

National Qualifications Framework for Higher Education in Thailand

IMPLEMENTATION HANDBOOK

November 2006

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A. National Qualifications Framework for Higher Education in Thailand

Introduction

The Qualifications Framework for Thailand's higher education system is designed to support implementation of the educational guidelines set out in the National Education Act, to ensure consistency in both standards and award titles for higher education qualifications, and to make clear the equivalence of academic awards with those granted by higher education institutions in other parts of the world. The Framework will help to provide appropriate points of comparison in academic standards for institutions in their planning and internal quality assurance processes, for evaluators involved in external reviews, and for employers, in understanding the skills and capabilities of graduates they may employ.

Programs developed within this Framework should not only lead to the knowledge, generic skills and professional expertise normally associated with studies leading to comparable awards throughout the world, but should also include particular emphases reflecting the policy priorities of Thailand. These priorities include emphasis on the transfer and application of cognitive skills in problem solving, creative thinking, and entrepreneurship; familiarity with and support for national culture and traditions; and reconciliation of those traditions with requirements for competitiveness in the international knowledge economy. Graduates should have the ability and commitment to engage in lifelong learning, capacity for effective communication including communication through use of information technology and the ability to take the initiative in individual and group activities.

The framework describes the expected increasing levels of knowledge and skill in these areas for each qualification.

Developing these abilities requires use of methods of instruction that take students well beyond the acquisition of knowledge and skills and emphasises their use in practical situations on a continuing basis.

1. Levels of Qualifications

Levels describe the increasing intellectual demand and complexity of learning expected as students progress to higher academic awards.

The qualifications framework begins at an entry level which is the successful completion of basic education, and culminates with the degree of doctor. Higher doctorates, postdoctoral studies and honorary degrees are described in the Implementation Handbook but are not included in the framework.

The levels in the framework are:

Entry. Completion of basic education.

Level 1. Advanced Diploma

Level 2. Bachelor

Level 3. Graduate Diploma

Level 4. Master

Level 5. Higher Graduate Diploma

Level 6. Doctor

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 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.

2. Credit Points

A system of credit points is used to describe the amount or volume of learning expected for qualifications at each level. Thirty credit points representing the minimum amount of learning normally expected of undergraduate students in one academic year of study. The same system of credit points is used for regulations governing major components of study such as the scale of a thesis requirement, the amount of general studies required in an undergraduate program, and equivalent credits for formal instruction, laboratory work or field work. Details of these requirements are set out in *Standard Criteria for Thai Higher Education* published by the Commission of Higher Education.

The length of programs (and the number of credit points given) may differ for programs with the same or similar titles. For example a bachelor degree may be four or five (or even six) years in length depending on the amount of learning expected at the level of complexity expected for bachelor degree studies. A similar period of study in different programs could lead to a bachelor and a master degree, but only if the study for the master degree component was taken at the more advanced level required for that degree. The title is based on the level or complexity of learning rather than the time taken, though there are minimum credit requirements.

3. Domains of Learning

The framework groups the kinds of learning expected of students into five domains and describes learning outcomes at each level in each of these groupings. The domains are:

- **Ethical and Moral Development:** Development of:
 - Habits of acting ethically and responsibly in personal and public life in ways that are consistent with high moral standards.
 - Ability to resolve value conflicts through application of a consistent system of values.
- **knowledge**, the ability to understand, recall and present information including:
 - Knowledge of specific facts,
 - Knowledge of concepts, principles and theories and
 - Knowledge of procedures.
- **cognitive skills**, the ability to
 - Apply knowledge and understanding of concepts, principles, theories and procedures when asked to do so; and
 - Analyze situations and apply conceptual understanding of principles and theories in critical thinking and creative problem solving when faced with unanticipated new situations.

- **interpersonal skills and responsibility**, the ability to;
 - work effectively in groups, and exercise leadership;
 - accept personal and social responsibility, and
 - plan and take responsibility for their own learning.
- **analytical and communication skills**, the ability to
 - use basic mathematical and statistical techniques,
 - communicate effectively in oral and written form, and
 - use information and communications technology.

