the amount of learning outcomes expected.

Post secondary education programs often include periods of field work or internship. These may be assigned credit hours. However the number of credit hours allocated must be justifiable in relation to the student learning outcomes expected from that experience.

In Technical and Vocational Education and training the qualifications are intended to certify the attainment of clearly defined competencies required for employment, especially vocational certificate, technical and vocational certificate 1,2,3 and higher diploma of technology/business are the qualifications-based competency. However, there are also time expectations based on the period of time normally required for an average learner to develop those competencies. The credit hour requirements are based on these periods of

time and the experiences that students undertake in their programs.

For education and training programs at certificate levels, vocational certificate and technical and vocational certificate1, 2 and 3 a minimum of 30 credit hours is required for each qualification. However mechanisms exist for assessment of competencies that students may have already acquired through experience in the work place and these times may be reduced through formal assessment for recognition of prior learning (RPL) and recognition of current competency (RCC).

At post secondary levels a minimum of 30 credit hours is required and a further 30 credit hours (minimum of 60 in total) for a program leading to a higher diploma (level 5), and a minimum of 60 additional credit hours making a total of at least 120 credit hours for a bachelor degree of technology education (level 6). For each qualification particular programs may require more credit hours than the minimum specified.

A master degree of technology education in TVET normally involve at least two years of study that contains a course work, a significant element of supervised research, normally embodied in a thesis, and project work. The master degree of technology education requires a minimum of 45 credits.

At doctoral degree of technology education in TVET is a research qualification that is at a significantly higher level than the master's degree, reflecting scholarship independence, and is awarded in recognition of research which has made a substantial and original contribution to knowledge and require a command and wide-ranging highly specialized technical or scholastic skill in a subject area. The doctoral program will be equivalent to a minimum of three years of full-time study and requires a minimum of 54 credits matching the level 8 descriptor.

In higher education a minimum of 60 credit hours(or two years of study) is required for an associate diploma (level 5), and a minimum of 120 credit hours for a 4-year-bachelor degree, 140 credit hours for a 5-year-bachelor degree, and 160 credit hours for a 6-year-bachelor degree (level 6).

At master degree requires studies beyond a bachelor degree involving 39 credit hours plus a major project (45 credits for a 2-year-master degree or 57 credits for 3-year-master degree). If students wish to proceed beyond a masters degree to a doctorate there are two options available with differing requirements for the amount of course

work involved. One option involves a minimum of 12 credit hours beyond a master degree and a thesis and the other option has a requirement of 54 credit hours and a thesis. Differing research and thesis requirements compensate for the differences in amount of required course work and the two alternatives have equivalent standing.

Table below shows the minimum credit hours required for each level:

Levels	Technical & Vocational Education and Training	Higher Education	Minimum Credit Hours
8	Doctoral Degree of Technology/Business Education	Doctoral Degree	54
7	Masters Degree of Technology/Business Education	Masters Degree	45
6	Bachelor of Technology/Business Education	Bachelors Degree	120
5	Higher Diploma of Technology/Business Education	Associate Degree	60
4	Technical and Vocational Certificate 3		30
3	Technical and Vocational Certificate 2		30
2	Technical and Vocational Certificate 1		30
1	Vocational Certificate		30

# 2.4 Learning Outcomes

The framework groups the kinds of learning expected of students into two major set of competency, basic competency and core competency which into five major domains that are applicable to all programs in Technical and Vocational Education and Training and particular the groups the kinds of learning expected of students in higher education into four major domains that are applicable to all programs and a fifth that is relevant to only some. The Framework describes learning outcomes at each level in each of these groupings. The five domains are:

knowledge, the ability to recall, understand, and present information including:
 knowledge of specific facts,

- knowledge of concepts, principles and theories, and
- knowledge of procedures.
- cognitive skills, the ability to:
  - apply understanding of concepts, principles, theories and procedures in critical thinking and creative problem solving, both when asked to do so and when faced with unanticipated new situations.
- Psychomotor skills, the ability to:
  - performs one or more skills with ease and becomes automatic with limited physical or mental exertion,
  - performs of combining than one skill in sequence with harmony and consistency,
  - reproduces a skill with accuracy proportion; and exactness and usually performed

independent of original source,

- performs skill according to instruction rather than observation.
- interpersonal skills and responsibility, the ability to:
- take responsibility for their own learning and continuing personal and professional

development,

- work effectively in groups and exercise leadership when appropriate,
- act responsibly in personal and professional relationships, and
- act ethically and consistently with high moral standards in personal and public forums.
- communication, information technology and numerical skills, including the ability to:
  - communicate effectively in oral and written form,
  - use information and communications technology, and
  - use basic mathematical and statistical techniques.

Psychomotor skills involving manual dexterity is that applies to only some programs. Psychomotor skills are extremely important in a number of technical and vocational and in some fields in higher education. For example very high levels of psychomotor skills are required for a tradesman or a major equipment operator and for a surgeon, an artist, or a musician.

Since these psychomotor skills apply only to certain fields, and their nature varies widely, the expected learning outcomes at each level have not been described in the higher education sections of the Qualifications Framework though they have been described in the technical and vocational education and training sections. However where they are relevant in program standards of learning outcomes should be clearly described and methods of instruction and assessment included in program and course specifications.

#### 2.5 Study Pathway:

CQF underlines the point of integration and overlaps of different qualifications in terms of types and levels. This is performed through regulations on accumulation and transfer of credits, accreditation of recognition of prior learning (RPL), the mechanism of relatedness in fulfillment of the entry requirements to a higher level of education and the use of certificates and diplomas.

CQF, by linking qualifications, simplifies the process and supports student by indicating all possible opportunities and learning pathways for individual progress. CQF generates various alternative pathways with points of entry and exit that recognize individual achievements, thus, intensifying access and social boundaries by accrediting prior learning acquired through formal, non-formal and informal learning.

CQF study pathways make lifelong learning a reality as these give opportunities to individuals with knowledge and skills acquired from experience and self learning, to be assessed and given the opportunity to attain higher qualifications although they do not have basic qualifications.

# 3. Characteristics and Expected Learning Outcomes at Each Level

# 3.1 Technical and Vocational Education and Training

The qualifications in the vocational education and training sector is on the capacity to assess directly the performance criteria in the competencies specified within the promulgated Training Package or the Competency Assessment Package or accredited course.

#### **Vocational Certificate**

#### A. Characteristics of Programs

A program involving practical vocational training tasks (including workshops) and a limited number of classroom presentations until the competencies specified as learning outcomes for the program concerned have been achieved. For most learners beginning at entry level this would normally require four to six months of full time studies or equivalent (non-formal training).

#### B. Characteristics of Qualifications Holders

Typically holders of qualifications will have demonstrated:

- Knowledge of basic operating procedures and regulations, sufficient for a limited set of defined occupational tasks;
- The capacity to apply this knowledge to routine and sequential sets of tasks through standard procedures or under direct instruction;

- The capacity to complete a limited range of tasks in a reliable manner;
- The capacity to receive, understand respond to instructions, and recall basic operating procedures
- The capacity to communicate basic information orally and through standard written reports;
- The capacity to apply simple manual skills in routine procedures.

# Application- Well trained qualification holders at this level should:

- Apply their knowledge of procedures and regulations and their manual skills in a consistent and reliable manner;
- Participate cooperatively in, and complete, all assigned work activities within a limited range of occupational activities;
- Accept and act upon all reasonable directions given by supervisors;
- Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society.

# B. Learning Outcomes in Each Domain at Qualification level 1

# Knowledge

 Has simple factual knowledge related to occupational tasks in a limited and relatively stable range of work contexts. This knowledge includes basic operating procedures and regulations and is confined to information and ideas derived from directions and instructions.

#### **Cognitive Skills**

 Can apply knowledge gained through training and work experience to a limited range of structured and mainly sequential tasks. These involve minimal discretion, but a capacity to modify processes for familiar tasks under direct supervision.

#### **Psychomotor Skills**

 Has simple skills to use standard equipment for a limited range of occupational tasks, and can be relied upon to apply these skills to a set of standard operational procedures.

# Interpersonal Skills and Responsibility

- Can perform tasks in a reliable manner under direct instructions or through standard procedures in a limited range of contexts;
- Has some responsibility for the quantity and quality of his or her own output, but no responsibility for the output of others.

# Communication, Information Technology and Numerical Skills

- · Can receive, recall and respond to directions related to the work tasks;
- Is able to understand elementary oral and written communications, including written instructions, and to complete basic written communications. This includes the completion of basic reports on work and tasks completed, such as the completion of basic reporting forms.

# D. Pathways to the Qualification

 Having completed the four to six months of full time training courses meeting the requirements of a promulgated Training Package or a training program meeting

the requirements of an accredited course(s) delivered by the Registered Training organization:

or

 After having received the training certificate from the non-accredited training courses officially stated that the person be able to apply for a competency testing process at accredited testing center, and meeting requirements of a promulgated Competency Assessment Package, he/she shall obtain the Vocational Certificate;

or.

 After having received the certificate from the director of the organization officially stated that the person has been fully completed his/her work at least 1 year, he/she be able to apply for a competency testing process at accredited testing center, and meeting requirements of a promulgated Competency Assessment Package, he/she shall get the Vocational Certificate.

# **Technical and Vocational Certificate 1**

# A. Characteristics of Programs

A program involving practical technical and vocational training tasks (including workshops) and a limited number of classroom presentations until the competencies specified as learning outcomes for the program concerned have been achieved. For most learners beginning at level 1 this would normally require one year of full time studies or equivalent.

# B. Characteristics of Qualification Holders:

Typically holders of qualifications will have demonstrated:

 Knowledge of after basic operating procedures and regulations, sufficient for a limited set of defined occupational tasks;

- The capacity to apply this knowledge to routine and sequential sets of tasks through standard procedures or under direct instruction;
- Demonstrate basic practical skills such as the use of relevant tools
- The capacity to complete a limited range of tasks in a reliable manner;
- The capacity to receive, understand respond to instructions, and recall basic operating procedures
- The capacity to communicate basic information orally and through standard written reports.
- The capacity to apply simple manual skills in routine procedures.

# Application- Well trained qualification holders at this level should:

- Apply their knowledge of procedures and regulations and their manual skills in a consistent and reliable manner;
- Demonstrate knowledge by recalling in a narrow range of areas;
- Participate cooperatively in, and complete, all assigned work activities within a limited range of occupational activities;
- Accept and act upon all reasonable directions given by supervisors;
- Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society;
- Perform a sequence of routine tasks given clear direction;
- · Receive and pass on messages/information.

# C. Learning Outcomes in Each Domain at Qualification Level 2

#### Knowledge

 Has basic factual knowledge related to occupational tasks in a limited and relatively stable range of work contexts. This knowledge includes basic operating procedures and regulations and is confined to information and ideas derived from directions and instructions. It includes little conceptual knowledge.

#### **Cognitive Skills**

• Can apply knowledge gained through training and work experience to a limited range of structured and mainly sequential tasks. These involve minimal discretion, but a capacity to modify processes for familiar tasks under direct supervision.

#### **Psychomotor Skills**

 Has the basic skills to use standard equipment for a limited range of occupational tasks, and can be relied upon to apply these skills to a set of standard operational procedures.

#### Interpersonal Skills and Responsibility

- Recognition of Prior Learning or Recognition of Current Competencies;
- Recognition of Prior Learning combined with Further Training as required;
- Accumulation of a Variety of Short Courses/Training Programs.

# Technical and Vocational Certificate 2

# A. Characteristics of Programs

A program involving practical vocational training tasks (including workshops and laboratory activities) and some classroom presentations until the competencies specified as learning outcomes for the program concerned have been achieved. For most learners beginning after level 2 would normally require one year of full time studies or equivalent.

#### B. Characteristics of Qualification Holders:

Typically holders of qualifications will have demonstrated:

- Knowledge of the operational tasks and related standards, and some of their basic underpinning ideas, in defined occupational fields;
- The capacity to apply knowledge and standard procedures in stable situations in order to solve predictable problems;
- The capacity to complete a limited range of routine and some non-routine tasks and apply standard procedures to problems in a reliable manner;
- The capacity to take responsibility alone or with others for the quality and quantity of outputs.
- The ability to acquire, interpret, recall and pass on information from identified sources and to analyse data relevant to occupational tasks through basic mathematical and statistical processes;
- The reliable and safe use of, and standard adjustments to, standard tools, materials, and techniques for basic occupational tasks.
- Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgment is required in the selection of equipment, services or contingency measures and within known time constraints;
- Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems.
- This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.
- Demonstrate basic operational knowledge in a moderate range of areas;

Application- Well trained qualification holders at this level should:

- Can perform tasks in a reliable manner under direct instructions or through standard procedures in a limited range of contexts;
- Has some responsibility for the quantity and quality of his or her own output, but no responsibility for the output of others.

# Communication, Information Technology and Numerical Skills

- Can receive, recall and respond to directions related to the work tasks.
- Is able to understand elementary oral and written communications, including written instructions, and after completing basic written communications. This includes the completion of basic reports on work and tasks completed, such as the completion of basic reporting forms.

# D. Pathways to the Qualification

Access to the qualification could be through:

- Having successfully completed an accredited one year training course delivered by the Registered Training Organization, and meeting the requirements of a promulgated Training Package;
- Obtain a Technical and Vocational Certificate 1 (a non- accredited 1 year vocational training program) and shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Cente;

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 Obtain Vocational Certificate plus at least 1 year of working experience and successfully completed lower-secondary education or completed the bridging course he/she shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center.

Time taken to gain the qualification will vary according to the pathway taken and factors related to the particular industry or work area. Structured training at this level may be broad-based induction skills for work in a large and diverse industry area and therefore involve more hours than others that focus on more specific workplace skills. Nominal duration statements may appear in training programs which may be part of the non-endorsed Learning Strategies component of a Training Package. Nominal duration statements are also to be included in accreditation submissions but will not be used to determine the level of a qualification.

Examples of possible pathways include:

- Work-Based Training and Assessment;
- Institution-Based Education and Training and Competency Assessment
- Part Institution-Based Education and Training and Competency Assessment /Part Work-Based Training and Competency Assessment;

- Apply their knowledge and skills in a reliable and consistent manner through standard procedures and in ways that allow them to solve predicable problems;
- Show initiative in developing understanding of principles and ideas relevant to their operational tasks and make appropriate adjustments to procedures when necessary in non-routine situations;
- Work willingly with others and accept responsibility for the quality and quantity of work done individually and as members of a group;
- Be reliable participants in work situations and act in a consistent manner to contribute to safety, effective communication and business capacity;
- Behave in ways that are consistent with Buddhist values and belief, and demonstrate loyalty, responsibility, and commitment to service to society;
- Apply known solutions to a limited range of predictable problems;
- Apply a defined range of skills;
- Perform a range of tasks where choice between a limited range of options is required;
- Assess and record information from varied sources
- Take limited responsibility for own outputs in work and learning.
- Applications may involve some responsibility for others. Participation in teams including group or team coordination may be involved.

