

TUNING TOOLKIT FOR THE (RE-)DESIGN OF ECTS-BASED DEGREE PROGRAMMES

CONTENTS

INTRODUCTION	3
1. TOOLS FOR (RE-)DESIGN OF EDUCATIONAL PROGRAMMES	4
 TUNING MODEL FOR (RE-)DESIGN, IMPLEMENTATION AND DELIVERING CURRICULA 	4
 TUNING List of Key Questions for Programme Design and Programme Delivery, Maintenance and Evaluation 	5
 DEGREE PROFILE 	8
 LEARNING OUTCOMES 	11
 COMPETENCES 	12
 DIAGRAM Degree Profiles, Learning Outcomes, Competences 	13
 COURSE UNITS AND MODULES 	14
• ECTS	14
 Planning form Educational Module Form for checking workload of Module 	15 16
 TUNING CHECKLIST FOR CURRICULUM EVALUATION 	18
2. RELEVANT DOCUMENTS FOR THE TUNING TOOLKIT	22
 EUROPEAN QUALIFICATIONS FRAMEWORKS 	22
 DUBLIN DESCRIPTORS 	22
 NATIONAL QUALIFICATIONS FRAMEWORKS 	25

INTRODUCTION

This leaflet intends to put together the key concepts and tools developed by Tuning for the (re-) design of educational programmes and the use of ECTS therein. It was created for the participants of the Lithuanian project "Development of the Concept of European Credit Transfer and Accumulation System (ECTS) at the National Level: Harmonization of the Credit and Implementation of the Learning Outcomes Based Study Programme Design"

More detailed information ont these concepts and tools are to be found in the Tuning General Brochure and on the Tuning website: http://tuning.unideusto.org/tuningeu

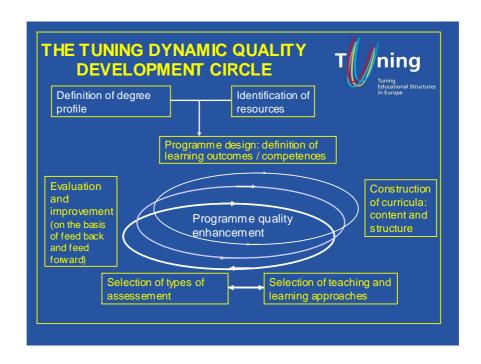
May 2010

1. TOOLS FOR (RE-)DESIGN OF EDUCATIONAL PROGRAMMES

TUNING MODEL FOR (RE-)DESIGN, IMPLEMENTATION AND DELIVERING CURRICULA

The Tuning model for designing, implementing and delivering curricula consists of the following steps:

- 1. Needs analysis, support & resources
- 2. Degree Profile
- 3. Programme Learning Outcomes (LO); definition of Competences
- 4. Structure programme into Course Units,
- defining LO and ECTS for each
- 5. Teaching and learning methods
- 6. Assessment
- 7. Evaluation system & quality enhancement



TUNING List of Key Questions for Programme Design and Programme Delivery, Maintenance and Evaluation in the Framework of the Bologna Reform

Programme Design

Items	Key questions
Degree Profile	Has the need for and the potential of the (new) degree programme been established comprehensively fully and clearly?
	Does it aim to satisfy established or new professional and/or social demands?
	•Was there a consultation with stakeholders? Did they identify the need for the degree programme?
	•Was the approach used for the consultation adequate? Were the groups selected the relevant ones for the degree programme considered?
	 Are the definition of the profile, the identification of the target groups to be addressed and its place in the national and international setting clear?
	•Is there convincing evidence that the profile will be recognized in terms of future employment ? Is it related to a specific professional or social context?
	•Is this profile academically challenging for staff and students?
	•Is there awareness of the educational context in which the programme is offered?
Learning Outcomes	Have clear and adequate learning outcomes been identified at the level of the programme as a whole and of each of its components?
	•Will they result in the profile identified? Are they adequately distributed over the various parts of the programme?
	•Is the progression and coherence of the programme and its units sufficiently guaranteed?
	Are the learning outcomes formulated in terms of subject-specific and generic competences covering knowledge, understanding, skills, abilities and values?
	What guarantee is there that the learning outcomes will be recognized and understood within and outside Europe?
Competences	• Are the competences to be obtained by the student clearly identified and formulated , both subject-specific and generic?
	•Is the level of the competences to be obtained appropriate for this specific degree programme?
	 Are the competences to be gained expressed in such a way that they can actually be measured?
	•Is progression guaranteed in the development of the competences?
	 Can the competences obtained be assessed adequately? Is the methodology of assessment of the competences clearly specified and suitable for the expressed learning outcomes?
	 Are the approaches chosen for learning and teaching the competences clearly specified? What evidence is there to assure that the results will reached?
	Are the approaches chosen sufficiently varied and innovative / creative?
	Are the competences identified comparable and compatible with the European reference points relative to the subject area? (if applicable)