These domains and the learning outcomes associated with them apply to all fields of study. In addition there are some fields in which highly developed physical skills are also necessary. Examples can be found in the Arts where skills of dance, music, painting or sculpture are essential, in physical education, and in the medical and health sciences. For programs in these fields learning outcomes should be specified in an additional domain of **Psychomotor Skills**, with the level of skill required for each qualification accurately described and appropriate strategies for teaching and student assessment included in program and course specifications.

4. Learning Outcomes in Domains of Learning

Descriptions of learning outcomes at each of the levels of the Framework are provided in Section C of this Handbook. Psychomotor skills have not been described in this section because they are relevant only to some fields of study, and because their nature and the way necessary levels skill are described varies widely.

The learning outcomes described in Section C are grouped into the five domains, and in each domain there is an increase in the scale or complexity of the learning that is expected. In each case the knowledge and skills are intended to be cumulative, so that the learning at any level includes that of the same domain at earlier levels even if the particular knowledge or skill is not restated.

Learning outcomes for **ethical and moral development** are expected to apply at the level described for all learners, though there are also some field specific items of knowledge that should be known by students in those fields such as codes of ethical practice for medical doctors, accountants, lawyers, etc.

Learning outcomes in the domains of **knowledge** and for **cognitive skills** are directly related to the field of study undertaken and details of the knowledge and skill appropriate to those fields should be specified in program and course specifications.

Learning outcomes for **interpersonal skills and responsibility** are intended to apply to all students at the level described regardless of field of study.

Learning outcomes for **analytical and communication skills** are generic descriptions that should apply to all students regardless of field of study. However when the main focus of a student's field of study is in one of these areas a much higher level of performance is expected. For example a student undertaking major studies in IT would be expected to have the levels of expertise in IT described under the headings of Knowledge and Cognitive Skills rather than the more general expectation for everyone described under the heading of Analytical and Communication Skills.

5. Relationship Between Levels, Credits and Domains of Learning

These three components come together in a framework structure as shown in the following table.

Levels	Minimum Credits	Domains of Learning Outcomes				
		Ethical and Moral Development	Knowledge	Cognitive Skills	Interpersonal Skills and Responsibility	Analytical and Communication Skills
1. Advanced Diploma	90	XX	XX	XX	XX	XX
2. Bachelor	120 150 180	XXX	XXX	XXX	XXX	XXX
3. Grad Dip	24 after bachelor		XXXX	XXXX	XXXX	XXXX
4. Master	36 after Bachelor	XXXXXX	XXXXX	XXXXX	XXXXX	XXXXX
5. Higher Graduate Diploma	24 after Master		XXXXXX	XXXXXX	XXXXXX	XXXXXX
5. Doctor	48 after Master, or 72 after Bachelor		XXXXXXXX	XXXXXXXX	XXXXXXXX	XXXXXXXX

6. Academic and Professional Strands

The framework has two general strands representing different orientations in programs. One of these is described as academic with a general focus on research and transmission of knowledge in fields that are not directly related to professional occupations. The other is described as professional, and programs in this strand have a more practical orientation to provide students with the high levels of knowledge and skill required for professional occupations.

The two strands are not mutually exclusive. Academic studies should develop abilities that will be of significant value in employment as well as in everyday life. Professional programs should involve thorough understanding of research and theoretical knowledge in their field 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 between these two types of programmes that should be reflected in their detailed content and in the titles of awards.

7. Field Descriptors

The terms used for levels, Advanced Diploma, Bachelor, Graduate Diploma, Master, Higher Graduate Diploma, and Doctor, are used to describe the expectations for complexity of learning described in the framework. 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.

The term Arts should be used for studies in the humanities or social sciences, the term Science should be used for studies in natural or applied sciences, including environmental and medical sciences. Academic research degrees in all fields at doctoral level should carry the title of Doctor of Philosophy (PhD). The term Bachelor of Technology may be used at bachelor degree level for multi-disciplinary studies in applied science designed to develop theoretical and practical knowledge relevant to specific industries or professional fields.