# C. Learning Outcomes in Each Domain at Qualification Level 3

# Knowledge

 Has factual knowledge of occupational tasks and related standards and regulations, including some basic understanding of their key theoretical underpinnings. This knowledge is applicable to relatively stable contexts where variations in requirements are predictable.

# **Cognitive Skills**

 Can apply knowledge to known and predictable contexts and problems in order to develop standard and reliable solutions. This involves sufficient understanding and thinking ability to select the standard procedures that are most applicable to the tasks or problems, but does not require the development of new ideas or solutions.

# **Psychomotor Skills**

- Uses standard tools, materials and procedures in a safe and reliable manner, and to complete standard tasks with minimal wastage;
- Is able to make standard adjustments to tools using techniques that are acquired through training, work based experience or direct instruction to improve quality and safety or reduce wastage.

# Interpersonal Skills and Responsibility

- Completes operational tasks in a reliable manner with minimum supervision and takes individual responsibility for the outputs;
- Is able to work cooperatively with others and share group responsibility for the reliability, quality and quantity of outputs.

# Communication, Information Technology and Numerical Skills

- Can acquire, interpret, recall and pass on information that is relevant to occupational tasks, including directions for modifications in standard procedures and techniques;
- Is able to communicate basic information related to the tasks in a clear manner;
- Is able to undertake simple mathematical and statistical processes to interpret and understand data that is related to the tasks undertaken.

#### D. Pathways to the Qualification

Access to the qualification could be through:

 Having completed a second year of certificate training program meeting the requirements of a promulgated Training Package or a training program meeting the requirements of an accredited course(s) delivered by a Registered Training Organization;

or

 Obtain a Technical and Vocational Certificate 2 or equivalence of a nonaccredited training program and shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center;

or

 Obtain Technical an Vocational Certificate1 plus at least 1 year of working experience and he/she shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center.

Time taken to gain the qualification will vary according to the pathway taken and factors related to the particular industry or work area. Nominal duration statements may appear in training programs which may be part of the non-promulgated Learning Strategies component of a Training Package. Nominal duration statements are also to be included in accreditation submissions but will not be used to determine the level of a qualification.

#### Examples of possible pathways include:

- Work-Based Training and Competency Assessment;
- Institution-Based Education and Training and Competency Assessment;

- Part Institution-Based Education and Training and Competency Assessment /Part Work-Based Training and Competency Assessment
- Recognition of Prior Learning or Recognition of Competency
- Recognition of Prior Learning combined with Further Training as required
- Accumulation of a Variety of Short Courses/Training Programs

# **Technical and Vocational Certificate 3**

# A. Characteristics of Programs

A program involving practical technical training (including workshops, laboratories and applied work and work experience) and classroom presentations until the competencies specified as learning outcomes for the program concerned have been achieved. For most learners beginning after level 3 this would normally require one year of full time work and study or equivalent. This work would be assessed as equivalent to 30 credit hours.

# B. Characteristics of Qualification Holders

Typically holders of qualifications will have demonstrated:

 Broad knowledge of the tasks and procedures involved in their occupation, including a basic understanding of the key underpinning theoretical knowledge;

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- Performance of a defined range of skilled operations, usually within a range of broader related activities involving known routines, methods and procedures, where some discretion and judgment is required in the selection of equipment, services or contingency measures and within known time constraints;
- Demonstrate some relevant theoretical knowledge
- The capacity to select and integrate different processes, materials and equipment for in ways that are appropriate for predictable contexts and problems;
- Some capacity for self-direction in responding to different work tasks taking full responsibility for their own and some responsibility for the output of others;
- The capacity to locate, interpret and apply relevant written, numerical and graphical information and to use the information to develop simple and clear presentations and instructions;
- The capacity to respond to issues and problems in a variety of contexts, and to use and evaluate known strategies to deal with them.
- The capacity to operate and manipulate complex equipment and perform skilled manual operations with minimal supervision.; and
- Breadth, depth and complexity of knowledge and competencies would cover selecting, adapting and transferring skills and knowledge to new environments and providing technical advice and some leadership in resolution of specific problems. This would be applied across a range of roles in a variety of contexts with some complexity in the extent and choice of options available.

# Application- Well trained qualification holders at this level should:

- Apply their knowledge and skills to select appropriate strategies to solve a variety
  of problems in the work situation in order to maximise safety, output and quality,
  and minimise wastage;
- Contribute to the harmony and productivity of groups with which they are involved, sharing responsibility for the quality and quantity of the output of the group, and supporting improved effectiveness;
- Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service to society;
- Apply a range of well developed skills
- Perform processes that require a range of well developed skills where some discretion and judgment is required
- Have a sound understanding of the main principles and regulations on which procedures are based, be able to select the most appropriate processes for different situations and make necessary adjustments to suit different circumstances.
- Interpret available information, using discretion and judgment
- Take limited responsibility for the quantity and quality of the output of others

#### D. Learning Outcomes in Each Domain in Qualification Level 4

# Knowledge

 Has a broad knowledge of specified occupational tasks and processes and related occupational areas and is able to apply this knowledge to routine and some nonroutine work situations. This would include the basic underpinning concepts and theories for these processes.

#### **Cognitive Skills**

 Is able to select from a range of standard processes to solve predictable problems in familiar and some unfamiliar work situations. The processes integrate skills and techniques, materials and equipment in a planned manner to deal with routine and some non-routine tasks.

#### **Psychomotor Skills**

 Operates complex equipment and performs skilled manual operations in carrying out routine and some non-routine tasks in the work processes. This includes the capacity to make standard adjustments to tools and equipment and the selection of materials and processes appropriate for different tasks.

# Interpersonal Skills and Responsibility

- Is able to act responsibly with some delegated authority in the workplace to exercise self-direction in the selection and application of work processes in a reliable and consistent manner in a set of defined areas;
- Is able to take full responsibility for the quality and quantity of own work, provide leadership and decision making capacity, and take some responsibility for the output of others;
- Accepts responsibility and takes some initiative in improving own occupational skills.

# Communication, Information Technology and Numerical Skills

- Can locate, comprehend and interpret relevant information and apply this to the work processes to improve efficiency and safety. This information includes written, numerical and graphical information;
- Is able to process this information and present it in a clear manner through oral, written or graphic presentations.

# D. Pathways to the Qualification

Access to the qualification could be through:

 Having completed a third year of certificate training program meeting the requirements of a promulgated Training Package or a training program meeting the requirements of an accredited course(s) delivered by a Registered Training Organization;

or

Obtain a Technical and Vocational Certificate 3 or equivalence of a non-accredited training program and shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center, he/she shall obtain the qualification level 4 of CQF;

or

 Obtain Technical and Vocational Certificate 2 plus at least 2 year of working experience he/she shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center.

Time taken to gain the qualification will vary according to the pathway taken and factors related to the particular industry or work area. Nominal duration statements may appear in training programs which may be part of the non-promulgated Learning Strategies component of a Training Package. Nominal duration statements are also to be included in accreditation submissions but will not be used to determine the level of a qualification.

Examples of possible pathways include:

Work-Based Training and Competency Assessment;

- Institution-Based Education and Training and Competency Assessment;
- Part Institution-Based Education and Training and Competency Assessment /Part Work-Based Training and Competency Assessment;
- Recognition of Prior Learning or Recognition of Current Competency;
- Recognition of Prior Learning combined with Further Training as required;
- Accumulation of a Variety of Short Courses/Training Programs.

# **Higher Diploma of Technology/Business Education**

# A. Characteristics of Programs

A program involving study and practical technical training (including classroom presentations, workshops, laboratories and applied work and work experience) until the competencies specified as learning outcomes for the program concerned have been achieved. For students entering technical education after general secondary school two years of study and training or equivalent. (at least 60 credit hours) would be required. This work would be assessed as equivalent to 30 credit hours beyond level 4.

# B. Characteristics of Qualification Holders

Typically holders of qualifications will have demonstrated:

- Broad knowledge of the relevant occupations and industries, and the underlying theories associated with work tasks, and the impact of new technology on their field of work;
- Applications involve significant judgment in planning, design, technical or leadership/guidance functions related to products, services, operations or procedures;
- The capacity to apply this knowledge in a variety of contexts in a planned manner and transfer and adapt this knowledge to solve different problems;
- Strong self direction, effective workplace team leadership and accountability, and responsibility for ongoing skills development;
- The capacity to utilise mathematical and statistical techniques for analysis and problem solving and to synthesize and present information in a variety of modes;
- Complex and adaptable skills for a range of complex tasks and use of sophisticated equipment;
- Breadth, depth and complexity involving analysis, diagnosis, design, planning, execution and evaluation across a broad range of technical and/or management functions including development of new criteria or applications or knowledge or procedures. The degree of emphasis on breadth as against depth of knowledge and skills may vary between qualifications granted at this level.

Application- Well educated qualification holders at this level should:

- Use their broad knowledge of occupations and their industry, including underlying principles and theories associated with it to improve work processes and outputs. This includes the application and adaptation of skills and techniques to new technologies and the modification of work processes;
- Use their knowledge and skills, including numeracy and statistical skills, to analyse work processes and problems, develop innovative solutions, and transfer this knowledge to new situations;
- Show strong leadership in taking action to build effective workplace teams that accept responsibility for the quality and consistency of work processes and outputs;
- Communicate complex information in an accurate, clear and timely manner;
- Operate complex technical equipment with a very high level of skill, meet relevant safety standards, and provide effective guidance to work colleagues in similar tasks;
- Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society;
- The application of a significant range of fundamental principles and complex techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Contribution to the development of a broad plan, budget or strategy is involved and accountability and responsibility for self and others in achieving the outcomes is involved;
- Generate ideas through the analysis of information and concepts at an abstract level;
- Demonstrate a command of wide-ranging, highly specialized technical, creative or conceptual skills
- Demonstrate accountability for personal and group outcomes within broad parameters

# C. Learning outcomes in Each Domain in Qualification Level 5

# Knowledge

- Has a broad knowledge of the technical requirements and processes of specific industries including understanding of how these may change as a result of new technologies;
- Is fully aware of all relevant regulations and understands the principles and theories associated with the industry.

# Cognitive Skills

- Can apply this knowledge in a range of predictable and non predictable situations and analyse information from a range of sources to plan and implement effective solutions to problems in a creative manner;
- Can transfer and adapt this knowledge to different work contexts.

# **Psychomotor Skills**

- Has the skill to operate a wide range of complex technical/ sophisticated equipment relevant to the industry and to make appropriate adjustments to this equipment for different work requirements;
- Can readily transfer skills to new technologies and operations.

# Interpersonal Skills and Responsibilities

- Can effectively lead and supervise the activities of a work team. Accepts responsibility for own work outputs and the output of others in the work environment;
- Takes initiative in extending knowledge of relevant technological and other occupational practices and can effectively support the continuing professional development of supervised staff and other work colleagues.

# Communication, Information Technology and Numerical Skills

- Can use numerical and statistical techniques in planning, evaluation and reporting on work activities and investigating new processes applicable to the work situation;
- Is able to synthesise a range of oral, written, numerical and graphical information and present conclusions in a variety of modes in a clear and accurate manner.

# D. Pathways to the Qualification

Access to the qualification in the technical and vocational education and training sector could be through:

- Having completed a two years of training program meeting the requirements of a promulgated Training Package or a training program meeting the requirements of an
  - accredited course(s) delivered by a Registered Training Organization;

or

 Obtain a Higher Diploma of Technology/Business Education of a non-accredited training program and shall go through completion competency test meeting the requirements of a promulgated Competency Assessment Package, administered by Registered Testing Center;

or

• A combination of a training program meeting the requirements of a promulgated Training Package or a training program meeting the requirements of an accredited course delivered by a Registered Training Organization, plus recognition of prior learning including credit transfer and/or experience. This case, students after obtain Technical and Vocational Certificate 3 plus at least 3 year of working experience, he/she can go through competency test for the recognition of prior learning or current competencies that provides evidence of the achievement of the

competencies or learning outcomes. In this case, students who earned credits or competencies under the RPL/RCC will only take the remaining competencies or credits for required the next higher qualifications.

Time taken to gain the qualification will vary according to the pathway taken and factors related to the particular industry or work area. Nominal duration statements are also to be included in accreditation submissions for planning purposes but will not be used to determine the level of a qualification. An individual may complete the requirements for a Higher Diploma of Technology/Business Education only or may go on to gain an Bachelor of Technology/Business Education (level 6).

Access to the qualification in the higher education sector follows:

- Satisfactory completion of the requirements set by a university or other recognized higher education institution; and
- Recognition of prior learning, including credit transfer.

# Examples of possible pathways include:

- Work-Based Training and Competency Assessment;
- Institution-Based Education and Training and Competency Assessment;
- Part Institution-Based Education and Training and Assessment/Part Work-Based Training and Assessment;
- Recognition of Prior Learning;
- Recognition of Prior Learning combined with Further Training as required, and Accumulation of a Variety of Short Courses/Training Programs.

# Bachelor Degree of Technology/Business Education/Engineer

# A. Characteristics of Programs

A Bachelors Degree program in technology/business education/training is a systematic, research-based, coherent, introduction to knowledge, idea, principles, concept, chef research methods and to analytical and problem-solving techniques of a recognized major subject or subjects. A programme leading to this qualification usually involves major studies in which significant knowledge is available. Programme content is taken to significant depth and progressively developed to a high level, which provides a basis for post-graduate study and professional careers.

An award requiring a minimum of 120 credit hours at post secondary levels, normally following four years of full time training and study or equivalent at post secondary levels.

A Bachelors Degree program in technology/business education/training is designed to develop a comprehensive understanding of an industry and highly skilled occupations within it, with some studies taken to considerable depth and involving critical analysis of the latest developments and research, together with the knowledge and skill to

effectively train others in their field. Students should be aware of relevant knowledge and theory in other related fields of learning.

A bachelors degree of technology/business education/training is the basic qualification for students/graduates in technical and vocational education and training should develop advanced knowledge and skills in the area concerned and also thorough knowledge and skill in the application of educational strategies.

#### B. Characteristics of Qualification Holders

Typically holders of a Bachelor of Technology/Business Education will have demonstrated:

- Extensive and in-depth knowledge of an industry and of occupations or professions associated with it;
- Thorough knowledge of educational processes involved in the planning and delivery of educational programs for students in their field;
- The capacity to apply this knowledge to solve complex problems in the industry and in teaching and learning situations in a range of contexts;
- Effective leadership and high levels of responsibility for own and group outputs;
- The capacity to comprehend, analyse and present detailed and diverse written, numerical, and graphical data including material for teaching purposes;
- Acquisition of the foundational underpinnings of one or more disciplines, including understanding and interpretation of key concepts and theories and how they are evolving within the relevant scientific, technical, social and cultural contexts;
- · Development of the academic skills and attributes necessary to access,
- Comprehend and evaluate information from a range of sources;
- Development of generic employment-related skills relevant to a range of employment contexts; and a capacity for self-directed and lifelong learning.