Level	•Has the entrance level of potential students been taken into consideration when identifying their learning needs?				
	•Does the level of learning outcomes and competences correspond to the level(s) of the degree (cycle) foreseen in the European and National Qualification Framework?				
	•If sublevels are included, are these described in terms of learning outcomes expressed in competences?				
	Are levels described in terms of:				
	- acquiring knowledge, understanding, skills and abilities				
	 applying knowledge, understanding, skills and abilities in practice 				
	- making informed judgments and choices				
	 communicating knowledge and understanding 				
	- capacities to continue learning				
Credits and	•Is the degree programme ECTS based? Is it in alignment with the ECTS key features?				
Workload	•Have credits been allocated to the programme? How is the adequacy of this allocation guaranteed?				
	How are credits related to the learning outcomes of this programme?				
	●How is the correlation between workload and credit allocation checked?				
	How is a balanced student workload guaranteed during each learning period in terms of learning, teaching and assessment activities?				
	•What mechanisms are used for revision of credit allocation and learning, teaching and assessment activities? How are the students involved in this process?				
	•Is information on the programme (modules and/or course units) presented as described in the ECTS Users' Guide ?				
	How is student mobility facilitated in the programme?				
	How are students advised about mobility?				
	How are the key documents of ECTS used for mobility?				
	•Who is responsible for recognition and which are the procedures used?				
Resources	•How is the formal acceptance of the programme and the resources required to deliver it, guaranteed?				
	•Is the staffing (academic and supporting staff and workplace supervisors) for delivering the programme guaranteed? Does the programme require the use of teaching staff from outside the department/institution?				
	•Is staff development foreseen in terms of (new) approaches to learning, teaching and assessment?				
	How are the necessary structural, financial and technical means (class rooms, equipment, health and safety procedures etc.) guaranteed?				
	In the case of workplace learning/placements, are there sufficient and suitable placements guaranteed?				

Programme delivery, maintenance and evaluation

Monitoring	•How is the quality of delivery of the programme and its components monitored?		
	•How is staff quality and motivation for the delivery of the programme monitored?		
	•Are there systems in place to evaluate the quality of the learning environment in workplace learning/placements?		
	•Is the quality of class rooms and the equipment (including workplace environments) required to deliver the programme sufficient?		
	●How is the entrance level of potential students monitored?		
	•How is student performance monitored in terms of quality of learning outcomes to be obtained / competences to be achieved and time required to complete the programme and its components?		
	●In what way is the employability of graduates monitored?		
	●How is the alumni database organized?		
	•Are data collected on the graduates ' satisfaction with the programme?		
Updating	●How is the system for updating / revision of the degree programme organized?		
	•In what way can changes related to external developments in society be incorporated in the programme?		
	How is staff development related to programme updating organized and guaranteed?		
Sustainability and Responsibility	How is the sustainability of the programme guaranteed?		
	 How is it guaranteed that the relevant bodies take responsibility for sustaining and updating of the programme? 		
Organisation and Information	•How is the updating of information regarding the degree programme organized and guaranteed?		
	•How is the adequacy of the system of student support, advising and tutoring ensured?		
	•Is a Diploma Supplement issued to the students automatically and without charge in a widely spoken European language?		

DEGREE PROFILE

A degree profile shows:

- The specific aims of the programme
- how it fits into the academic map of disciplines or thematic studies
- how it relates to the professional world
- what are its main distinguishing features

Also, it is generally a *narrative* description of degree, which is:

- Short (1-2 paragraphs)
- Expressed in broad, general terms / concepts
- Addresses a wide and varied audience / range of purposes
- Takes account of different stakeholder perspectives (academics, employers, graduates, students, policymakers...)