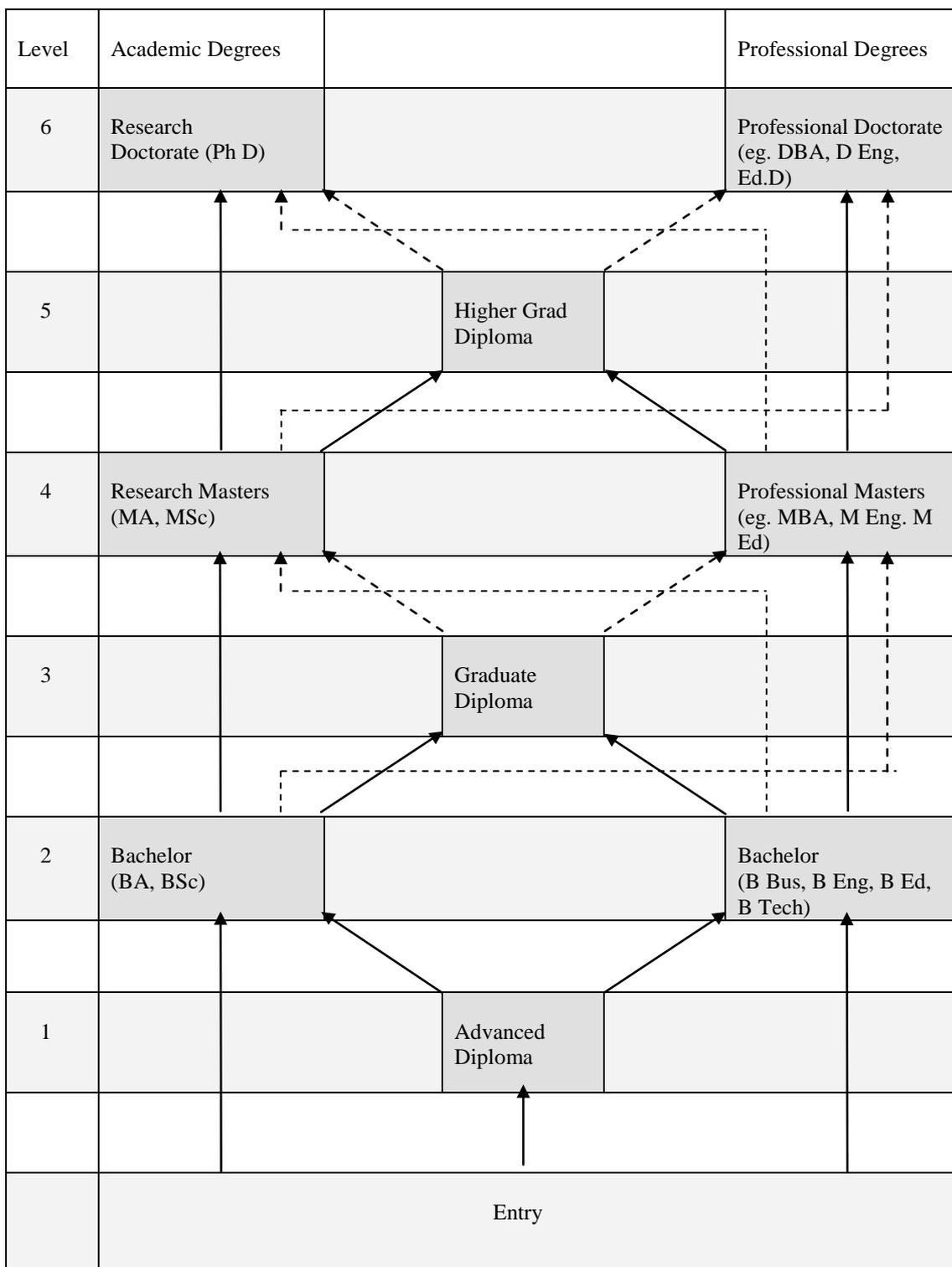
More detailed guidelines on degree designations are available in a Commission of Higher Education publication, *Nomenclature Rules for Degree Names*.

The following arrangements should apply:

Level	Academic Strand	Professional Strand
Entry level. Completion of basic education	No higher education title.	No higher education title.
1. Advanced Diploma	Graduate Diploma in Arts, or Science, or (if evenly divided) of Higher Education	Advanced Diploma in ...(area of specialization)
2. Bachelor Degree	Bachelor of Arts, or of Science	Bachelor of ...(name of professional field—eg. Business, Education, Engineering)
3. Graduate Diploma	Graduate Diploma in Arts, or Science	Graduate Diploma in...(name of professional field—eg. Business, Education, Engineering)
4. Master Degree	of Science, or of Arts	Master of ...(name of professional field— Business, Education, Engineering)
Higher Graduate Diploma		Higher Graduate Diploma in...(name of professional field)
5. Doctoral Degree	Doctor of Philosophy	Doctor of ...(name of professional field—eg. Business, Education, Engineering)

For the award of a diploma or bachelor or masters degree, where an area of specialization is included with a general qualification title (Eg. B Eng in Information Technology, or B Bus in Accounting), at least 50% of studies should be in that area of specialization.