#### Application-Well educated qualification holders at this level should:

- Command a high level of respect from students, employers and industry representatives for the range and depth of their knowledge and skills, and their understanding of relevant theoretical knowledge across particular occupations, industries and professions;
- Recognize the provisional nature of knowledge in their field and take this into account in investigating and proposing solutions to academic and professional issues;
- Have a strong commitment to advancing the knowledge and learning of others, and to advancing their own learning through practical and scholarly activities;
- Take initiative in adapting their knowledge and skill to different context, to the needs of different learners and to support and encourage learning by others;
- Process complex information in a variety of modes and be able to present this information in clear and accurate forms appropriate for different audiences;

• Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service to society.

# C. Learning outcomes in Each Domain in Qualification Level 6

# Knowledge

• Has comprehensive and in depth knowledge of an industry and major occupational knowledge and skills within it, supported by a broad general knowledge that provides a foundation for learning about new developments. This includes thorough knowledge of conventions, regulations and technical requirements, and of underlying theories and their relevance for new technologies. Has thorough knowledge of educational theories and processes relating to learning and teaching.

# Cognitive Skills

- Can investigate and critically analyse complex problems relating to both learning and teaching and to developments in industry and develop solutions and plan strategies for their implementation in a variety of known and unknown contexts;
  - Can plan and deliver effective educational programs taking account of individual learning needs, requirements for different domains of learning outcomes, and evaluate and progressively improve those programs following valid and reliable student assessments and program evaluations;
  - Can use routine procedures appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights in response.

# Psychomotor Skills

 Learning outcomes expected in psychomotor skills at this level are the same as for level 5, (higher diploma of technology/business education) with the addition of skills required for the effective delivery of training programs. This includes not only the possession of the skills but also capacity to demonstrate them to others and understanding of how those skills are developed and improved.

# Interpersonal Skills and Responsibilities

- Contributes to and facilitates constructive resolution of issues in group or team situations, whether in a leadership role or as a member of a group;
- Can exercise group leadership in undefined situations calling for innovative responses;
- Shows initiative in identifying issues requiring attention and in addressing them appropriately on an individual or team basis;
- Takes responsibility for own learning and is able to identify and use means of finding new information or techniques of analysis needed for completion of tasks;

 Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice.

# Communication, Information Technology and Numerical Skills

- Can utilize a wide variety of complex written, numerical and statistical information sources and undertake analyses for their application to employment and educational contexts;
- Can communicate effectively both orally and in writing, selecting and using forms
  of presentation appropriate for different issues and audiences;
- Can develop and delivery a variety of clear and accurate presentations for the direction and learning of others.

# D. Pathways to the Qualification

Access to the qualification could be through:

 Having completed a four years of Bachelor of Technology/Business/Engineer education /training program meeting the requirements of a promulgated Training Package or a training program meeting the requirements of an accredited course(s) delivered by a Registered Training Organization;

or

 Obtain a Higher Diploma of Technology/Business Education of a non- accredited training program, he/she can take a third year of an accredited Bachelor of Technology/Business education /training program delivered by a Registered Training Organization by going through competency test for the recognition of prior learning or current competencies that provides evidence of the achievement of the competencies or learning outcomes, and meeting the requirements of a promulgated Training Package;

or

 Obtain a Higher Diploma of Technology/Business Education of an accredited training program, he/she can take a third year of an accredited Bachelor of Technology/ Business education /training program meeting the requirements of a promulgated Training Package;

or

• Obtain a Higher Diploma of Technology/Business Education of an accredited training program plus at least 2 year of working experience or learning outcomes; he/she can take a third year of an accredited course(s) of Bachelor of Technology/ Business education delivered by a Registered Training Organization; by going through competency test for the recognition of prior learning or current competencies that provides evidence of the achievement of the competencies or learning outcomes, and meeting the requirements of a promulgated Training Package. In this case, students who earned credits or competencies under the

RPL/RCC will only take the remaining competencies or credits required for the next higher qualifications.

# Masters Degree of Technology/Business Education

# A. Characteristics of Programs

Masters degrees of technology/business education aimed at advanced professional expertise may involve a significant independent project applying learning gained to issues or problems in their field, together with advanced coursework.

Masters degrees of technology/business education in Technical and Vocational Education and Training is normally designed to extend the principal subject or subjects of the qualifying degree or may be build on relevant knowledge and skills derived from advanced occupational experience. A master's degree of technology/business education contains a significant element of supervised research, normally embodied in a thesis, dissertation or substantial research paper.

The master's degree of technology/business education required a minimum of 24 credits for course work plus a thesis in a research degree program, or 39 credits for course work plus a significant project (45-57 credits). Masters degrees normally involve at least two years for full-time of advanced study following completion of a bachelor degree.

# **B.** Characteristics of Qualification Holders

Typically holders of a master degree of technology/business education qualification will have demonstrated:

- Thorough understanding of theory, research and recent developments at the forefront of an academic discipline or field of professional practice and of the implications of
  - those developments for the store of knowledge in the field;
- Familiarity with and ability to use advanced techniques of research and inquiry applicable to the field of scholarship or professional practice, and will have use those techniques in carrying out a significant research or professional project;
- Ability to synthesize and apply the results of research and new developments in professional practice, in analyzing, developing and testing hypotheses, and proposing solutions to theoretical and practical problems;
- Competency at this level involves the self –directed development and mastery of broad and/or specialized areas of knowledge with a range of skills;
- Work is likely to be in accordance with a broad plan, budget or strategy.
   Responsibility and broad ranging accountability for the structure, management and outputs of the work of others and/or functions may be involved;

- Significant high level judgement is required in planning, design, operational, technical and /or management functions;
- Familiarity with complete accountability for determining and achieving and evaluating personal and group outcomes;
- Ability to communicate the results of advanced study and research through refereed publications to academic, professional and community audiences.

# Application-Well educated qualification holders at this level should:

- Consistently respond to complex academic and professional issues, providing creative solutions and making sound judgments, exercising these skills when necessary in the absence of complete data relevant to the matter concerned;
- Act autonomously in tackling and solving both anticipated and unpredictable problems, and cooperate with others and provide leadership when appropriate in group situations;
- Follow, and actively encourage others to apply, sound ethical and moral judgments in dealing with sensitive and complex issues that may involve difficult value conflicts;
- Take full responsibility for their own independent learning, and provide leadership
  in developing opportunities to support the continuing professional development of
  others;
  - Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society.

# C. Learning Outcomes in Each Domain at Qualifications Level 7

#### Knowledge

- Has thorough knowledge and critical understanding of the main areas of a subject or discipline including principal concepts, principles and theories and their current application to a specialist field of academic inquiry or professional practice;
- Has detailed understanding of one or more complex areas of specialization at the forefront of theory, research or professional practice in that field;
- Understands how new knowledge is developed and applied and the effects of recent research on the store of knowledge in the field and on associated professional practice;
- Is aware of recent regulatory provisions in the local and international environment that might affect the professional field concerned and of reasons for and future implications of those changes.

#### **Cognitive Skills**

 Consistently applies practical and theoretical knowledge in dealing with a wide variety of novel and unpredictable scholarly and/or professional contexts, and

- develops original and creative responses to issues and problems;
- Makes informed and defensible judgments in circumstances where there is an absence of complete or consistent information;
- Can synthesize and apply research and scholarly publications or professional reports, and develop significant new ideas and integrate them into or challenge established knowledge;
- Can apply common and specialized research techniques in the creative analysis
  of complex issues and development of conclusions and proposals relevant to an
  academic or professional field;
- Can independently plan and execute a major project or piece of scholarly research applying practical and theoretical knowledge and research techniques and producing sound conclusions that add significantly to existing knowledge or professional practice.

# Interpersonal Skills and Responsibility

- Takes initiative in identifying and responding creatively to complex issues and problems in an academic or professional context. Where additional information or skills are required takes independent action to acquire and apply that information or skill;
- Accepts full responsibility for own work and cooperates fully and constructively
  with others in dealing with issues and problems, exercising both informal and
  formal leadership skills where appropriate. In group situations acts in ways that
  consistently enhance the effectiveness of the group as a whole;
- Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in current ethical codes of practice or regulations, makes informed, fair, and valid judgments on the basis of sound principles and values;
- Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment.

# Communication, Information Technology and Numerical Skills

- Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a thesis or major project report;
- Obtains, critically evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating conclusions and recommendations.

# D. Pathways to the Qualification:

Access to the qualification could be through:

 Having completed a two years of an accredited Master Degree of Technology/ Business education /training program, after obtain a Bachelor Degree of Technology / Business Education/Engineer, and achieving the credits or competencies required qualification through coursework, project work and research in varying combinations;

or

• Obtain a Bachelor Degree of Technology / Business Education/Engineer of an accredited training program plus at least 2 year of working experience or learning outcomes; he/she can access in an accredited course(s) of Master Degree of Technology/ Business education /training program delivered by a Registered Training Organization; by going through competency test for the recognition of prior learning or current competencies that provides evidence of the achievement of the competencies or learning outcomes, and meeting the credits or competencies required for the qualification through coursework, project work and research in varying combinations. In this case, students who earned credits or competencies under the RPL/RCC will only take the remaining competencies or credits required for the next higher qualifications.

or

Entry to the Masters Degree is based on evidence of a capacity to undertake higher degree studies in the proposed field. There is a wide range of entry pathways, varying according to the program methodology and the discipline involved. Predominantly research-based programs normally have a research prerequisite whereas predominantly coursework-based programs may be accessed more broadly.

# Typical programs and entry pathways include:

- The typical coursework Master's Degree of Technology / Business Education program comprising coursework, project work and research in varying combinations, may be entered from a Bachelor Degree of Technology / Business Education . Coursework Master's Degrees of Technology / Business Education are often structured in a three- to four-semester nested arrangement with the Most Bachelor Degree of Technology / Business Education/Engineer and Master's Degree of Technology / Business Education;
- The typical research Master's Degree of Technology / Business Education program comprising at least two-thirds research with a substantial, often externally assessed thesis outcome, Masters preliminary year, a research-based Bachelor Degree of Technology / Business Education/Engineer or equivalent research experience;
- A professional coursework Master's Degree Bachelor Degree of Technology / Business Education program, which may involve a workbased project, specifically designed for entry on the basis of a relevant qualification and professional experience or extensive relevant professional experience.

Because of the range of entry pathways and methodologies the duration of Master's Degree of Technology / Business programs varies. However, most Masters Degrees require the equivalent of two years of study post the four-year Bachelor Degree of Technology / Business Education or longer Bachelor Degree.

# **Doctoral Degree of Technology/Business Education**

#### A. Characteristics of Programs

The Doctoral Degree of Technology/Business Education required a minimum of 54 credit hours for advanced coursework plus a major thesis normally taken at least three years up to six years for full time academic years and eight years for part time or equivalent following a Masters degree. An alternative program structure with greater concentration on independent research is available in selected fields at some institutions involving a minimum of 12 credit hours and a more extensive thesis.

Doctoral programs involve substantial advanced independent scholarship, mastery of the most recent developments in a major field of inquiry, and the creation, interpretation and application of knowledge in a way that adds significantly to the development of a subject, discipline or professional field. Programs may focus on independent research that results in a thesis adding to existing knowledge, or involve a combination of advanced coursework and thesis in a professional or applied field.

Research doctorates are normally awarded with the title of PhD. Professional doctorates based on advanced coursework and major applied thesis or project are normally awarded with the title of DBA, D Ed, D Eng or other field descriptor appropriate for the professional field concerned.

The Doctoral Degree of Technology/Business Education in the Technical and Vocational Education and Training sector is a research qualification that is at a significantly higher level of reflecting scholarly independent, and is awarded in recognition of research which has made a substantial and original contribute to the knowledge.

#### B. Characteristics of Qualification Holders

Typically holders of a doctor degree of Technology/Business Education will have demonstrated:

- Thorough understanding of a substantial body of advanced knowledge and research in an academic or professional field;
- Familiarity with emerging issues at the forefront of the discipline or professional field and with the potential challenges of those issues for existing practice and generally accepted conclusions;

- Advanced scholarship involving the synthesis of theory and research in related fields and the creation and interpretation of new knowledge through original research, or the application of theory and research in a major contribution to professional practice;
- Thorough understanding of research techniques applicable to the field of study involved:
- Ability to document the results of research undertaken in a major thesis or project report and in refereed academic or professional publications;
- Competency at this level involves the self –directed development and mastery of a range of knowledge and skills. Apply the major functions both broad and/or specialized within highly varied and/or highly specialized contexts;
- Work is likely to involve full responsibility and accountability for all aspects of the work of others and functions including planning, budgeting and strategy where required;
- The highest level of complex judgement is applied in planning, design, technical and /or management functions;

# Application-Well educated qualification holders at this level should:

 Consistently apply their advanced knowledge and/or professional understanding to the further development of knowledge and practice in their field, contributing significantly to the development of new insights and strategies;

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- Provide effective leadership in their field addressing significant emerging issues and communicating their ideas and conclusions effectively to specialist and nonspecialist audiences;
- Deal consistently and sensitively with complex ethical issues in academic or professional contexts and take initiative in ensuring appropriate resolution of wider issues affecting the wider community;
- Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society.

# C. Learning Outcomes in Each Domain at Qualifications Level 8

# Knowledge

- Has thorough understanding of a substantial body of knowledge in a discipline or professional field, including both specific information and underlying theories, principles and concepts;
- Knows about the latest developments in the field including emerging issues and research techniques and the potential challenges in developments for generally accepted conclusions. For doctoral studies in a professional field, has thorough and extensive knowledge of changing practices locally and internationally;
- Has thorough knowledge of developments in related fields that potentially impact on the area of inquiry or professional practice.

# **Cognitive Skills**

- Is able to apply advanced theoretical insights and techniques of inquiry in the creative analysis of major issues and problems and development of innovative solutions;
- Can synthesize research and theoretical writings and develop new and creative insights based on the integration of ideas from within and outside the special field of advanced study;
- Can design and carry out major research or development projects to deal with complex issues involving development of new knowledge or significant improvements in professional practice.

# Interpersonal Skills and Responsibility

- Acts consistently with a high level of autonomy and initiative in professional or scholarly activities;
- Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement;
  - Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments;
- Deals consistently and sensitively with complex ethical issues, makes informed, fair, and valid judgments, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected. Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment.

# Communication, Information Technology and Numerical Skills

• Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a major thesis or project report on a complex and significant issue;

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 Routinely evaluates and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating conclusions and recommendations.