Potential components of Degree Profiles:

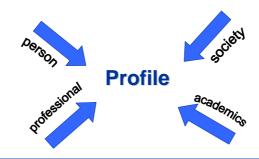
- Subject area and description
- Cycle (1st Bachelor, 2nd Master, 3rd Doctor)
- Theoretical, applied or professional orientation
- Subject related knowledge/ Know-how (mono-, multi-, interdisciplinary)
- Generic & subject specific competences (broad)
- Employability & typical graduate occupations
- Regulated or non-regulated
- Social and professional responsibility
- Distinguishing features / focus
- Approach towards teaching, learning & assessment
- Mission of the institution / faculty / department
- Relationship to other degrees





Profiles have to serve different purposes

A good profile takes into account different users' perspectives & interests



EXAMPLES OF DEGREE PROFILES

Example 1 - University College Utrecht

1st Cycle Liberal Arts and Sciences

"Graduates distinguish themselves by their capacity to pose and resolve problems beyond the boundaries of the discipline. Students come to understand how disciplines look at the world from distinct vantage points and apply different methodologies and tools in their reasoning. This broader perspective increases students' ability to formulate new ideas, new solutions and new projects. Relating intellectual capacities to society is another important objective. Graduates are perceiving the interdependence between scientific developments and their social context and of communicating these insights efficiently. Students gain a deep understanding of the world's variety and develop ethical grounding and the ability to emphasize with others. Graduates go beyond academic curiosity, formulating new questions in response to new insights. Their intellectual versatility enables them also to create new answers, exploring existing concepts and transferring into new contexts."

Example 2 – Erasmus Mundus

2nd Cycle MA Euroculture

"The European inter-university masters programme Euroculture focuses on the cultural and social developments in present Europe, the political processes of European integration and the role of European Union institutions. It highlights manifestations of cultural self-understanding as an important element of transnational social and political developments within and beyond Europe. Special attention is paid to topics like: values, citizenship, cultural identity concepts and conflicts. The interdisciplinary programme covers European modern history, political issues, social relations, legal issues and religious traditions. Graduates are expected to be able to identify the European dimensions of social and political problems and to reflect on the cultural aspects and factors that play a role in the process of European identity formation and European integration."

LEARNING OUTCOM ES

 A Learning Outcome is a statement formulated by academic staff of what a learner is expected to know, understand and be able to demonstrate after completion of a process of learning.

Plan

Plot

Postulate

Predict

Present

Propose

Recognise

Recall

Use Utilise¹

- A Learning Outcome can refer to a single course unit or module or else to a period of studies, for example, a first or a second cycle programme.
- Learning outcomes are formulated by academic staff

The <u>level of a competence</u> is expressed in a Learning Outcome

How to write a Learning Outcome?

When writing learning outcomes use the following phrase:

'At the end of this course unit/ module students /learners are expected to '

To be followed by a active verb such as:

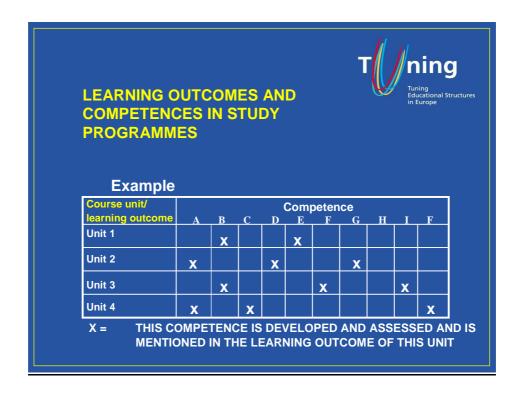
Analyse Design Develop *Appraise Apply* Differentiate Calculate Discuss Choose **Explain** Compare Evaluate Contrast Extrapolate Create *Formulate* Criticise *Identify* Demonstrate List Derive Measure Describe Name

Note: Please be aware of the level (the cycle or year of the degree programme) that you are writing a Learning Outcome for. Some of the above verbs may be suited for all levels, whereas others should only be used in the higher levels of a cycle, or in the second cycle only.