8. Structure and Normal Progression Through the Qualifications Framework



Solid lines indicate normal routes of progression between levels and academic awards. Dotted lines indicate possible routes of progression, but these may involve some additional transitional studies to ensure students have necessary prerequisite knowledge and skill.

B. Issues for Consideration in Implementing the Framework in Higher Education Institutions

1. Recognition of Prior Learning

In many cases students will commence higher education studies directly after completion of basic education and will undertake full programs in higher education institutions that are consistent with the levels and credits described in the framework.

In other cases students may have developed important skill and knowledge through informal education systems or in employment, or have taken further studies beyond the level of basic education in vocational education or other higher education institutions.

Students should not be required to duplicate learning they have already acquired or repeat work they have already completed satisfactorily elsewhere. They should be given advanced standing when it can be demonstrated that they have knowledge and skill that are 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 to develop those special attributes.

Institutions should develop processes to evaluate the background of students who might be considered for advanced standing towards 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 in response to their experience.

Subject to these considerations general guidelines have been provided for admission of students seeking advanced standing on admission on the basis of studies in a similar field completed at another vocational education or higher education institution.

These guidelines are set out in *Proclamation of the Ministry of University Affairs¹ Concerning Principles for Recognition of Prior Learning and Transfer of Course Credits on Entry to the Formal Education Sector*. BE 2545/CE 2002

2. Diversity -- Recognizing Higher Standards and Special Graduate Attributes

Defining minimum standards in the Qualifications Framework is intended to give students and the wider community confidence in the quality of an academic award, wherever it is earned. However it is not intended to constrain desirable diversity or striving for higher standards of achievement.

Defining minimum standards for academic awards does not limit the achievement of individual students who may learn at a higher standard. Obviously it is important that

¹ Now the Commission on Higher Education

students achieve at the highest standard they can and the grades given to them should recognize outstanding performance.

It is also important that institutions be able to identify areas of special interest and to define student attributes that are part of their special mission, and that go beyond the minimum requirements. Nothing in the Qualifications Framework should constrain special initiatives of this sort, but despite any variations that may develop the minimum standards described in the domains for each level must be achieved if the community is to have confidence in what the higher education system produces.

Verification of Standards

The Framework provides guidance for staff, students, employers and external quality evaluators about the expected standards of knowledge, skills and personal qualities of students at different qualification levels. 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 other institutions, including at least some good international universities. It is part of the internal quality assurance responsibility of all institutions offering higher education programs to obtain independent verification that the expected standards are understood across the institution, and are being consistently achieved. External evaluators may need to be able to verify that this has been adequately done.

Common strategies used by higher education institutions to verify standards include check marking of student scripts and assignments, 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 institutions, but whether this process is adequate will depend on details of the particular arrangements made and the effectiveness with which they are carried out. An arrangement with a partner institution does not remove the responsibility of the teaching institution to verify its standards and ensure they are consistently maintained.

Conditions of Learning

There are significant differences in the way learning occurs in the different domains. For example students memorize information in a different way from the way their attitudes are formed, and they learn to apply cognitive skills in problem solving in a different way again. Very different processes are involved in learning to apply ethical and moral principles in everyday behavior and in improving interpersonal effectiveness and capacity for leadership. Psychomotor skills are developed through repeated practice with feedback on the effectiveness of performance.

This means that if learning outcomes are to be achieved in the different domains of learning, different teaching strategies that are appropriate for those different types of learning must be used. The term “conditions of learning” is used to describe what are generally recognized as the most important requirements for effective teaching in each of the domains.

If the abilities described in the domains of learning are to be developed the necessary conditions of learning for the full range of learning outcomes must be established, and

this will require methods of teaching that go well beyond the conventional lecture and classroom discussions that are most commonly used in higher education.