# D. Pathways to the Qualification:

Access to the qualification could be through:

 Having completed a three years of an accredited Doctor Degree of Technology/ Business education /training program, after obtain a Master Degree of Technology / Business Education, and achieving the credits or competencies required the qualification through coursework, project work and research in varying combinations;

or

 Obtain a Master Degree of Technology / Business Education of an accredited training program plus at least 2 year of working experience or learning outcomes; he/she can access in an accredited course(s) of Doctor Degree of Technology/ Business education /training program delivered by a Registered Training Organization; by going through competency test for the recognition of prior learning or current competencies that provides evidence of the achievement of the competencies or learning outcomes, and meeting the credits or competencies required the qualification through coursework, project work and research in varying combinations.

# 3.2. Higher Education

# Entry Level Expectations- (Completion of Secondary Education)

The framework for higher education assumes that students entering post secondary education will have completed secondary education; with any necessary pre-requisites for study in particular fields. If additional preparatory work is required it is not part of higher education and credits that might be granted for such studies does not count towards higher education award requirements.

# Learning Outcomes in Each Domain expected at Entry Level

#### Knowledge

 Has a broad understanding of important knowledge and skill in the general subject fields taught in secondary school together with more extensive knowledge in any selected fields specified as prerequisites for further studies.

#### **Cognitive Skills**

- Understands general concepts, principles and theories in subjects studied and has
  the ability to apply those insights in analyzing new issues and problems in formal
  studies and in daily life;
- Is aware of major issues relating to economic and social development, and is able to apply insights from studies in analyzing those issues.

# Interpersonal Skills and Responsibility

- Accepts responsibility for own learning and behavior and is able to take initiative and work with guidance in academic studies and other aspects of personal development;
- Can be relied upon to complete assigned tasks with limited supervision;

Works effectively towards common goals in group situations.

# Communication, Information Technology and Numerical Skills

- Can effectively use basic information and computer technology and numerical skills in tackling and resolving problems in educational settings and in everyday life;
- Communicates effectively, both verbally and in writing and through use of information technology.

# Associate Diploma/Degree

# A. Characteristics of Programs

An award requiring a minimum of 60 credit hours normally following two years of full time study or equivalent in higher education. Associate degrees are designed to develop both the knowledge and skills for employment in an administrative or paraprofessional field, and the foundation of general and theoretical knowledge that provides the basis for further studies leading to a bachelor's degree. Both these elements are important though the emphasis on general or professionally related study may vary. Where an associate degree is awarded with a specific field descriptor relating to an occupational field there should be sufficient coverage of directly related knowledge and skill for employment in that field, normally involving at least 50% of the program.

A course leading to the Associate Degree is generally but not exclusively articulated with relevant Bachelor Degree programs. A course leading to an Associate Degree will vary in breadth and depth according to whether it is a single or multidisciplinary program but will be taken to sufficient depth to provide a basis for full articulation with relevant Bachelor Degree programs.

An Associate Degree qualification provides a broad-based point of entry to employment, in particular in a range of associate professional occupations, and an introduction to the foundations of a discipline or across several disciplines.

#### B. Characteristics of Qualification Holders

Typically holders of a diploma or an associate degree will have demonstrated:

- Knowledge of important facts, principles and theories in a field of study and of regulations and operating procedures relevant to their professional field;
- The ability to apply concepts theories and processes of enquiry to issues and problems related to their area of study and/or employment, and develop sound solutions based on that analysis;
- The ability to successfully carry out the responsibilities for employment in the field of activity for which they have been prepared;

 The ability to interpret and evaluate quantitative and qualitative data and present conclusions orally and in writing, making appropriate use of information and communications technology;

### Application-Well educated qualification holders at this level should:

- Apply their knowledge and skill to issues in their field with limited guidance, but also understand the limits of their knowledge and how this affects the analysis and interpretations based on that knowledge;
- Seek advice from appropriate sources when necessary;
- Take initiative in planning to enhance their knowledge and skill;
- Think and act independently, but also interact constructively in group or team situations in pursuit of common goals;
- Identify the impact on others of actions taken and evaluate the appropriateness of those actions in the light of sound ethical and moral principles. They accept personal responsibility for actions taken in individual or group situations;
- Behave in ways that are consistent with Buddhist values and beliefs, and reflect loyalty, responsibility, and commitment to service to society.

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### C. Learning Outcomes in Each Domain at Qualifications Level 5

### Knowledge

- Has general knowledge of the scope and defining features of a field of study, and in-depth knowledge of some areas within the field, including important theories, concepts and principles;
- Is familiar with important current issues and recent research;
- In programs preparing students for a professional or para-professional occupation, has knowledge of recent developments in professional practice and of technical requirements and regulations relevant to that professional field.

### **Cognitive Skills**

- Can analyze and interpret technical and research information and apply it to practical issues with some guidance;
- Is able to investigate defined or routine problems, evaluate alternative solutions, and propose new approaches drawing on relevant theoretical and practical knowledge;
- Can identify relevant concepts and theories from subjects studied and apply them outside the context in which they were learned, in both academic and employment contexts;
- Is aware of the provisional nature of knowledge in the field and able to take this into account in analyzing problems and proposing solutions;

• In professional programs can apply technical and professional knowledge in the analysis and resolution of practical issues with limited guidance, and understand and explain the consequences of decisions made.

### Interpersonal Skills and Responsibility

- Is able to think and act independently, but interacts constructively in group or team situations in pursuit of common goals;
- Is able to exercise leadership in a small group in a defined area of responsibility;
- Can identify weaknesses in own knowledge and skill and plan for and take action to provide for continuing learnin;
- Accepts personal responsibility for actions taken in individual and group situations;
- Is aware of and acts consistently with relevant regulations and codes of practice; seeking advice when necessary.
- Can identify the impact on others of actions proposed or taken and evaluate the appropriateness of those actions in the light of their consequences;
- In situations of potential conflict in values or priorities can make explicit the nature of the conflict and the values and priorities involved and make a defensible judgment on the course of action that should be taken.

### Communication Information Technology and Numerical Skills

- Is able to apply routine statistical and relevant mathematical techniques in investigating and proposing solutions to problems and issues;
- Communicates effectively, both orally and in writing, presenting arguments, analyses and conclusions succinctly and in correct form;
- Is able to make effective use of information and communications technology in analyzing issues and obtaining information, and in making presentations.

### D. Pathways to the Qualification

Candidates on entry typically hold the Senior Secondary Certificate of Education or its equivalent, which include the certificate of the foundation year, or an appropriate vocational education and training qualification including vocational certificate3 (level 4) and technical certificate (level 5). Entry to an Associate Degree would not normally presume significant work experience or employment prior to or concurrent with study.

The Associate Degree is a qualification of two years duration post-Year 12. An Associate Degree program may be developed around a single discipline or may be multidisciplinary in scope, and integrate generic employment-related skills as appropriate to its particular orientation. Specialist vocational preparation to meet the practitioner requirements of the professional associations or industry would be expected to occur through subsequent completion of a professional Bachelor Degree.

There are a number of different pathways from an Associate Degree into other qualifications. The primary pathway is through a fully articulated arrangement into a Bachelor Degree program in a directly related area of study, with a maximum of two years advanced standing, with specified credit. There is also scope for an articulated arrangement with a Bachelor Degree in an adjacent or different discipline, with correspondingly less credit where appropriate.

### **Bachelor Degree**

### A. Characteristics of Programs

An award requires a minimum of 120 credit hours, normally following four academic years of full time study or equivalent. There are differing expectations for length of programs in different fields of professional study and programs. The minimum number of 120 credit hours of campus based studies applies to all bachelor degree programs, but reference should also be made to professional study requirements for professional fields. Where longer programs are required for bachelor's degrees, as they are in certain fields, the level remains the same, but additional credits are given to recognize the greater amount of learning-required.

A bachelor degree program is designed to develop a comprehensive understanding of a broad field of study, with some studies taken to considerable depth and involving critical analysis of the latest developments and research. Students should be aware of relevant knowledge and theory in other related fields of learning.

A bachelor degree is the basic qualification for entry to a number of highly skilled professional fields and programs in these fields should develop both the knowledge and skill to practice in those professions, and the background in practical and theoretical knowledge and research to proceed to further study.

#### **B.** Characteristics of Qualifications Holders

Typically holders of a bachelor degree will have demonstrated:

- Knowledge of a comprehensive, coherent and systematic body of knowledge in a field of enquiry and of the underlying theories and principles associated with it;
- The ability to investigate complex problems and develop creative solutions with limited guidance, using insights from their own and other related fields of study;
- The ability to identify and use appropriate mathematical and statistical techniques in the analysis and resolution of complex issues, and select and use the most appropriate mechanisms for communicating the results to a variety of audiences;
- In the case of a professional program the full range of knowledge and skill required for effective practice in the profession concerned;
- In the case of an academic program not geared to professional practice, in depth knowledge and understanding of research literature in a field, and ability to

interpret, analyze and evaluate the significance of that research in extending knowledge in the field.

### Application-Well educated qualification holder at this level should:

- Take initiative in identifying and resolving problems and issues both individually and in group situations exercising leadership in pursuit of innovative and practical solutions;
- Apply the theoretical insights and methods of inquiry from their field of study in considering issues and problems in other contexts;
- Recognize the provisional nature of knowledge in their field and take this into account in investigating and proposing solutions to academic or professional issues;
- Participate in activities to keep up to date with developments in their field and enhance their own knowledge and understanding;
- Consistently demonstrate a high level of ethical and responsible behavior in academic professional and community environments;
- Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society.

### C. Learning Outcomes in Each Domain at Qualification Level 6

### Knowledge

- Posses a comprehensive, coherent and systematic body of knowledge in a field and the underlying principles and theories associated with it:
- Be aware of related knowledge and theory in other disciplines and, in the case of professional programs, other professional fields;
- Be familiar with the latest developments at the forefront of specializations within the main field of study including critical awareness of current research relating to resolution of issues and extension of knowledge;
- In programs preparing students for professional practice graduates are aware of relevant conventions, regulations, and technical requirements and of how these may be modified over time in response to changing circumstances.

### Cognitive Skills

- Is able to undertake investigations, comprehend and evaluate new information, concepts and evidence from a range of sources, and apply conclusions to a wide range of issues and problems with limited guidance;
- Is able to investigate relatively complex problems and recommend creative and innovative solutions taking account of relevant theoretical knowledge and practical experience and the consequences of decisions made:
- Could apply these skills and insights in the professional and academic contexts relevant to the field of study. In professional programs can use routine

procedures appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights in response.

### Interpersonal Skills and Responsibility

- Contributes to and facilitates constructive resolution of issues in group or team situations, whether in a leadership role or as a member of a group;
- Can exercise group leadership in undefined situations calling for innovative responses;
- Shows initiative in identifying issues requiring attention and in addressing them appropriately on an individual or team basis;
- Takes responsibility for own learning and is able to identify and use means of finding new information or techniques of analysis needed for completion of tasks;
- Posses independent study skill to continues further study with higher degree of autonomy
- · Apply team and interpersonal skill which are suitable to employment;
- Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice.

### Communication Information Technology and Numerical Skills

- Routinely uses the most appropriate information and communications technology in gathering, interpreting and communicating information and ideas;
- Can identify relevant statistical or mathematical techniques and apply them creatively in interpreting information and proposing solutions when investigating issues and problems;
- Can communicate effectively both orally and in writing, selecting and using forms
  of presentation appropriate for differing issues and audiences.

### D. Pathways to the Qualification

Candidates on entry typically hold the Senior Secondary Certificate of Education or its equivalent, which include the certificate of the foundation year, or an appropriate vocational education and training qualification including technical and vocational certificate 3 (level 4), and Higher Diploma of Technology Education or Associate Diploma/Degree (level 5). Candidates who enter from a Associate Degree/Diploma, A or Higher Diploma of Technology Education require the articulation and credit transfer arrangements from the another undergraduate degree an individual may complete the requirements for a Diploma only or may go on to gain a Bachelor Degree (level 6). Entry to a Bachelor Degree would not normally presume significant work experience or employment prior to or concurrent with study.

The Batchelor Degree is a qualification of four years duration post-Year 12. A Batchelor Degree program may be developed around a single discipline or may be multidisciplinary in scope, and integrate generic employment-related skills as appropriate to its particular orientation.

There is a range of Bachelor Degree programs, including the following:

- A four or five year (or longer) professional degree which equips students with the practical skills and techniques necessary to apply their skills effectively in a professional context;
- A combined or double degree program which allows students particular combinations of subjects from the two degrees and to graduate with both degrees in a shorter time than required to complete both degrees independently.

A graduate of a Bachelor Degree is eligible to apply for entry to a Masters Degree.

### **Master Degree**

### A. Characteristics of Programs

An award requiring a minimum of 24 credit hours for course work plus a thesis in a research degree program, or 39 credit hours for course work plus a significant project (45-57 credits). Masters degrees normally involve at least two years and up to six years for full-time and eight years for part-time of advanced study following completion of a bachelor degree.

Masters degrees are designed to provide very advanced academic and professional knowledge and skill for students who have completed a bachelor degree with a high level of achievement, normally a GPA of 3.0 or better.

Masters degrees aimed at advanced professional expertise may involve a significant independent project applying learning gained to issues or problems in their field, together with advanced coursework.

Research masters degrees based on a thesis are normally awarded with the title of MA or MSc. Professional masters degrees based on advanced coursework or coursework and major project are normally awarded with the title of M Bus, MBA, M Ed, M Eng or other field descriptor for the professional field concerned.

#### B. Characteristics of Qualifications Holders

Typically holders of a master degree will have demonstrated:

• Thorough understanding of theory, research and recent developments at the forefront of an academic discipline or field of professional practice and of the

- implications of those developments for the store of knowledge in the field;
- Familiarity with and ability to use advanced techniques of research and inquiry applicable to the field of scholarship or professional practice, and will have use those techniques in carrying out a significant research or professional project;
- Ability to synthesize and apply the results of re search and new developments in professional practice, in analyzing, developing and testing hypotheses, and proposing solutions to theoretical and practical problems;
- Ability to communicate the results of advanced study and research through refereed publications to academic, professional and community audiences.

### Application-Well educated qualifications holders at this level should:

- Consistently respond to complex academic and professional issues, providing creative solutions and making sound judgments, exercising these skills when necessary in the absence of complete data relevant to the matter concerned;
- Act autonomously in tackling and solving both anticipated and unpredictable problems, and cooperate with others and provide leadership when appropriate in group situations;
- Follow, and actively encourage others to apply sound ethical and moral judgments in dealing with sensitive and complex issues that may involve difficult value conflicts;
- Take full responsibility for their own independent learning, and provide leadership in developing opportunities to support the continuing professional development of others;
- Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society.

### C. Learning Outcomes in Each Domain at Qualification Level 7

### Knowledge

- Has thorough knowledge and critical understanding of the main areas of a subject or discipline including principal concepts, principles and theories and their current application to a specialist field of academic inquiry or professional practice;
- Has detailed understanding of one or more complex areas of specialization at the forefront of theory, research or professional practice in that field;
- Understands how new knowledge is developed and applied and the effects of recent research on the store of knowledge in the field and on associated professional practice;
- Is aware of recent regulatory provisions in the local and international environment that might affect the professional field concerned and of reasons for and future implications of those changes.