¹ Tina Overton, Writing Learning Outcomes; Advice on defining courses using an outcomes-based approach, The Higher Education Academy, Physical Science Centre, March 2005

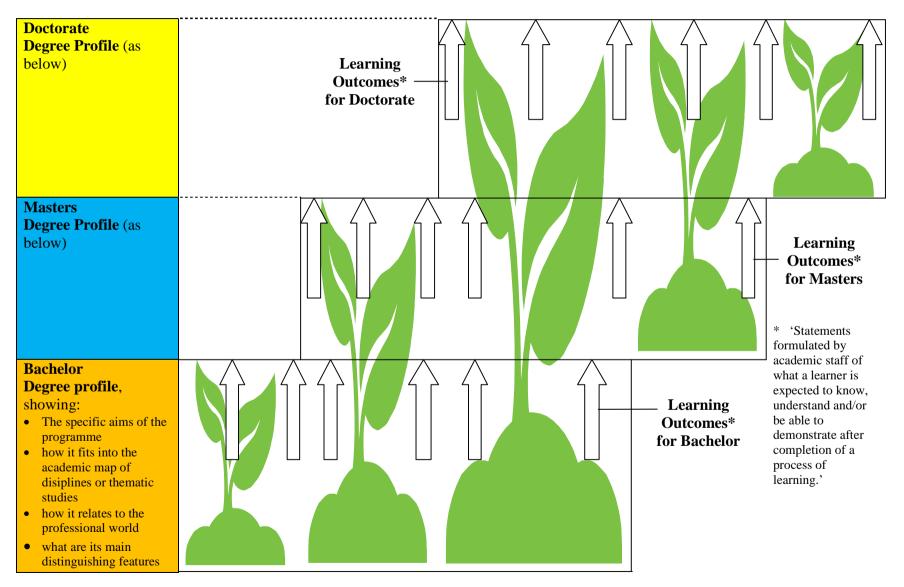
COMPETENCES

- A competence is a dynamic combination of knowledge, understanding, skills and abilities [...] formed in different course units and assessed at different stages.
- Competences are developed in all course units and assessed at different stages of a programme.
- Some competences are **SUBJECT-SPECIFIC** (specific to a field of study), others are
- **GENERIC** (common to any degree course).
- Fostering competences is the object of educational programmes. Competences are obtained by the student.



See below for a diagram which shows the relation between Degree Profiles, Learning Outcomes and Competences

Competences: 'a dynamic combination of knowledge, understanding, skills and abilities [...] formed in different course units and assessed at different stages'



An educational programme consists of course units:

COURSE UNIT

A self-contained, formally structured learning experience. It should have a coherent and explicit set of learning outcomes, expressed in terms of competences to be obtained, and appropriate assessment criteria. Course units can have different numbers of credits, although it is recommended that units carry a uniform number of credits or a multiple thereof. These units, with thesis work and work placements where appropriate, are the building blocks of programmes.

MODULE

A course unit in a system in which each course unit carries *the same number of credits* or a multiple thereof.

ECTS (European Credit Transfer and Accumulation System)

ECTS is a learner-centred credit system based on the student workload required to achieve the objectives of a programme of study and on the principle that 60 credits constitute the workload of a full-time student during one academic year. The student workload of a full-time study programme in Europe represents in most cases a student workload of around 1500 to 1800 hours per year. Credits are allocated on the basis of an official plan. If a study programme officially exceeds the normal length of an academic year more credits can be allocated. This might be the case for programmes at second cycle level. A 'full calendar year' programme designed to require 50 to 52 weeks of full-time study (no summer holidays) might have credits up to 75 depending on the learning outcomes and associated workload.

As well as being a system for facilitating the mobility of students across Europe through credit accumulation and transfer, ECTS can also facilitate programme design and development, particularly in respect of overseeing the demands on students of concurrent course units.



Programme of Studies:

Prerequisites:

PLANNING FORM FOR AN EDUCATIONAL

.....