It is an important part of the internal quality assurance of higher education institutions to ensure that the necessary conditions for developing different kinds of learning outcomes are understood by faculty, are applied in courses and programs, and that the effectiveness of those strategies is evaluated on a continuing basis.

The following conditions have been generally supported by research and appear to be necessary.

For ethical and moral development—This involves a combination of knowledge about appropriate behavior and formal and informal codes of practice, attitudes, and maturity of judgment. Development strategies may include exposure to positive role models and analysis and reflection on their own behavior and that of others in a variety of situations. Group discussions of simple and more complex moral dilemmas can help students clarify their own values and think through general principles that they believe should guide their own behavior. The principles of transfer of learning call for discussions of a wide range of possible situations including ones that are similar to those likely to be faced by the students in later life and employment. While special attention to this domain may be given in certain courses, it is important that opportunities are taken in all courses to reinforce and apply the principles developed.

For acquisition of knowledge--The provision of a broad overview as an advance organizer for the information to be learned. As new information is provided it should be linked to that advance organizer and to students prior knowledge to facilitate understanding and recall. Mnemonic devices may be used to aid recall and periodic reviews of important information can help to ensure that information is retained in long term memory.

For development of cognitive skills—A planned sequence in the development of concepts and theoretical principles with practice in their use in analyzing situations and solving problems. This practice needs to occur in a variety of settings including ones that are similar to the situations where it is hoped they will be applied in the future, to facilitate transfer and use in different situations when appropriate. Developing capacity to identify and apply cognitive skills in solving new and unanticipated problems requires at least some open ended problem solving tasks, with assistance given in identifying and applying relevant insights.

To improve creative thinking and problem solving capacity students should be assisted to reflect on their own thinking processes as they tackle new and challenging tasks and to improve the management of their own thought strategies as they deal with different types of issues.

For development of interpersonal skills and personal responsibility-- Opportunities to participate in group activities with constructive feedback on performance. This feedback is likely to be most effective if it involves objective analysis by the students of their own behavior in a supportive environment, and the development by them of rules for their own behavior.

Development of capacity and responsibility for their own continuing learning requires student assigned work that develops and reinforces these abilities, with expectations for independent work progressively increased during a program.

For development of analytical and communication skills--A planned sequence of instruction that includes practice with feedback and advice on improvement in the necessary skills in simple numerical skills, communication, and use of information and communication technology. Students entering higher education may differ widely in their ability to use analytical and communication skills and some may require special instruction. This may be done through a combination of direct instruction and practice. Assistance should be given in how to improve these skills as expected standards increase at stages through a program.

5. 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.

Universities may offer additional study opportunities beyond doctoral level, and to offer additional awards including the title of doctor for outstanding lifetime achievement or contributions to society. It is important that these practices are carried out in a consistent way. The following arrangements which are consistent with common international practice and should be followed.

Post Doctoral Studies.

Additional study and research may be undertaken by recent graduates who have completed doctoral studies. This work should be recognized in an official university transcript, but no academic award is granted.

Additional Doctoral Degrees

It is possible for students to enroll in and complete a second full doctoral program and receive the appropriate academic award for that study. This could be a second Ph D programme or a professional doctorate depending on the nature of studies undertaken.

Higher Doctorates

Higher doctorates are granted in recognition of extensive distinguished research and scholarship over a lengthy period of time, normally at least ten years. Candidates submit evidence in the form of books and other peer reviewed and published research documents and this is evaluated by a senior independent panel of leading authorities in the field who are external to the university. (There is normally an initial screening process within the university) An award might carry the title of Doctor of Letters for work in the liberal arts, or Doctor of Science for science based studies. However more specialized titles designating a particular field of studies might also be used.

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). 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 or public functions in which the recipient of the award was involved.

C. Characteristics of Programs and Expected Outcomes in Domains of Learning

Entry Level

The Qualifications Framework is based on an assumption that students entering higher education will have completed a full programme of secondary education and have acquired the knowledge and skill to participate effectively in higher education. This assumed background includes competence in the eight broad learning areas described in standards of basic education and the ability to think creatively and apply knowledge and cognitive skills gained from study of relevant disciplines in new situations. Students who have clearly met these requirements may proceed direct to the higher education programs described in the Framework. However in some cases students, particularly those who have not proceeded direct from secondary school, may have gaps in their knowledge and skill and may need to complete foundation studies to ensure they have the necessary language and study skills and the academic background to succeed.