### **Cognitive Skills**

- Consistently applies practical and theoretical knowledge in dealing with a wide variety of novel and unpredictable scholarly and/or professional contexts, and develops original and creative responses to issues and problems;
- Makes informed and defensible judgments in circumstances where there is an absence of complete or consistent information;
- Can synthesize and apply research and scholarly publications or professional reports, and develop significant new ideas and integrate them into or challenge established knowledge;
- Can apply common and specialized research techniques in the creative analysis of complex issues and development of conclusions and proposals relevant to an academic or professional field;
- Can independently plan and execute a major project or piece of scholarly research applying practical and theoretical knowledge and research techniques and producing sound conclusions that add significantly to existing knowledge or professional practice.

### Interpersonal Skills and Responsibility

- Takes initiative in identifying and responding creatively to complex issues and problems in an academic or professional context. Where additional information or skills are required takes independent action to acquire and apply that information or skill;
  - Accepts full responsibility for own work and cooperates fully and constructively with others in dealing with issues and problems, exercising both informal and formal leadership skills where appropriate. In group situations acts in ways that consistently enhance the effectiveness of the group as a whole;
  - Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in current ethical codes of practice or regulations, makes informed, fair, and valid judgments on the basis of sound principles and values;
  - Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment.

### Communication, Information Technology and Numerical Skills

- Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a thesis or major project report;
- Obtains, critically evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and

communications technology in investigating issues and in communicating conclusions and recommendations.

### D. Pathways to the Qualification:

Entry to the Masters Degree is based on evidence of a capacity to undertake higher degree studies in the proposed field. There is a wide range of entry pathways, varying according to the program methodology and the discipline involved. Predominantly research-based programs normally have a research prerequisite whereas predominantly coursework-based programs may be accessed more broadly.

Typical programs and entry pathways include:

- The typical <u>coursework Masters Degree program</u> comprising coursework, project work and research in varying combinations, may be entered from a Bachelor Degree . Coursework Masters Degrees are often structured in a three-to four-semester;
- The typical <u>research Masters Degree program</u> comprising at least two-thirds research with a substantial, often externally assessed thesis outcome, Masters preliminary year, a research based Masters Degree or equivalent research experience;
  - A <u>professional coursework Masters Degree program</u>, which may involve a work-based project, specifically designed for entry on the basis of a relevant qualification and professional experience or extensive relevant professional experience.

Because of the range of entry pathways and methodologies the duration of Masters Degree programs varies. However, most Masters Degrees require the equivalent of two years of study post the four-year Bachelor Degree or longer Bachelor Degree.

### **Doctoral Degrees**

### A. Characteristics of Programs

An award requires a minimum of 54 credit hours for advanced coursework plus a major thesis normally taken at least three years up to six years for full time academic years and eight years for part time or equivalent following a Masters degree. An alternative program structure with greater concentration on independent research is available in selected fields at some institutions involving a minimum of 12 credit hours and a more extensive thesis.

Doctoral programs involve substantial advanced independent scholarship, mastery of the most recent developments in a major field of inquiry, and the creation, interpretation and application of knowledge in a way that adds significantly to the development of a subject, discipline or professional field. Programs may focus on independent research that results in a thesis adding to existing knowledge, or involve a combination of advanced coursework and thesis in a professional or applied field.

Research doctorates are normally awarded with the title of PhD. Professional doctorates based on advanced coursework and major applied thesis or project are normally awarded with the title of DBA, D Ed, D Eng or other field descriptor appropriate for the professional field concerned.

#### B. Characteristics of Qualifications Holders

Typically holders of a doctor degree will have demonstrated:

- Thorough understanding of a substantial body of advanced knowledge and research in an academic or professional field:
- Familiarity with emerging issues at the forefront of the discipline or professional field and with the potential challenges of those issues for existing practice and generally accepted conclusions;
- Advanced scholarship involving the synthesis of theory and research in related research, and the creation and interpretation of new knowledge through original research, or the application of theory and research in a major contribution to professional practice;
- Thorough understanding of research techniques applicable to the field of study involved;
- Ability to document the results of research undertaken in a major thesis or project report and in refereed academic or professional publications.

### Application-Well educated qualification holder at this level should:

- Consistently apply their advanced knowledge and/or professional understanding to the further development of knowledge and practice in their field, contributing significantly to the development of new insights and strategies;
- Provide effective leadership in their field addressing significant emerging issues and communicating their ideas and conclusions effectively to specialist and nonspecialist audiences;
- Deal consistently and sensitively with complex ethical issues in academic or professional contexts and take initiative in ensuring appropriate resolution of wider issues affecting the wider community;
- Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society.

### C. Learning Outcomes in Each Domain at Qualification Level 8

### Knowledge

- Has thorough understanding of a substantial body of knowledge in a discipline or professional field, including both specific information and underlying theories, principles and concepts.;
- Knows about the latest developments in the field including emerging issues and research techniques and the potential challenges in developments for generally accepted conclusions. For doctoral studies in a professional field, has thorough and extensive knowledge of changing practices locally and internationally;
- Has thorough knowledge of developments in related fields that potentially impact on the area of inquiry or professional practice.

### **Cognitive Skills**

- Is able to apply advanced theoretical insights and techniques of inquiry in the creative analysis of major issues and problems and development of innovative solutions,
- Can synthesize research and theoretical writings and develop new and creative insights based on the integration of ideas from within and outside the special field of advanced study;
- Can design and carry out major research or development projects to deal with complex issues involving development of new knowledge or significant improvements in professional practice.

### Interpersonal Skills and Responsibility

- Acts consistently with a high level of autonomy and initiative in professional or scholarly activities;
- Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement;
- Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments;
- Deals consistently and sensitively with complex ethical issues, makes informed, fair, and valid judgments, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected. Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment.

### Communication, Information Technology and Numerical Skills

- Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a major thesis or project report on a complex and significant issue;
- Critically evaluates and makes effective use of mathematical and statistical d ata, and uses a wide range of appropriate information and communications

technology in investigating issues and in communicating conclusions and recommendations.

### D. Pathways to the Qualification:

Candidates typically hold a Masters Degree and are expected to demonstrate potential to undertake work at this level in the proposed field of study. In some institution, candidates may upgrade an in-progress Masters Degree to a Doctoral Degree where they have not yet taken out the Masters Degree. For some doctoral programs, substantial professional experience will be an integral requirement.

There is a range of doctoral programs, in varying combinations of research and coursework and professional orientation, as follows:

- The research doctorate is the highest of higher education qualification is awarded to people who has an outstanding ability to document the results and method of research undertaken and its is applicable to science magazine publications as well as contribution to the researching program for professional knowledge and practice innovation. The research doctorate program is usually entered from a research or part-research Masters Degree is primarily achieved through supervised research.
- The professional doctorate is the highest of higher education qualification is awarded to people who has study in the professional fields such medical, dental pharmacology, engineering, education, business and fine arts. The graduate is usually entered from a combined research and coursework Masters Degree equivalent and requires significant professional practice either prior to and/or as part of the program, which may be undertaken through varying combinations of coursework and research. The title of <a href="Elder Master Trainer of Arts">Elder Master Trainer of Arts</a> is equivalent to the professional doctorate. The research doctorate program is usually entered from a research or part-research Masters Degree is primarily achieved through supervised research.
- The Honorary doctorate is a type of the qualification that not include in the CQF. Honorary doctorates are granted where a university wishes to recognize an outstanding contribution to society by a distinguished member of the community through researching, document writing or professional publications.

Because candidates hold a range of relevant skills and knowledge, the duration of programs varies. A typical research or professional doctoral program would be expected to require the equivalent of three to six years of full-time work.

<sup>\*</sup> Further information is specified in the Sub-Decree No. 151 ANK.BK, 06 December 2010, on Doctoral Degree Education.

### 4. Issuing a Qualification

## 4.1. Distinction between Technical and Vocational Education and Training and Higher Education

The levels of qualifications in technical training and higher education overlap and similar titles are used for both sectors. Since there are important differences in the nature of studies undertaken, and the community should be accurately informed about what students have learned it is necessary to have a clear distinction in the titles used.

To communicate this distinction the qualification titles used in technical and vocational education should include the terms "technical" or "technology".

The way the term "technical" "technology" is used may vary to provide appropriate titles for studies in different fields. For example:

Bachelor of Technology Education (This general title might be followed by an appropriate field descriptor such as Bachelor of Technology Education (Mechanical Engineering); Bachelor of Technology Education in Information Technology, or Bachelor of Technology Education in Administrative Systems)

To ensure that the distinction between technical and higher education is preserved in the titles of qualifications the words technical or technology should not be used in the titles of higher education qualifications.

### 4.2. Use of Field Descriptors

It is also important that the descriptions of fields in which studies are undertaken be accurately and consistently used. Field descriptors are the terms used to describe the broad area of study (Arts, Science, Engineering etc.), and in some cases areas of specialization within the field. With some exceptions degree programs that are designed for professional practice carry a title that relates to that professional field. (B Eng., B.Bus., B Ed., B.Ag Science etc.)

For higher education programs, where professional field descriptors are not used the term "Arts" should be used for studies in the humanities or social sciences, and the term Science should be used for studies in natural or applied sciences, including environmental, biological, physical and medical sciences.

At post graduate levels there are similar conventions. Academic research degrees normally carry titles of M.Sc for studies in the natural and applied sciences, and M.A. in the humanities and social sciences, with the title Ph.D used for research degrees in any field. Professionally oriented degrees at these levels normally include substantial coursework and a major project or thesis and a title that includes the field of study.

For Higher Diploma of Technology/Business and all post graduate levels (Master Degree of Technology/Business and professional doctorate) in which students may be undertaken through varying combinations of coursework and a major project or thesis and a title that includes the field of study without suffix term.

The following arrangements should be followed for higher education programs:

Level	Academic Strand	Professional Strand
Diploma/Associate Degree	Diploma/Associate	Diploma/Associate Degree of
	Degree of Arts, or	(area of specialization)
	of Science, or	
	(if evenly divided)	·
	of Higher Education	of two
Bachelor Degree	Bachelor	Bachelor of
	of Arts, or	(name of professional field—
	of Science	eg. Business, Education,
		Engineering)
Master Degree	Master of Science	Master of (name of
	Master of Arts (Research	professional field—Business,
	Master)	Education, Engineering):
		Professional Master
Doctoral Degree	Doctor of Philosophy	Doctor of (name of
	(Research Doctorate)	professional field-eg.
		Business, Education,
	and the second s	Engineering): Professional
	en e	Doctorate

Note: Where an area of specialization is included with a general qualification title (Eg. Diploma of Agriculture or B Eng of Information Technology or B Bus in Accounting) at least 50% of studies should be in that area of specialization.

### 4.3 Other Doctoral Awards.

The title of Doctor of Philosophy is used for research-based programs at level six regardless on the field of study. Professional doctorates such as Doctor of Business Administration (DBA), Doctor of Education (D Ed or Ed D) or Doctor of Engineering (D Eng) may include a strong research component but are more practically focused and include substantial coursework as well as a thesis or major project. The research based and professional doctorates are regarded as having equivalent standing.

### **Honorary Doctorates:**

Honorary doctorates are granted where a university wishes to recognize an outstanding contribution to society by a distinguished member of the community. This may or may

not include contributions to the university granting the award. The titles most commonly used are Doctor of Laws (LLD) or Doctor of Letters (D Letters). However as for higher doctorates the title of a specific field may be used where the contribution being recognized is within that field. These awards are granted honoris causa, and that term is used in making the award. Recipients of these awards have the right to use the title, but do not normally do so in general public situations. However, the university that makes the award would normally use the title in communications with that person.

### 4.4 Suggested Form: Qualifications

All qualifications issued will include the following elements:

- name, code and logo of issuing body;
- name of person receiving the qualification;
- nomenclature as in the Framework, e.g. Certificate I, Diploma:
- date issued;
- authorized signatory.

Additionally, in the **Technical and Vocational Education and Training sector** the following elements should be included:

- industry descriptor, e.g. Engineering;
- occupational or functional stream, in brackets, e.g. (Fabrication);
- the words, 'the qualification certified herein is recognized within CQF'.

### 4.5 National Qualifications Authority

For the Technical and Vocational Education and Training sector, the **National Training Board** is a National Qualifications Authority.

The roles, function and responsibility of the National Qualifications Authority are set by Sub-Decree .

### 5. Issues and Relationships

## 5.1 Relationship between Higher Education, and Technical and Vocational Education and Training

Programs in Technical and Vocational Education and Training are largely competency based with competencies directly derived from employment requirements for particular trades and occupations. Higher education programs are based to a major extent on research and the development of generalizable knowledge in a field of study, and the application of that theoretical and practical knowledge in research and professional practice.

However there are also similarities. In both sectors there are important bodies of knowledge and students are expected to develop capacity for thinking and problem solving, personal qualities of responsibility, integrity and capacity for continuing learning.

The intended nature of teaching and learning in the two sectors should be clearly understood so their special strengths can be preserved in programs that are delivered. It is also important to recognize that programs in the same fields in the two sectors may include a lot of similar material. Consequently if students who have undertaken studies in one sector and wish to proceed in the other, consideration should be given to the granting of credit or exemptions from program requirements for substantially equivalent studies that have already been undertaken. It may be necessary to provide appropriate transitional support for students who make that transfer.

### 5.2 Recognition of Prior Learning

In many cases students will commence higher education studies directly after completion of secondary education and will undertake full programs in higher education institutions. Similarly students may commence technical and vocational education and training programs directly on leaving school and will undertake full programs as described.

In other cases students may have developed important skills and knowledge through informal education systems or in employment. This is particularly important in technical and vocational education and training where programs are largely competency based and where mature age students with considerable work experience in industry may enrol in programs to gain a formal qualification or to upgrade their skills.

Students sometimes complete advanced studies beyond the level of the 12<sup>th</sup> year of school, which though not identical, are substantially equivalent to part of the academic program in the institution in which they enrol. This advanced study could be through specially designed programs offered in cooperation with another institution, or through a partially completed program at another post secondary institution.

Students should not be required to or repeat work/study they have already completed satisfactorily elsewhere. They should be given advanced standing or credit when it can be demonstrated that they have knowledge and skill that is substantially equivalent to the learning outcomes described in the framework, and be permitted to proceed to further studies in a flexible way.

On the other hand it is of little benefit to students if they are expected to proceed with studies for which they do not have adequate background. It is also important that where institutions have identified special student attributes that reflect their particular mission and objectives, students admitted with advanced standing have the time required in their new institution to develop those special attributes.

National Qualifications Authority should develop the National Recognition Prior Learning and Credit Transfer Implementation Policies and Guideline (NRPLCIPG)that for using as a national common reference for the Recognition Prior Learning, articulation and credits transfer processes among own and between Higher Education and Technical and Vocational Education and Training sectors with a greed clearly standards.