MODULE

(to be completed by the teacher)



FORM FOR CHECKING WORKLOAD OF AN EDUCATIONAL MODULE

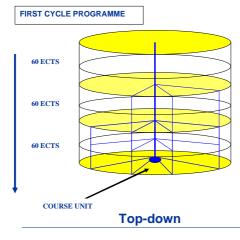
(to be completed by the student)

Programme of Studies: Name of the module / course unit: Type of course (e.g. major, minor, elective): Level of the module / course unit (e.g. BA, MA, PhD): Prerequisites: Number of ECTS credits: Competences to be developed: 1. 2. 3. 4. 5. 6.							
Learning outcomes	Educational activities	Estimated student work time in hours	Assessment				





Tuning model



Degree programme according to the Tuning methodology:

- Programme based on profile, sets of competences to be obtained, desired learning outcomes to be achieved, ECTS credits to be awarded
- Programme design is team work, based on consultation, discussion, cooperation
- Learning outcomes / competences to be developed are the basis for credit allocation
- Teaching, learning and assessment approaches respect credit allocation: feasibility is key factor

TUNING CHECKLIST FOR CURRICULUM EVALUATION

The following elements can be distinguished within the framework of curriculum evaluation: the educational process, the educational outcome and the means and facilities required for programme delivery.

Educational Process:

- degree profile (aims educational programme)
- learning outcomes and competences to be achieved
- degree/educational programme build-up and order of programme components (to realize progression)
- coherence of degree / educational programme
- division of workload over the semester and academic year
- feasibility of programme
- teaching, learning and assessment methods
- connection of secondary and higher education
- international cooperation and student mobility

Educational product / outcome:

- study rate, cessation of study and switch-overs (output)
- output of 1st and 2nd cycle
- employability

Means and facilities required:

- structural and technical facilities
- staff and material means
- student support: student counsellors

EDUCATIONAL PROCESS

1. Degree / programme profile

Premises:

The degree programme has a clearly defined profile which is based on the demands set by an academic degree on the one hand, and by the needs of society on the other hand by taking the future labour-market of graduates (of that particular programme) into consideration.

Questions:

To what extent do the available data show that the programme profile meets the demands set to it? If necessary, which adjustments are thought to be desirable?

2. Learning outcomes and competences at programme level

Premises:

The degree programme has clearly defined learning outcomes that reflect the programme profile. The learning outcomes are described in terms of competences to be attained by the students (knowledge, understanding and skills).

Questions:

To what extent do the learning outcomes and competences to be attained by the students correspond with the programme profile? If necessary, which adjustments are thought to be desirable?

3. Learning outcomes and competences of the (separate) programme components

Premises:

For each degree programme component a total of about five learning outcomes has been formulated, which clearly contribute to realizing the learning outcomes at programme level. The learning outcomes are described in terms of competences to be attained (knowledge, understanding and skills) *Questions:*

Are the learning outcomes (explicitly) mentioned in the course syllabus of each programme component (module or course unit), and explained further when required? To what extent is it clear from the descriptions that specific competences are practised? Is indicated which level of the competences is aimed for.

4. Curriculum set-up and the sequence of programme components / educational modules *Premises*:

The curriculum is structured in such a way that coherence is assured within the total programme, in the various phases of the programme, and the separate programme components, and continuous progression is made with regard to the generic and subject-specific competences that have to be attained in terms of knowledge, understanding and skills.

Questions:

To what extent is it clear in practice that the programme is structured in such a way that coherence is assured and that progression is made with regard to knowledge, understanding and skills in relation to the learning outcomes and competences to be attained? If necessary, which adjustments are thought to be desirable?

5. (Division of) workload

Premises:

The programme is structured in such a way that a well-balanced division of the total workload is realized for the programme as a whole, for and within the separate academic years, and for and within both semesters. The calculated workload per programme component must correspond with the time that a typical student needs to attain the required learning outcomes.

Questions:

To what extent is it shown in practice that the total workload is divided according to the premises in the above? If necessary, which adjustments are thought to be desirable?

6. Feasibility of degree programme

Premises:

The programme is set up in such a way that it is feasible for a typical student (to complete the programme within the given time frame). This implies a good mixture of teaching, learning and assessment methods, no unnecessary impediments between programme components, and sufficient supervision/tutoring by the teaching staff.