Expected Learning Outcomes at Entry Level—(Completion of Basic Education)

Ethical and Moral Development

Understands and appreciates generally accepted Thai values and systems of morality. Acts consistently according to a clearly articulated system of values that balances personal beliefs and values with responsibilities towards family, community, and Thai society. Able to analyze issues where values conflict, reach defensible conclusions, and accept responsibility for decisions made.

Knowledge

Has a broad understanding of important knowledge and skill in eight general subject fields—Thai language, Mathematics, Science, Social studies religion and culture, Health and physical education, Art, Career and technology, and foreign language including English. More extensive knowledge in selected fields in preparation for further studies in vocational or higher education.

Cognitive Skills

Understands major concepts, principles and theories in subjects studied and has the ability to apply those insights in analyzing new issues and problems in subject studies and in daily life. Is aware of major issues relating to economic and social development in Thailand and in Thailand's interaction with other countries, 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 some guidance in academic studies and other aspects of personal development.

Can be relied upon to work independently and complete assigned tasks with limited supervision. Works effectively towards common goals in group situations.

Analytical and Communication Skills

Can effectively use information and computer technology and basic mathematical skills in tackling and resolving problems both in educational settings and in work and social environments.

Communicates effectively, both verbally and in writing, in Thai language and in English.

Level 1 – Advanced Diploma

Characteristics of Programs at Level 1

Advanced diploma programmes in higher education are designed to develop both the knowledge and skills for employment in an administrative or para-professional field, and the foundation of theoretical knowledge and research that provides the basis for further studies leading to a bachelors degree. Both these elements are important. An advanced diploma should be a legitimate and useful exit point from studies and be accepted as a qualification for employment in the field concerned. It must also include relevant theoretical knowledge equivalent to that normally acquired in the first three years of study towards a bachelors degree. An advanced diploma may be taken over three years of full time or equivalent part time study. Details of requirements for the awards of different lengths are specified by the Commission on Higher Education. An advanced diploma requires a minimum of 90 credit points.

If students are admitted to a program leading to an advanced diploma with less than the normal entry level skills expected at the end of basic education a longer program may be undertaken to ensure that necessary skills are developed. However in these cases the initial preliminary work is not considered part of higher education, and should be referred to as basic or foundation studies. Credits obtained in these studies do not count towards the credit requirements for the advanced diploma.

Characteristics of Graduates at Level 1

Typically holders of an advanced diploma will have demonstrated:

- Knowledge of important facts, principles and theories in their 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 interpret and evaluate quantitative and qualitative data and present conclusions orally and in writing, making appropriate use of information and communications technology;
- The ability to carry out successfully the responsibilities for employment in the field of activity for which they have been prepared

Well educated graduates from an advanced diploma programme should:

- Think and act independently, but also interact constructively in group or team situations in pursuit of common goals;

- Understand the limits of their knowledge and how this affects the analysis and interpretations based on that knowledge, and as a consequence seek advice from appropriate sources when necessary;
- Take initiative in planning to enhance their knowledge and skill;
- 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.

Learning Outcomes in Each Domain at Level 1

Ethical and Moral Development

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.

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 a minimum of 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 learning.

Analytical and Communication 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.

Level 2 Bachelor

Characteristics of Programmes at Level 2

A bachelors 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 bachelors degree is the basic qualification for entry to a number of highly skilled professional fields and programs in the professional strand 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. The length of programs varies for different professional fields, with the duration of most being four academic years, and requiring a minimum of 120 credit points. Where longer programs are offered, 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 five year program requires a minimum of 150 credit points and a six year program requires 180 credit points.

Characteristics of Graduates at Level 2

Typically holders of a bachelors 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.

Well educated graduates from a bachelor degree programme 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

Learning Outcomes in Each Domain at Level 2

Ethical and Moral Development

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. Demonstrates a high level of ethical behaviour in situations involving value conflicts and competing priorities.

Consistently demonstrates honesty and integrity with an appropriate balance of personal and group goals and objectives. Provides a positive influence to others through example and leadership in employment or other group situations in family and community.