Based on the NRPLCIPG, Institutions should develop policies and processes to evaluate the background of students who might be considered for advanced standing towards vocational, technical or academic awards, and provide counselling and guidance for those who are admitted in this way. They should also monitor the performance of these students and adjust the processes and criteria they use if required.

Responsibility for determining eligibility for admission to programs and the extent to which credit or unit competency should be given for prior studies must remain with the institution in which students wish to enrol. However as a general guide, students who have completed a higher diploma of technology in a college of technology or a higher TVET institute might reasonably expect to receive credit for about 30 credit hours of study in substantially equivalent courses. Depending on the specific content of the courses involved this number might be increased or reduced. It may also be necessary to make provision for special transitional programs in subject areas that are prerequisite for more advanced studies in the discipline concerned.

### 5.3 Expectations on Entry to Post Secondary Education or Training

The National Qualifications Framework is based on an assumption that students entering post secondary education or training will have completed a full program of secondary education or equivalent and have acquired the knowledge and skill to participate effectively at post secondary levels in their chosen field of study. This assumed background includes oral and written competence in the language of instruction, the ability to think creatively and apply knowledge and cognitive skills gained from study of relevant disciplines, and the ability to work independently and take responsibility for their own learning. It also includes any prerequisites for study in particular fields. Students who have clearly met these requirements at the level expected may proceed direct to the programs described in the Framework.

Students may need to complete preparatory or foundation studies designed to ensure that they have the necessary language and study skills, and the academic background, to succeed in post secondary programs. Where foundation studies are required they precede, and are not part of the post secondary education program. Any credit hours that may be allocated for this foundation or preparatory work do not count towards a post secondary education award.

### 5.4 Relationship between Academic and Professional Requirements in Higher Education

There is a significant difference between academic programs that focus on research and transmission of knowledge in fields that are not directly related to professional employment, and others that are designed to provide students with the high levels of knowledge and skill required for professional occupations.

The two categories are not mutually exclusive; academic studies should develop abilities that would be of great value in employment as well as in everyday life, and professional programs should involve thorough understanding of research and theoretical knowledge in the field of study and in related areas, and develop general thinking and problem solving abilities that are applicable in any context. However there is a difference in emphasis that should be reflected in the detailed content of programs and in the titles of qualifications.

Completion of a higher education program at an accredited institution and the granting of an academic award frequently carries with it the right to practice in a profession. Consequently it is important to consider not only the general levels of knowledge and skill that programs are intended to develop and that are described in this Qualifications Framework, but also the particular knowledge and skill that is necessary for the professions for which students are being prepared. This involves both what is commonly included in comparable programs at other institutions and in other countries, and any particular requirements relevant to the Kingdom of Cambodia. As a guide, institutions should consider the specified curriculum requirements of specialized accrediting agencies or professional bodies as well as any special requirements for professional practice in Cambodia.

The Cambodia Qualifications Framework establishes levels and generic skill requirements for all academic qualifications. It is expected that further work on the special knowledge and skill requirements for various professional occupations will be undertaken in Cambodia. Pending that development, institutions must accept responsibility through their program development and evaluation procedures for ensuring that the requirements for professional practice are met, and criteria for accreditation will include the adequacy of those procedures.

In Technical and Vocational Education and Training where the skills and competencies required are defined in consultation with industry it will be expected that skill requirements will be defined in specific terms for each qualification following that consultation and for purposes of accreditation evidence must be available to demonstrate that those skills and competencies are being acquired by students.

### 5.5 Programs and Awards Offered by Professional Associations

Some professional associations based in other countries give recognition to professional experience or specialized training, with titles such as "associate",

"certificate", "diploma" or "fellow" and arrangements are sometimes made for training leading to these awards in the Kingdom of Cambodia. Similar programs and forms of recognition are sometimes given by computer companies to recognize experience and skill in using their systems.

Programs of this kind can be valuable and a number of them are highly regarded. However many are <u>not</u> regarded as academic awards and they are not part of this qualifications framework. Though an institution could recognize such work and give credit for it towards a higher education qualification provided it is offered at the level required, and develops at the necessary standards, learning outcomes sought in the program concerned.

### 5.6 Intermediate Exit Points within a Longer Program

A program leading to a qualification must provide a coherent sequence of activities designed to develop a defined set of abilities to be acquired by graduates. It is not simply an accumulation of credit hours. Where an exit award is granted, for example a diploma for students who leave a program after two years of study, it is essential that this be a worthwhile qualification in its own right, and that students have valuable knowledge and marketable skills at that point. A program designed for one of these awards may have a more practical orientation than the first two years of study in a longer program in which studies at this level is aimed primarily at providing a basis for further study.

Consequently it is not acceptable to award a diploma to a student who has completed the first two years of a bachelors degree, or a higher diploma to a student who has enrolled in a masters degree and failed to continue past the coursework components of that program unless the components of the program have been designed to have legitimate and planned exit points at those stages.

Similarly, where a shorter program is extended in length, for example where a diploma program is extended and converted to a bachelors degree, the total program should be reviewed to ensure that the components of the program and the sequence of activities are appropriate for development of the more advanced knowledge and skills required at the new level. It is not appropriate to simply add on to an existing program without reviewing the total program structure.

### 5.7 International Equivalence of Awards

Recognition of equivalence in standards with international benchmarks is important and qualification requirements can be taken as a useful guide in establishing equivalence.

It is intended that the four-year bachelors degree in this Framework be equivalent to bachelors degrees in other countries in the Arab region, the degree of Bachelor with Honours in the United Kingdom or the bachelors degrees in Europe, North America,

Australia and elsewhere in the world. This applies not only to bachelors degrees but to all qualifications offered in the Kingdom. It is an expectation that applies to all programs regardless of the type of institution where they are offered. All programs leading to a qualification should lead to the knowledge, generic skills and professional expertise normally associated with studies leading to comparable qualifications throughout the world.

While the specifications of the Qualifications Framework must be complied with for programs delivered in the Kingdom of Cambodia, it is recognized that requirements and circumstances differ in other parts of the world and that legitimate and valuable studies undertaken elsewhere may reflect different requirements and structures in those other education systems. For the purposes of assessing the equivalence of completed studies undertaken elsewhere, the Cambodia Qualifications Framework will be taken as a guide, but consideration will also be given to the standing of the qualification concerned and the extent to which it is accepted as a professional qualification in the other jurisdiction. Such qualifications are assessed on a case-by-case basis. This may result in longer or shorter programs being accepted for salary or employment purposes, or even for admission to post-graduate study, as equivalent to a Cambodian award. However the acceptance of such an award as a qualification does not affect what is required in the Kingdom of Cambodia for programs delivered in this country.

## 5.8 Application of the Cambodia Qualifications Framework to International Institutions Operating in Cambodia

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The assistance provided to students and institutions in the Kingdom of Cambodia by international institutions is welcomed and it is understood that to receive an academic or technical qualification issued by such an institution students must meet all of that institution's requirements for its academic awards.

However this does not remove an expectation that programs offered within the Kingdom of Cambodia must also meet the requirements established in this Kingdom. These include consistency with the National Qualifications Framework including conformity with its credit hour requirements, the requirements for years of study, and the development of learning outcomes in different domains of learning.

Programs delivered in the Kingdom of Cambodia must be made relevant to this country and the background, experiences and learning requirements of its students. They must include the knowledge of regulations and practices in the Kingdom of Cambodia that are relevant to their program of study, and ability to apply concepts to issues and problems of local significance. Many programs have sufficient flexibility to accommodate these dual expectations, but it may be necessary in some cases for additional study to be undertaken or for substitutions to be made so that both sets of requirements are met.

### 5.9 Verification of Standards

The Cambodia Qualifications Framework provides guidance for teaching staff, students, employers and quality assessors about standards relating to extent of knowledge and range of skills and abilities. However these are necessarily phrased in general terms and require interpretation by experienced people familiar with the field of study concerned and with standards of achievement at leading international technical or higher education institutions. It is part of the "internal" quality assurance responsibility of all institutions offering post secondary education programs to obtain independent verification that standards set out in the Cambodia Qualifications Framework are being consistently achieved, and an acceptable strategy for obtaining this verification will be a necessary condition for institutional and program accreditation.

Common strategies used by institutions to verify standards include check marking of student scripts and assignments, independent verification of standards of assessment tasks or student performance, external reviews of departments and programs, assessments of programs by students and graduates, and reports on the skills of graduates by employers.

The responsibility to verify standards may be partly addressed by particular arrangements made with a partner institution or in the case of a system of colleges by processes established by the system concerned, but the acceptability of these procedures will depend on details of the arrangements made and the effectiveness with which they are carried out. An arrangement with a partner institution or a college system does not remove the responsibility of the local institution that is teaching a program to verify standards.

External quality reviews of institutions and accreditation of programs will give particular attention to the adequacy of mechanisms for verification of standards. If these mechanisms are not considered adequate, accreditation will be denied.

### 5.10 Verifying Consistency with the Cambodia Qualifications Framework

One of the requirements for accreditation of a program is that it is consistent with the qualifications framework.

Particular requirements include:

- 1. Use of qualification titles that clearly and consistently describe the education sector, the qualification level, and the field of study or specialization.
- 2. The minimum number of credit hours required for each qualification.
- 3. Learning outcomes in different specified domains of learning.
- 4. Required standards achieved in each of those domains for each qualification level.

To following notes describe what must be done to meet these requirements for accreditation.

**Requirement 1**: The title of the qualification must comply with the Framework.

Particular concerns are that the title of must accurately certify the level of the qualification, that a program in technical education at levels 4 or 5 must include the word technical, and field descriptors must accurately describe the area of study undertaken.

**Requirement 2**: The number of credit hours required for the qualification must be as specified in the framework.

When considering credit hours included in a program several important considerations should be kept in mind.

• The credit hours in a program must be in addition to any foundation or preparatory studies.

• The Commission will recognize a maximum of 21 credit hours within a semester of full time study.

The credit hour formula is based on a numbering system in which a full time student load is 15 to 18 credit hours in a semester and a minimum of 120 credit hours in a four year degree. The credit hour formula is used as a surrogate for estimates of the amount of learning achieved. If a program has a high number of contact hours this formula can result in an unrealistically high number which does not accurately represent the amount of learning that can reasonably be expected.

**Requirement 3:** The program objectives should develop learning outcomes in all of the required domains of learning. To provide evidence that this is done:

- Learning objectives specified for the program should include outcomes in all of the domains.
- Responsibility for achieving these learning outcomes should be distributed appropriately across the courses within the program and included in course objectives.
- Program and course specifications should include methods of teaching and student activities that are appropriate for the learning outcomes in each of the domains.
- Tests, examinations and other required assessment tasks should include appropriate forms of assessment of learning in each of the domains.
- Program evaluations, including student, graduate or employer surveys and/or other mechanisms should include attention to learning outcomes in each of the domains.

Requirement 4: The standards achieved in each of the domains must be consistent with the descriptions of characteristics of graduates and the descriptions of learning outcomes for each qualification level.

Some of these learning outcomes can be assessed in tests and examinations or other competency assessment tasks within the program. However others relate to characteristics of graduates after they have left the institution. A further complication is that the standards are expressed in general terms that require levels of judgment about standards achieved. Consequently much of the evidence of consistency with standards of achievement must rely on indirect measures and informed professional judgments. To satisfy requirements for accreditation the following sources of evidence should be included in program evaluations.

- Program evaluations and self assessments by graduates of the program.
- Independent advice by professional colleagues from other institutions or trained evaluators on the level of difficulty in tests and assignments and the standards achieved by students.
- Survey responses from employers of graduates or senior professional associates of graduates.

### <u>APPENDIX</u>

### Appendix1: CQF Qualification Level Descriptors

Qualification of CQF	Vocational Certificate	Technical and Vocational Certificate 1
CQF Level	Level 1	Level 2
Purpose	The Vocational Certificate qualifies individuals with basic functional knowledge and skills to perform work and further learning	The Technical and Vocational Certificate 1 qualifies individuals to perform mainly predicable and simple works and as a pathway further learning
Knowledge	Has simple factual knowledge related to occupational tasks in a limited and highly stable range of work contexts	Has basic factual knowledge related to occupational tasks in a limited and relatively stable range of work contexts, includes basic operating procedures and regulations and is confined to information and ideas derived from directions and instructions
Cognitive Skills	<ul> <li>Can apply knowledge gained through training and work experience to a limited range of structured and sequential tasks</li> <li>These involve minimal discretion, but a capacity to modify processes for highly familiar tasks under close supervision</li> </ul>	<ul> <li>Can apply knowledge gained through training and work experience to a limited range of structured and mainly sequential tasks</li> <li>These involve minimal discretion, but a capacity to modify processes for familiar tasks under direct supervision</li> </ul>
Psychomotor Skills	<ul> <li>Has simple skills to use standard equipment for a limited range of occupational tasks, and can be relied upon to apply these skills to a set of standard operational procedures</li> </ul>	<ul> <li>Has the basic skills to use standard equipment for a limited range of occupational tasks, and can be relied upon to apply these skills to a set of standard operational procedures</li> </ul>
Interpersonal Skills and Responsibility	<ul> <li>Can perform tasks in a reliable manner under specific instructions or through standard procedures in a limited range of contexts</li> <li>Has some responsibility for the quantity and quality of own output, but no responsibility for the output of others</li> </ul>	<ul> <li>Can perform tasks in a reliable manner under direct instructions or through standard procedures in a limited range of contexts</li> <li>Has some responsibility for the quantity and quality of own output, but no responsibility for the output of others</li> </ul>
Communication, Information Technology and Numerical Skills	<ul> <li>Can receive, recall and respond to directions related to straight forwardwork tasks</li> <li>Is able to understand elementary oral and written communications, including written instructions, and to complete simple written communications. This includes the completion of simplereports on work and tasks completed, such as the completion of simple reporting forms</li> </ul>	<ul> <li>Can receive, recall and respond to directions related to work tasks</li> <li>Is able to understand elementary oral and written communications, including written instructions, and completing basic written communications. This includes the completion of basic reports and forms.</li> </ul>

Application	<ul> <li>Apply their knowledge of procedures and regulations and their manual skills in a consistent and reliable manner.</li> <li>The capacity to apply simple manual skills in routine procedures.</li> <li>Participate cooperatively in, and complete, all assigned work activities within a limited range of occupational activities.</li> <li>Accept and act upon all reasonable directions given by supervisors.</li> <li>Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society.</li> </ul>	<ul> <li>Apply their knowledge of procedures and regulations and their manual skills in a consistent and reliable manner</li> <li>Participate cooperatively in, and complete, all assigned work activities within a limited range of occupational activities</li> <li>Accept and act upon all reasonable directions given by supervisors</li> <li>Demonstrate knowledge by recalling in a narrow range of areas</li> <li>Perform a sequence of routine tasks given clear direction</li> <li>Receive and pass on messages/information</li> <li>Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society</li> </ul>
Volume of learning	The volume of learning of a Vocational Certificate is typically 4-6 months	The volume of learning of a Technical and Vocational Certificate 1 is typically 1 year
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**CQF Qualification Level Descriptors** 