Questions:

To what extent are guaranteed that a well-balanced combination of teaching and learning and assessment methods is applied, sufficient supervision by teaching staff is available, and entrance

requirements for programme components are only required when a motivation with regard to educational content can be given? If necessary, which adjustments are thought to be desirable?

7. Teaching, learning and assessment methods

Premises:

The teaching, learning and assessment methods used are varied and have been chosen because they are particularly well-suited to achieving the formulated learning outcomes and competences.

Questions:

To what extent does the available information, in particular the educational and assessment regulations and course syllabi, assure that the formulated premises are being met? If necessary, which adjustments are thought to be desirable?

8. Connection of secondary and higher education

Premises:

The programme has been set up so that it takes into consideration the entrance level of students. For first cycle programmes it concerns the connection to secondary education, and for second cycle programmes it concerns the connection to first cycle programmes (that give entrance to the second cycle programmes).

Questions:

To what extent is made certain that the programme is set up in such a way that a good transition is provided with regard to entrance qualifications for first and second cycle? If necessary, which adjustments are thought to be desirable?

9. International cooperation

Premises:

There is structural cooperation with foreign partner institutions. This cooperation can be joint degree programmes and/or facilitating student exchanges and recognizing the academic achievements undertaken at the partner institutions.

Questions:

In what way is it guaranteed that students do not get behind schedule if they take part of their programme at a foreign partner institution, except when they are responsible for it themselves (e.g. because they have changed their programme without consultation, or because they have not completed programme components successfully). If necessary, which adjustments are thought to be desirable?

EDUCATIONAL PRODUCT

10. (Realized) output of 1st or 2nd cycle

Premises:

The Faculty/School aims to achieve the following aims: successful completion of the first year of study xx% (maximum two years after starting the programme), completion of a first cycle degree based on a completed first year xx% (four years after starting the educational programme), completion of a second cycle degree xx% (two or three years after starting the educational programme).

Questions:

Does the programme realize the set percentages? If not, why? Which suggestions are made in that case to bring about improvement?

11. Employability

Premises:

The degree programme meets a need in society as can be concluded from the fact that the transition to the labour market in a broad sense is good.

Question:

Do graduates find (suitable) employment within a reasonable period of time that fits the profile and level of the degree programme?

REQUIRED FACILITIES AND MEANS

12. Structural and technical facilities

Premises:

Sufficient structural and technical facilities and provisions are available for the delivery of the degree programme.

Question:

Are any bottlenecks apparent in practice in the delivery of the programme with regard to facilities and provisions?

13. Material and personnel means

Premises:

For the delivery of the programme sufficient quantitative and qualitative personnel means are made available in terms of teaching and supporting (administrative and technical) staff. Each programme / organizational unit has sufficient means for the delivery of the programme (guest lecturers, materials etc.)

Question:

To what extent are the assigned means sufficient in practice to deliver the programme according to its original premises and set-up?

14. Student support, advising and tutoring

Premises:

A system for student support, student advising and tutoring is available to students. *Question:*

In what way is the demand/need met for an adequate system of student support, advising and tutoring?

2. Relevant documents for the Tuning toolkit

EUROPEAN QUALIFICATIONS FRAMEWORKS

There are two **European** Qualifications Frameworks:

■ Framework for Qualifications of the European Higher Education Area (QF-EHEA) Please see:

http://www.bologna-bergen2005.no/EN/BASIC/050520_Framework_qualifications.pdf This Qualifications Framework focuses on Higher Education.

■ The European Qualifications Framework for Lifelong Learning (EQF for LLL) Please see:

http://www.ond.vlaanderen.be/hogeronderwijs/bologna/news/EQF_EN.pdf

As part of the QF-EHEA the following general descriptors were developed

DUBLIN DESCRIPTORS

The so-called "Shared 'Dublin' descriptors for Short Cycle, First Cycle, Second Cycle and Third Cycle Awards" are general statements of the expected attributes of a student following completion of a short, first, second or third cycle study. The descriptors have been developed by the <u>Joint Quality Initiative</u> with a focus on general higher education.