Knowledge

Has possession of a comprehensive, coherent and systematic body of knowledge in a field and the underlying principles and theories associated with it. Is aware of related knowledge 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. In programs preparing students for professional practice students is 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 carry out 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 without external guidance. Is able to investigate complex problems and recommend creative and innovative solutions taking account of relevant theoretical knowledge and practical experience and the consequences of decisions made. Can apply these skills and insights in professional and academic contexts relevant to the field of study undertaken. 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. Accepts personal responsibility for actions undertaken and shares responsibility as a member of a group.

Shows initiative in identifying issues requiring attention in both personal and social situations and in addressing them appropriately on an individual or team basis.

Accepts responsibility for own continuing learning and personal and professional development.

Analytical and Communication Skills

When investigating issues and problems can identify relevant statistical or mathematical techniques and apply them creatively in interpreting information and proposing solutions.

Can communicate effectively both orally and in writing, selecting and using forms of presentation appropriate for differing issues and audiences.

Routinely uses the most appropriate information and communications technology in gathering, interpreting and communicating information and ideas.

Level 3 Graduate Diploma

Characteristics of Programs at Level 3

A Graduate Diploma involves a minimum of 24 credit points and is normally taken over a period of one academic year or equivalent part time period of study. The programs are intended to provide advanced academic and professional studies beyond the level of a bachelors degree for students who want to improve professional skill and knowledge but do not meet entry requirements, or do not wish to undertake the research or major project work required for a Masters degree.

Although intended as a final qualification, students completing a Graduate Diploma may proceed to further study at Masters level, but may be required to complete additional theoretical or applied studies before doing so.

Characteristics of Graduates at Level 3

Typically holders of a graduate diploma will have demonstrated:

- Advanced knowledge of theory or professional practice, and substantial experience in an academic or professional field;
- The ability to apply that theory and practice creatively in planning and research drawing on a wide range of relevant insights within and outside their specific field of study;
- The ability to select from and use a wide range of mathematical and other analytical techniques in investigating and reporting on issues and proposing new initiatives, making effective use of oral, written and electronic forms of communication for academic, professional and community audiences;

- A very high level of professional competence in carrying out responsibilities in professional practice or employment.

Well educated graduates from a graduate diploma programme should:

- Draw on a wide range of theoretical and practical knowledge both within and outside their specialized field in addressing new issues and problems;
- Exercise effective leadership in initiating action to address significant issues in the work or community environment in ways that are sensitive to others and consistent with basic values and ethical principles;
- Provide a positive influence to others through example and leadership in professional and community life;
- Participate in and assist in planning initiatives for others to keep up to date with new developments in their field;

Learning Outcomes in Each Domain at Level 3

Ethical and Moral Development

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. Demonstrates a high level of ethical behavior in situations involving value conflicts and competing priorities.

Consistently demonstrates honesty and integrity with an appropriate balance of personal and group goals and objectives. Provides a positive influence to others through example and leadership in employment or other group situations in family and community.

Knowledge

Has advanced knowledge of theory and practice in an academic or professional field, and of related knowledge in other fields that are relevant to an area of specialization. Knows about current research and innovations in professional practice and the impact of these developments on accepted theory and practice.

Cognitive Skills

Is able to apply theoretical knowledge and practical experience in investigating complex issues and problems, identifying additional sources of information or analytical techniques as required. Takes full account of differing circumstances in analyses of issues, forming conclusions and proposing solutions to problems or strategies for action.

Interpersonal Skills and Responsibility

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.

Analytical and Communication Skills

Can draw upon and appropriately apply a wide range of analytical 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.

Level 4 Master

Characteristics of Programmes at Level 4

Master degrees are designed to provide very advanced academic and professional knowledge and skill for students who have completed a Bachelors degree with a high level of achievement, normally a GPA of 3.0 or better. Master degrees are conducted over a minimum of one academic year, and require a minimum of 36 credit points.

Academic degrees aimed at developing research expertise may be completed through an extended thesis on a topic that requires application of advanced theoretical understanding and adds to knowledge in a field, or through a combination of a less sophisticated thesis and advanced coursework for between 12 and 24 credits.

Master 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 master degrees based on a thesis are normally awarded with the title of MA or MSc. Professional master 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.