CQF Qualification Level Descriptors		
Qualification of CQF	Technical and Vocational  Certificate 2	Technical and Vocational Certificate 3
	Level 3	
Purpose	The Technical and Vocational Certificate 2 qualifies individuals who apply a broad range of knowledge and skills in varies context to perform skilled work and as a pathway further learning	Level 4  The Technical and Vocational Certificate 2 qualifies individuals who apply a broad range of specialized knowledge and skills in varies context to perform skilled work and as a pathway further learning
Knowledge	Has factual knowledge of occupational tasks and related standards and regulations, including some understanding of their key theoretical underpinnings	Has a broad knowledge of specified occupational tasks and processes and related occupational areas and is able to apply this knowledge to routine and some non-routine work situations. This would include the fundamental underpinning concepts and theories for these processes
Cognitive Skills	<ul> <li>Can apply knowledge to known and predictable contexts and problems in order to develop standard and reliable solutions</li> <li>This involves sufficient understanding and thinking ability to select the standard procedures that are most applicable to the tasks or problems, but does not require the development of new ideas or solutions</li> </ul>	<ul> <li>Is able to select from a range of standard processes to solve predictable problems in familiar and some unfamiliar work situations</li> <li>The processes integrate skills and techniques, materials and equipment in a planned manner to deal with routine and some nonroutine tasks</li> <li>Understands general concepts, principles and theories in subject fields and has the ability to apply those insights in analyzing new issues and problems in formal studies and in daily life</li> <li>Is aware of major issues relating to economic and social development, and is able to apply insights from studies in analyzing those issues</li> </ul>
Psychomotor Skills Interpersonal Skills and Responsibility	Uses standard tools, materials and procedures in a safe and reliable manner, and to complete standard tasks with minimal wastage Is able to make standard adjustments to tools to improve quality and safety or reduce wastage  Completes operational tasks in a reliable manner with minimum supervision and takes individual	<ul> <li>Operates technical equipment and performs skilled manual operations in carrying out routine and some non-routine tasks in the work processes</li> <li>This includes the capacity to make standard adjustments to tools and equipment and the selection of materials and processes appropriate for different tasks</li> <li>Is able to act responsibly with some delegated authority in the workplace to exercise self-direction</li> </ul>
	responsibility for the outputs.  Is able to work cooperatively with others and share group responsibility for the reliability, quality and quantity of outputs	<ul> <li>in the selection and application of work processes in a reliable and consistent manner in a set of defined areas</li> <li>Is able to take full responsibility for the quality and quantity of own work, provide leadership and</li> </ul>

	•	decision making capacity, and take some responsibility for the output of others
		<ul> <li>Accepts responsibility and takes some initiative in improving own occupational skills</li> </ul>
		Works effectively towards common
		goals in group situations
		Can be relied upon to complete
		assigned tasks with limited
		supervision.
		Accepts responsibility for own
	· .	learning and behavior and is able
	·	to take initiative and work with
		guidance in academic studies and
		other aspects of personal
		development
Communication,	Can acquire, interpret, recall and	Can locate, comprehend and
Information	pass on information that is	interpret relevant information and
Technology and	relevant to occupational tasks,	apply this to the work processes to
Numerical Skills	including directions for	improve efficiency and safety. This
	modifications in standard procedures and techniques	information includes written,
	Is able to communicate essential	numerical and graphical information
	information related to the tasks in	<ul> <li>Is able to process this information</li> </ul>
The second of th	a clear manner was with the tasks in	and present it in a clear manner
And Advanced to the second of	Is able to undertake fundamental	through oral, written or graphic
	mathematical and statistical	presentations
	processes to interpret and	Can analyze and interpret
	understand data that is related to	numerical and statistical data
	the tasks undertaken	l e e e e e e e e e e e e e e e e e e e
·.		relevant to employment tasks ,
		and use standard software in
		the work processes
		Can effectively use basic
		information and computer
		technology and numerical skills in
		tackling and resolving problems in
		educational settings and in
		everyday life
		Communicates effectively, both verbally and in writing and through
•		use of information technology
		ass of anormation technology
	Apply their knowledge and skills	Apply their knowledge and skills to
Application	in a reliable and consistent	select appropriate strategies to
	manner through standard	solve a variety of problems in the
	procedures and in ways that	work situation in order to maximize
	allow them to solve predicable	safety, output and quality, and
	problems	minimize wastage
	Show initiative in developing	Have a sound understanding of the
•	understanding of principles and	main principles and regulations on
	ideas relevant to their operational	which procedures are based, be
	tasks and make appropriate	able to select the most appropriate
	adjustments to procedures when necessary in non-routine	processes for different situations and make necessary adjustments
	situations	to suit different circumstances
	Work willingly with others and	Contribute to the harmony and
	accept responsibility for the	productivity of groups with which
	quality and quantity of work done	they are involved, sharing
	individually and as members of a	responsibility for the quality and

		•
	<ul> <li>group</li> <li>Be reliable participants in work situations and act in a consistent manner to contribute to safety, effective communication and business capacity</li> <li>Demonstrate basic operational knowledge in a moderate range of areas</li> <li>Apply a defined range of skills</li> <li>Apply known solutions to a limited range of predictable problems</li> <li>Perform a range of tasks where choice between a limited range of options is required</li> <li>Assess and record information from varied sources</li> <li>Take limited responsibility for own outputs in work and learning</li> <li>Behave in ways that are consistent with Buddhist values and belief, and demonstrate loyalty, responsibility, and commitment to service to society</li> </ul>	quantity of the output of the group, and supporting improved effectiveness  Demonstrate some relevant theoretical knowledge  Apply a range of well developed skills  Apply known solutions to a variety of predictable problems  Perform processes that require a range of well developed skills where some discretion and judgment is required  Interpret available information, using discretion and judgment  Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service to society.
Volume of learning	The volume of learning of a	The volume of learning of a
	Technical and Vocational	Technical and Vocational
	Certificate 1 is typically 1 year	Certificate 1 is typically 1 year
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**CQF Qualification Level Descriptors** 

CQF Qualification Level Descriptors		
Qualification of CQF	Higher Diploma of Technology/	Bachelor of
	Associate Degree	Technology/
		Bachelor Degree
CQF Levels	Level 5	Level 6
	The Higher Diploma of Technology /	The Bachelor Degree of
Purpose	qualifies individuals who apply	Technology/ qualifies
	integrated technical and theoretical	individuals who apply a broad
	concepts in a broad range of	
	specialized knowledge and skills	and coherent body of knowledge in a range of context to perform
	context to perform advanced skilled or	professional or highly skilled work
	paraprofessional work and as a	and as a pathway further
	pathway further learning	learning
	The Associate Degree qualifies	The Bachelor Degree qualifies
	individuals who apply underpinning	individuals who apply a broad
	technical and theoretical knowledge in	and coherent body of knowledge
	a broad range of contexts to perform	in a range of context to perform
	paraprofessional work and as a	professional work and as a
	pathway further learning	pathway further learning
Knowledge	Has general knowledge of the scope	
Knowledge	and defining features of a field of	Has comprehensive and in
	study, and in-depth knowledge of	depth knowledge of an industry and major occupational
	some areas within the field, including	
	important theories, concepts and	knowledge and skills within it,
	principles.	supported by a broad general
	Knowledge outcomes include	knowledge that provides a
		foundation for learning about
	mastery of the significant bodies of	new developments. This
	information within a given field, and	includes thorough knowledge of
	in-depth understanding of the major specializations, including awareness	conventions, regulations and technical requirements, and of
	of key issues, and of how to address them.	underlying theories and their
		relevance for new technologies
	Understand the way in which new     knowledge is developed and should	Has thorough knowledge of
	knowledge is developed and should	educational theories and
	be aware of significant relationships	processes relating to learning
	between their field of study and	and teaching.
	related areas of knowledge.	Possess a comprehensive,
	Is familiar with important current	coherent and systematic body
	issues and recent research.	of knowledge in a field and the
		underlying principles and theories associated with it.
		l v · ·
		Is aware of related knowledge  and theory in other disciplines.
		and theory in other disciplines
		and, in the case of professional
		programs, other professional fields.  Is familiar with the latest
		developments at the forefront of
		specializations within the main
		field of study including critical
		awareness of current research
		relating to resolution of issues
		and extension of knowledge.

Cognitive Skills	<ul> <li>Can apply this knowledge in a range of predictable and non predictable situations and analyse information from a range of sources to plan and implement effective solutions to problems in a creative manner.</li> <li>Can transfer and adapt this knowledge to different work contexts.</li> <li>Can analyze and interpret technical and research information and apply it to practical issues with some guidance.</li> <li>Is able to investigate defined or routine problems, evaluate alternative solutions, and propose new approaches drawing on relevant theoretical and practical knowledge.</li> <li>Can identify relevant concepts and theories from subjects studied and apply them outside the context in which they were learned, in both academic and employment contexts.</li> <li>Have an awareness of the provisional nature of knowledge and an ability to take this into account in the interpretation, analysis and resolution of problems.</li> </ul>	<ul> <li>Is able to apply theoretical knowledge in investigating and analyzing complex issues and problems in relating to learning and teaching to develop solutions and plan strategies for their implementation in a variety of known and unknown contexts.</li> <li>Is able to undertake investigations, comprehend and evaluate new information, concepts and evidence from a range of sources, and apply conclusions to a wide range of issues and problems with limited guidance.</li> <li>Is able to investigate relatively complex problems and recommend creative and innovative solutions taking account of relevant theoretical knowledge and practical experience and the consequences of decisions made:</li> <li>Could apply these skills and insights in the professional and academic contexts relevant to the field of study. In professional programs can use routine procedures appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights in response.</li> <li>Can use routine procedures</li> </ul>
		appropriately, but identify situations requiring innovative solutions and draw on relevant theoretical and practical insights
Psychomotor Skills	Has the skill to operate a wide range of complex technical/ sophisticated equipment relevant to the industry and to make appropriate adjustments to this equipment for different work requirements     Can readily transfer skills to new technologies and operations	<ul> <li>in response</li> <li>Learning outcomes expected in psychomotor skills at this qualification are the same level 5( Higher Diploma of Technology and Associate Degree) and with the addition of skills required for the effective delivery of training programs</li> <li>This includes not only the possession of the skills but also capacity to demonstrate them to others and understanding of how those skills are developed and improved</li> </ul>
<ul> <li>Interpersonal Skills and Responsibility</li> </ul>	<ul> <li>Can effectively lead and supervise the activities of a work team</li> <li>Accepts responsibility for own work outputs and the output of others in the work environment</li> </ul>	Contributes to and facilitates constructive resolution of issues in group or team situations, whether in a leadership role or as a member of a group

- Takes initiative in extending knowledge of relevant technological and other occupational practices and can effectively support the continuing professional development of supervised staff and other work colleagues
- Is able to think and act independently, but interacts constructively in group or team situations in pursuit of common goals
- Is able to exercise leadership in a small group in a defined area of responsibility
- Can identify weaknesses in own knowledge and skill, plan for and take action to provide for continuing learning
- Accepts personal responsibility for actions taken in individual and group situations
- Is aware of and acts consistently with relevant regulations and codes of practice, seeking advice when necessary
- Can identify the impact on others of actions proposed or taken and evaluate the appropriateness of those actions in the light of their consequences
- In situations of potential conflict in values or priorities can make explicit the nature of the conflict and the values and priorities involved and make a defensible judgment on the course of action that should be taken.

- Can exercise group leadership in undefined situations calling for innovative responses
- Shows initiative in identifying issues requiring attention and in addressing them appropriately on an individual or team basis
- Takes responsibility for own learning and is able to identify and use means of finding new information or techniques of analysis needed for completion of tasks
- Deals with ethical and professional issues involving values and moral judgments in ways that are sensitive to others and consistent with underlying basic values and relevant professional codes of practice
- Works effectively on an individual basis or in a team situation in a wide range of circumstances including new situations and ones requiring high levels of tact and sensitivity
- Acts responsibly in employment or other professional situations, accepting high levels of responsibility
- Takes responsibility for developing new skills and knowledge required both for current tasks, and for further development of abilities and skills
- Possess independent study skills to continue further study with higher degree of autonomy
- Apply team and interpersonal skills which are suitable to employment
- Demonstrates a high level of ethical behavior in situations involving value conflicts and competing priorities. Provides a positive influence to others through example and leadership in employment or other group situations

### Communication, Information Technology and Numerical Skills

- Is able to apply routine statistical and mathematical techniques in investigating and proposing solutions to problems and issues
- Communicates effectively, both orally and in writing, presenting arguments, analyses and conclusions succinctly and in correct form
- Is able to apply routine statistical and mathematical techniques in
- Routinely uses the most appropriate information and communications technology in gathering, interpreting and communicating information and ideas
- Can communicate effectively both orally and in writing, selecting and using forms of presentation appropriate for differing issues and audiences

- investigating and proposing solutions to problems and issues
- Is able to make effective use of information and communications technology in analyzing issues and obtaining information, and in making presentations
- Have the ability to communicate information effectively, to develop arguments and analyze data in a variety of forms appropriate to different issues and audiences
- Can identify relevant statistical or mathematical techniques and apply them creatively in interpreting information and proposing solutions when investigating issues and problems
- Routinely uses the most appropriate information and communications technology in gathering, interpreting and communicating information and ideas
- Can draw upon and appropriately apply a range of mathematical and statistical techniques and use them intelligently in investigating and reporting on issues and problems
- Communicates effectively in oral and written modes and using electronic communications technology. Routinely evaluates the success of communications to different audiences and takes action to improve effectiveness when required

### Application

- Use their broad knowledge of occupations and their industry, including underlying principles and theories associated with it to improve work processes and outputs. This includes the application and adaptation of skills and techniques to new technologies and the modification of work processes
- Use their knowledge and skills, including numeracy and statistical skills, to analyze work processes and problems, develop innovative solutions, and transfer this knowledge to new situations
- Demonstrate understanding of specialized knowledge with depth in some areas analyze, diagnose, design and execute judgments across a broad range of technical or management function
- Show strong leadership in taking action to build effective workplace teams that accept responsibility for the quality and consistency of work processes and outputs
- An awareness of the provisional nature of knowledge and an ability to take this into account in the interpretation, analysis and resolution of problems
- Apply a significant range of fundamental principles and complex