Qualifications that signify completion of the higher education <u>short cycle</u>* (within the first cycle) are awarded to students who:

- have demonstrated knowledge and understanding in a field of study that builds upon general secondary education and is typically at a level supported by advanced textbooks; such knowledge provides an underpinning for a field of work or vocation, personal development, and further studies to complete the first cycle;
- can apply their knowledge and understanding in occupational contexts;
- have the ability to identify and use data to formulate responses to well-defined concrete and abstract problems;
- can communicate about their understanding, skills and activities, with peers, supervisors and clients;
- have the learning skills to undertake further studies with some autonomy.
- * A range of higher education awards are available to students who have undertaken a programme of study within the Bologna first cycle, but which do not represent the full extent of this cycle. Such awards may prepare the student for employment, while also providing preparation for, and access to, studies to completion of the first cycle. These awards are referred to as higher education short cycle (within the first cycle). National systems may have various qualifications within the first cycle. This descriptor is intended for a commonly found type, which approximates to 120 ECTS credits or equivalent

Qualifications that signify completion of the first cycle are awarded to students who²:

- have demonstrated knowledge and understanding in a field of study that builds upon and their general secondary education, and is typically at a level that, whilst supported by advanced textbooks, includes some aspects that will be informed by knowledge of the forefront of their field of study;
- can apply their knowledge and understanding in a manner that indicates a professional 3 approach to their work or vocation, and have competences 2 typically demonstrated through devising and sustaining arguments and solving problems within their field of study;
- have the ability to gather and interpret relevant data (usually within their field of study) to inform judgements that include reflection on relevant social, scientific or ethical issues;
- can communicate information, ideas, problems and solutions to both specialist and non-specialist audiences;
- have developed those learning skills that are necessary for them to continue to undertake further study with a high degree of autonomy.

Qualifications that signify completion of the second cycle are awarded to students who:

- have demonstrated knowledge and understanding that is founded upon and extends and/or enhances that typically associated with Bachelor's level, and that provides a basis or opportunity for originality in developing and/or applying ideas, often within a research3 context;
- can apply their knowledge and understanding, and problem solving abilities in new or unfamiliar environments within broader (or multidisciplinary) contexts related to their field of study;
- have the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete or limited information, but that include reflecting on social and ethical responsibilities linked to the application of their knowledge and judgements;
- can communicate their conclusions, and the knowledge and rationale underpinning these, to specialist and non-specialist audiences clearly and unambiguously;
- have the learning skills to allow them to continue to study in a manner that may be largely self-directed or autonomous.

Qualifications that signify completion of the <u>third cycle</u> are awarded to students who:

- have demonstrated a systematic understanding of a field of study and mastery of the skills and methods of research associated with that field:
- have demonstrated the ability to conceive, design, implement and adapt a substantial process of research with scholarly integrity;

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² Alternative title as proposed by the Joint Quality Initiative Meeting, in Dublin, on 23 March 2004

³ Defined in Glossary 1.

- have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication;
- are capable of critical analysis, evaluation and synthesis of new and complex ideas;
- can communicate with their peers, the larger scholarly community and with society in general about their areas of expertise;
- can be expected to be able to promote, within academic and professional contexts, technological, social or cultural advancement in a knowledge based society;

Glossary for Dublin Descriptors

- 1. The word '**professional**' is used in the descriptors in its broadest sense, relating to those attributes relevant to undertaking work or a vocation and that involves the application of some aspects of advanced learning. It is not used with regard to those specific requirements relating to regulated professions. The latter may be identified with the profile / specification.
- 2. The word '**competence**' is used in the descriptors in its broadest sense, allowing for gradation of abilities or skills. It is not used in the narrower sense identified solely on the basis of a 'yes/no' assessment.
- 3. The word 'research' is used to cover a wide variety of activities, with the context often related to a field of study; the term is used here to represent a careful study or investigation based on a systematic understanding and critical awareness of knowledge. The word is used in an inclusive way to accommodate the range of activities that support original and innovative work in the whole range of academic, professional and technological fields, including the humanities, and traditional, performing, and other creative arts. It is not used in any limited or restricted sense, or relating solely to a traditional 'scientific method'.

NATIONAL QUALIFICATIONS FRAMEWORKS

A national framework of qualifications is a single description, at national level or level of an educational system, which is internationally understood. The framework describes all qualifications awarded in the system considered and relates them to each other in a coherent way. A clear example is that of the Republic of Ireland: http://www.nfq.ie/nfq/en