Characteristics of Graduates at Level 4

Typically holders of a masters 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 research 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.

Well educated graduates from a master degree programme 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.

Learning Outcomes in Each Domain at Level 4

Ethical and Moral Development

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, and responds on the basis of sound principles and values, 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.

Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

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.

Analytical and Communication 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.

Level 5 Higher Graduate Diploma

Characteristics of Programmes at Level 5

A higher graduate diploma is an advanced professional qualification provided in a limited number of specialized fields that require professional studies between the levels of master and doctor. It is used primarily in medicine and related studies such as pharmacy and other medical sciences. Students must have completed a masters degree prior to admission and the programs require a minimum of 24 credit points in advanced professional studies.

Characteristics of Graduates at Level 5

Holders of a higher graduate diploma will have demonstrated all the knowledge and skills, and the behavioral characteristics expected of those with masters degrees in their field, and also:

- Thorough knowledge and understanding of the latest developments in research and professional practice in their field, and in other related fields that potentially impact on their professional responsibilities;
- The ability to apply that knowledge creatively in the resolution of complex issues, and to identify and work cooperatively with others in related fields in finding the best possible solution to major problems.

Well educated graduates from a higher graduate diploma should:

- Consistently apply the latest available knowledge and research insights in analyzing and resolving problems in their field of specialization.
- Cooperate with others within and outside their special field as appropriate in dealing with problems and issues, but take personal responsibility for decisions made and advice provided.
- Participate fully in individual and group activities designed to maintain and extend their professional knowledge and experience and provide leadership and support for the continuing professional development of colleagues in their field.
- Follow, and actively encourage others to apply, sound ethical and moral judgments in dealing with sensitive and complex issues that may involve value conflicts.

Learning Outcomes in Each Domain at Level 5

Ethical and Moral Development

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, and responds on the basis of sound principles and values, 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.

Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

Knowledge

Has thorough and up to date knowledge of local and international developments in the field of specialization, and of developments in related fields that have potential impact on that specialization. Is aware of current research activity and of emerging theories and of the extent to which those ideas have been validated and can be relied upon in making professional decisions.

Has thorough knowledge and understanding of regulations and of relevant codes of professional conduct affecting practice in the field.

Cognitive Skills

Can analyse new and complex situations and apply the latest research and practical knowledge in developing and applying the most appropriate solution in each case.

Can initiate and carry out more intensive analyses of complex problems, drawing on and evaluating additional sources of expert advice when appropriate. Can monitor the results of action taken and interpret and when appropriate generalize from those results in ways that contribute to improvements in professional practice.

Consistently uses these skills when relevant in the conduct of professional activities.

Interpersonal Skills and Responsibility

Acts consistently with a high level of autonomy and initiative in professional activities in the field of specialization.

Takes full responsibility for own activities, and evaluates and works to improve personal effectiveness through objective feedback and constructive planning for improvement.

Deals with clients and colleagues in ways that contribute to their personal and professional development.

Facilitates constructive interaction in group activities and exercises effective leadership in complex professional and social environments.

Analytical and Communication Skills

Communicates effectively and at appropriate levels with academic and professional audiences and the wider community through informal and formal reports and presentations and professional publications.

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 in the field of specialization and in communicating conclusions and recommendations appropriately to different audiences in the professional field and in the wider community.

Level 6 Doctor

Characteristics of Programmes at Level 6

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 that adds to existing knowledge, or involve a combination of advanced coursework and thesis in a professional or applied field.

Studies for a doctoral degree normally require a minimum of 48 credit points over two full time academic years or equivalent following a Masters degree or 72 credit points over three years after a Bachelors degree.

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

Characteristics of Graduates at Level 6

Typically holders of a doctors 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 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.

Well educated graduates from a doctor degree 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 non-specialist 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 community;

Learning Outcomes in Each Domain at Level 6

Ethical and Moral Development

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, and responds on the basis of sound principles and values, 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.

Actively encourages others to apply sound ethical and moral judgments in dealing with issues and problems affecting themselves and others and exercises leadership in promoting sound ethical and moral practices in the work environment and the wider community.

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 within Thailand and in other

countries. Has thorough knowledge of developments in related fields that potentially impact on the area of inquiry.

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.

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.

Analytical and Communication 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.

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.