- Command a high level of respect from students, employers and industry representatives for the range and depth of their knowledge and skills, and their understanding of relevant theoretical knowledge across particular occupations, industries and professions
- Recognize the provisional nature of knowledge in their field and take this into account in investigating and proposing solutions to academic and professional issues;
- Have a strong commitment to advancing the knowledge and learning of others, and to advancing their own learning through practical and scholarly activities
- Take initiative in adapting their knowledge and skill to different context, to the needs of different learners and to support and encourage learning by others
- Process complex information in a variety of modes and be able to present this information in clear and accurate forms appropriate for different

	techniques across a wide and often unpredictable variety of contexts in relation to either varied or highly specific functions. Work at this level also requires evaluation and analysis of current practices and the development of budgeting plan or strategic plan relating to accountability, responsibility for personal out puts and others  Communicate complex information in an accurate, clear and timely manner  Operate complex technical equipment with a very high level of skill, meet relevant safety standards, and provide effective guidance to work colleagues in similar tasks  Breadth, depth and complexity involving analysis, diagnosis, design, planning, execution and evaluation across a broad range of technical and/or management functions including development of new criteria or applications or knowledge or procedures  Generate ideas through the analysis of information and concepts at an abstract level  Demonstrate a command of wide ranging, highly specialized technical, creative or conceptual skills  Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to service and society	<ul> <li>audiences</li> <li>Take responsibility for their own further professional development and work cooperatively with others in keeping up to date with new developments in their field.</li> <li>Draw on a wide range of theoretical and practical knowledge both within and outside their specialized field in addressing new issues and problems.</li> <li>Take initiative in identifying and resolving problems and issues both individually and in group situations exercising leadership in pursuit of innovative and practical solutions</li> <li>Apply the theoretical insights and methods of inquiry from their field of study in considering issues and problems in other contexts</li> <li>Participate in activities to keep up to date with developments in their field and enhance their own knowledge and understanding</li> <li>Consistently demonstrate a high level of ethical and responsible behavior in academic professional and community environments</li> <li>Behave in ways that are consistent with Buddhist values and belief, and reflect loyalty, responsibility, and commitment to somic to seeint.</li> </ul>
Volume of learning	The volume of learning of a Higher Diploma of Technology/ Associate Degree is typically 2 years	to service to society. The volume of learning of a Bachelor Degree of Technology/ Bachelor Degree is typically 4-6 years

**CQF Qualification Level Descriptors** 

Ouglification of COE   Moster Degree of   Degree of		
Qualification of CQF	Master Degree of	Doctoral Degree of
	Technology/	Technology/
	Master Degree	Doctoral Degree
	Level 7	Level 8
	A CONTRACT OF THE PROPERTY OF	
Purpose	The Master Degree of Technology /	The Doctoral Degree of
	and the Master Degree of coursework	Technology/ and the Doctoral
	qualifies individuals who apply an	Degree qualifies individuals who
	advanced body of knowledge in a	apply a broad and coherent body
	range of contexts for professional	of knowledge in a range of
	practice or scholarship and as a	context to perform professional
	pathway further learning	or highly skilled work and as a
	The Master Degree of Technology /	pathway further learning
	and the Master Degree of research	
age of Miles	qualifies individuals who apply an	
and the Party and the control	advanced body of knowledge in a	
and the first transfer of the	range of contexts for research or	
	scholarship and as a pathway further	
	learning	·
· [Curindad all dist.		11-46
Knowledge	Has thorough knowledge and critical	Has thorough understanding of a
	understanding of a subject or discipline	substantial body of knowledge in a
l and the second	including principal concepts, principles	discipline or professional field,
Leading to the second second	and theories and their current application	including both specific information
	to a specialist field of academic inquiry	and underlying theories, principles
versely	or professional practice	and concepts
	Has detailed understanding of one or	Knows about the latest
	more complex areas of specialization at	developments in the field including
## ** ** ** ** ** ** ** ** ** ** ** ** *	the forefront of theory, research or	emerging issues and research
	professional practice	techniques and the potential
the second state of the second	Understands how new knowledge is	challenges in developments for
1. 14 May 1. 18	developed and applied and the effects of	generally accepted conclusions
the larger and the	recent research on the body of	For doctoral studies in a
Control of the Contro	knowledge in the field and on associated	professional field, has thorough
	professional practice	and extensive knowledge of
the state of the state of	Is aware of recent regulatory provisions	changing practices locally and
	in the local and international	internationally
	environment that might affect the	<ul> <li>Has thorough knowledge of</li> </ul>
	professional field concerned and of	developments in related fields that
	reasons for and future implications of	potentially impact on the area of
	those changes	inquiry or professional practice
	<ul> <li>Consistently applies practical and</li> </ul>	<ul> <li>Is able to apply advanced</li> </ul>
Cognitive Skills	theoretical knowledge in dealing with a	theoretical insights and techniques
	wide variety of novel and unpredictable	of inquiry in the creative analysis of
	scholarly and/or professional contexts,	major issues and problems and
the second will be a	and develops original and creative	development of innovative
	responses to issues and problems	solutions
	Makes informed and defensible	Can synthesize research and
	judgments in circumstances where there	theoretical writings and develop
	is an absence of complete or consistent	new and creative insights based on
	information	
		the integration of ideas from within
	Can synthesize and apply research and	and outside the special field of
	scholarly publications or professional	advanced study
	reports, and develop significant new	<ul> <li>Can design and carry out major</li> </ul>
	ideas and integrate them into or	research or development projects
	challenge established knowledge	to deal with complex issues
	<ul> <li>Can apply common and specialized</li> </ul>	involving development of new
	research techniques in the creative	knowledge or significant
	<u></u>	

	analysis of complex issues and development of conclusions and proposals relevant to an academic or professional field.  Can independently plan and execute a major project or piece of scholarly research applying practical and theoretical knowledge and research techniques and producing sound conclusions that add significantly to existing knowledge or professional practice	improvements in professional practice
Psychomotor Skills		
Interpersonal Skills and Responsibility	<ul> <li>Takes initiative in identifying and responding creatively to complex issues and problems in an academic or professional context. Where additional information or skills are required takes independent action to acquire and apply that information or skill</li> <li>Accepts full responsibility for own work and cooperates fully and constructively with others in dealing with issues and problems, exercising both informal and formal leadership skills where appropriate. In group situations acts in ways that consistently enhance the effectiveness of the group as a whole</li> <li>Deals consistently and sensitively with complex ethical issues in academic and or professional contexts. Where issues are not adequately dealt with in current ethical codes of practice or regulations, makes informed, fair, and valid judgments on the basis of sound principles and values</li> <li>Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment</li> </ul>	<ul> <li>Acts consistently with a high level of autonomy and initiative in professional or scholarly activities</li> <li>Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement</li> <li>Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments</li> <li>Deals consistently and sensitively with complex ethical issues, makes informed, fair, and valid judgments, and acts or communicates conclusions in ways that are fully sensitive to the concerns those affected.</li> <li>Takes initiative in raising deficiencies in existing codes of practice for possible review and amendment</li> </ul>
Communication, Information Technology and Numerical Skills	<ul> <li>Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a thesis or major project report.</li> <li>Obtains, routinely evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating conclusions and recommendations</li> </ul>	<ul> <li>Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and academic and professional publications, including a major thesis or project report on a complex and significant issue.</li> <li>Critically evaluates, and makes effective use of mathematical and statistical data, and uses a wide range of appropriate information and communications technology in investigating issues and in communicating conclusions and recommendations</li> </ul>

Application	<ul> <li>Work is likely to be in accordance with a broad plan, budget or strategy, and take responsibility and broad ranging accountability for structure, management and output of the work of others and functions may be involved</li> <li>Consistently respond to complex academic and professional issues, providing creative solutions and making sound judgments, exercising these skills when necessary in the absence of complete data relevant to the matter concerned</li> <li>Act autonomously in tackling and solving both anticipated and unpredictable problems, and cooperate with others and provide leadership when appropriate in group situations</li> <li>Follow, and actively encourage others to apply, sound ethical and moral judgments in dealing with sensitive and complex issues that may involve difficult value conflicts</li> <li>Take full responsibility for their own independent learning, and provide leadership in developing opportunities to support the continuing professional development of others</li> <li>Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society</li> </ul>	<ul> <li>Take full responsibility and accountability for all aspects of the work of others and functions including planning, budgeting, and strategy as required. The highest level of complex judgment is applied in planning, design, technical and management functions</li> <li>Consistently apply their advanced knowledge and/or professional understanding to the further development of knowledge and practice in their field, contributing significantly to the development of new insights and strategies</li> <li>Provide effective leadership in their field addressing significant emerging issues and communicating their ideas and conclusions effectively to specialist and non-specialist audiences</li> <li>Deal consistently and sensitively with complex ethical issues in academic or professional contexts and take initiative in ensuring appropriate resolution of wider issues affecting the wider community</li> <li>Behave in ways that are consistent with Buddhist values and beliefs, and reflect high levels of loyalty, responsibility, and commitment to service to society</li> </ul>
Volume of learning	The volume of learning of a Master Degree of Technology/ of course work and research is typically 2 years	The volume of learning of a doctoral Degree of Technology/ Doctoral Degree is typically 3-6 years
	The volume of learning of a Master Degree of course work and research is typically from 3-4 semesters	e sature suggestion of
l Karangaran Sebesaran Perlamban	The volume of learning of a Master Degree of research is typically 2 years	

### **Appendix 2: GLOSSARY**

Accreditation

Process through which a legally responsible agency or association grants public recognition to a school, institute, college, university, or programme of study that meets minimum established educational standards.

**Assessment** 

The process of gathering evidence to determine whether a learner has met the required standards. Assessment is also used as part of the learning process to assist the learner in making progress.

Certification

Process of formally validating knowledge, know-how and/or skills and competences acquired by an individual, following a standard assessment procedure, leading to the award of qualification by an accredited awarding body.

**CQF** Authority

An authorized body established under the Supreme Council for Education in the Kingdom of Cambodia. CQF's main function is to control, authorized the implementation and development of the CQF.

Competence

Proven ability to use knowledge, skills and personal, social and/or methodological abilities, in work or study situations and in professional and/or personal development.

Credit

Credit is a "currency" providing a measure of learning outcomes achieved in notional hours at a given level. It is awarded for learning that has been achieved and verified through reliable and valid assessment.

**Credit Accumulation** 

The process of gaining credits towards a qualification within an institution (or closed system, e.g. all qualifications offered by a single awarding body).

**Credit Transfer** 

The process by which credits gained in one institution or system may be recognized in another institution or system.

Curriculum

Set of actions followed when developing a learning programme, including defining training goals, content, methods (including assessment) and materials.

Competency-Based Curriculum

Specification for a course which is based on the knowledge, skills and effective work competencies identified from and closely linked to the competency standards.

## Higher Education Provider

A body corporate, organisation or other body of 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.

### Learning outcomes

Statements of what a learner knows, understands and is able to do on completion of a learning process, defined in terms of performance criteria based on knowledge, skills, attitudes and competence.

### Learning programme

Programme of studies or training defined by a curriculum that may consist of one or more modules, units, subjects or courses or any combination of those elements.

#### Level

Position where a qualification is located on a qualifications framework based on level descriptors.

### Level Descriptor

A definition of the characteristics of a qualification that would lead to it being assigned to a particular level.

### Modularisation

A system in which qualifications consist of a number of modules, each of which can be certificated independently. Sometimes, this is known as unitization" and "modularisation" is used to refer to a system in which learning programmes consist of a number of components.

#### Module

A component of a larger qualification, which is certificated independently. (Sometimes, it means a component of learning and teaching within a programme, not independently certificated).

### National Qualifications Framework

National Qualifications Frameworks is an instrument for the development and classification qualifications based on a set of criteria that is agreed nationally for specified levels of learning outcome achieved. It is a policy and strategy in the quality assurance of education and training which clarifies the standard of learning outcomes, academic levels and quality of qualifications, and is widely recognized as such as in the international academic and professional communities

### Notional Learning Hours

These include all formal and informal learning activities, practical work and practice, and all assessment-related activity.

### Training Package

refers to the document promulgated and issued by NTB consisting of competency standards, national qualifications and training guidelines for specific sectors/occupations. The training regulation serves as basis for establishment of qualification and certification under the NQF. It also serves as guide for development of competency-based curricula and instructional materials including registration of TVET programs offered by TVET institutions.

### **Unit of Competency**

is a component of the competency standards stating a specific key function or role in a particular job or occupation, it is the smallest component of achievement that can be assessed and certified under the CQF.

### Competency

is the possession and application of knowledge, skills and attitudes to perform work activities to the standard expected in the workplace.

### Provider of education and training

Education and training body (institution, organization, company centre, collaborative partnership or consultancy) which delivers learning programmes that are directed to a specified CQF standard(s) and/or qualifications and manages the assessment thereof.

#### Qualification

Formal outcome of an assessment and validation process which is obtained when a recognised awarding body determines that an individual has achieved learning outcomes.

Is a cluster of units of competencies that meets job roles and is significant in the workplace. It is also a certification awarded to a person on successful completion of a course in recognition of having demonstrated competencies in an industry sector.

<u>From MQA:</u> A certificate, diploma or degree, which is awarded by a higher education provider or any party that is authorised to confer or to award the qualification and to affirm the earned learning outcomes.

<u>From AQF</u>: Qualification is defined as follows: formal certification, issued by a relevant approved body, in recognition that a person has achieved learning outcomes or competencies relevant to identified individual, professional, industry or community needs.

## Qualifications framework

Instrument for the classification of qualifications according to an established set of criteria for specified levels of learning achieved, thereby improvin

g the transparency, access, progression, comparability and quality of qualifications.

### Quality assurance

Generic term for all activities that provide assurance that the educational and training services of an organization are continually being delivered effectively, to the required standard, and in line with published goals and objectives.

#### Qualification Level

An award level described with generic outcomes or a qualification descriptor which characterises typical qualification.

Levels numbered and linked to qualification titles to describe the increasing intellectual demand and complexity of learning expected as students progress to higher technical or academic awards.

## Recognition of Prior Learning (RPL)

To recognize and validate competencies for purposes of certification obtained outside the formal education and training systems.

### Regional Qualifications Framework (RQF)

A framework that consists of a set of agreed principles, practices, procedures and standardize terminology intended to ensure effective comparability of qualifications and credits across countries in region.

### Registration

Process of providing an institution with the opportunity to establish a formal, publicly recognised relationship with the relevant national body (competent authority).

### Skills

Ability to apply knowledge to complete tasks and solve problems. Skills are described as both cognitive (employing logical, intuitive and creative thinking) and practical (involving manual dexterity and the use of methods, materials, tools and instruments).

# Transnational Qualifications Framework (TQF)

Translation instrument for the classification of regional and world qualifications according to set criteria for specified levels of learning achieved, to improve credit transfer and promote common accreditation mechanisms between participating regional and world countries.

#### Validation

Process through which a legally responsible agency or association determines if a provider-based and/or national qualification meets minimum established criteria for registration on the qualifications framework.

A verification process of an individual's achievement of a set of learning outcomes acquired through formal, non-formal or informal learning, irrespective of time and place.