

Master's degree characteristics

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Draft for consultation

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Preface

This draft *Master's degree characteristics* (*July 2009*) document offers a framework that higher education providers can use in describing the nature of the master's degrees they offer. The document may also provide a useful reference point for other groups seeking an understanding of the nature of master's degrees in the UK, which might include students, employers and overseas higher education institutions.

Master's degrees are academic qualifications located at level 7 (M level) in *The framework for higher education qualifications in England, Wales and Northern Ireland (August 2008)* (FHEQ), at level 11 in *The framework for qualifications of higher education institutions in Scotland (January 2001)*. All master's degrees are expected to meet the national qualification descriptor which is a statement of the nature and level of the outcomes of study.

This document is not, therefore, intended to provide a means of assessing whether a master's degree is properly so called, but rather to assist those involved in designing and delivering programmes in considering the characteristics of the awards they offer. The characteristics described here relate to the different ways in which a master's degree programme may be provided in delivering the outcomes identified in the qualification descriptor.

The Quality Assurance Agency for Higher Education (QAA) publishes a set of reference points, known as the Academic Infrastructure which institutions use in maintaining academic standards and quality. This document is not a formal part of the Academic Infrastructure but is designed to assist institutions as a reference point in locating their awards among the diversity of those offered in the UK.

The Academic Infrastructure comprises four components: subject benchmark statements, programme specifications, the FHEQ and the *Code of practice for the assurance of academic quality and standards in higher education* (the *Code of practice*). Subject benchmark statements set out expectations about standards of degrees in a range of subject areas. They express what can be expected of graduates in terms of the abilities and skills needed to develop understanding or competence in the subject. QAA publishes a small number of subject benchmark statements for master's degrees which providers and other readers may also wish to consult.²

A detailed description of an individual programme of study specific to a particular higher education institution should be available in the form of a programme specification produced by that institution. QAA provides guidance for institutions on producing programme specifications in its *Guidelines for preparing programme specifications* (2006).

The *Code of practice* covers matters relating to the management of academic quality and standards in higher education. It provides an authoritative reference point for institutions, setting out principles and practices agreed UK-wide. There are ten sections in total, each covering a different area of activity. Areas covered include programme design, approval, monitoring and review, student assessment, work-based and placement learning, and students with disabilities.

¹ The Academic Infrastructure and further information surrounding its usage can be accessed via www.qaa.ac.uk

² QAA currently publishes master's degree subject benchmark statements for Business and Management, Chemistry, Engineering (MEng), Mathematics, statistics and operational research (MMath), Pharmacy (MPharm) and Physics, astronomy and astrophysics (MPhys/MSci)

1 Defining characteristics of master's degrees

1.1 Introduction

Various types of master's degrees exist in UK higher education. There are no nationally-agreed definitions of types, and awards with similar titles can vary in nature both between institutions and across disciplines.³ This situation reflects the independent and autonomous nature of UK higher education institutions and the diversity of traditions that exists within different disciplines.

All master's degrees are expected to meet the generic statement of outcomes set out in the qualification descriptor within *The framework for higher education qualifications in England, Wales and Northern Ireland (August 2008)* (FHEQ) or *The framework for qualifications of higher education institutions in Scotland (January 2001).* The qualification descriptor sets out broad expected outcomes for a master's degree in terms of what graduates should be able to demonstrate and the wider abilities that they would be expected to have developed.

Master's degrees in the UK are often described as either 'taught' or 'research' depending on the relative proportion of structured learning and independent study making up the award. In a third broad 'professional' or 'practice' category, the predominant mode of delivery is through work-based or practice-related learning.

While the above classifications may provide a convenient short-hand, they are not definitive. Most 'taught' master's will include a degree of independent study or research and many 'research' master's will include some learning undertaken in a structured environment. Master's considered to be of the 'professional/practice' type often combine structured and independent learning methods alongside time spent in practice. Furthermore, there may be characteristics other than the mode of delivery that a higher education provider feels are important in defining the award, for example, the intention of the award or its relationship to further study or employment.

This document does not attempt to categorise master's based on any particular characteristic. Instead, a set of key characteristics are described which together make up the profile of a master's degree. Higher education providers may describe their master's awards in terms of these characteristics as appropriate. This approach does not, therefore, seek to straightjacket current provision, but rather to reflect it.

For those seeking further guidance, Appendix 1 provides a description of three broad types of master's awards: 'research', 'specialised/advanced study' and 'professional/practice'. These descriptions are indicative only and are not intended to be definitive or exhaustive given the diversity in current provision outlined above.

1.2 Purpose

Master's degrees may be designed to fulfil a range of purposes. The purpose for which the degree is intended will reflect both the desires and ambitions of students and the traditions and needs of particular disciplines and professions. Master's degrees may be designed with more than one purpose in mind, which will be reflected in the destinations of graduates.

³ There may be exceptions where the title of an award is protected by a professional, statutory or regulatory body.

In broad terms, graduates of all master's degrees should be capable of demonstrating a systematic understanding of knowledge, much of which is at, or informed by, the forefront of the discipline, field of study or area of professional practice. They should be capable of demonstrating originality in their application of that knowledge and in addressing problems. They will have demonstrated a comprehensive understanding of the techniques applicable to their own research or advanced scholarship. In relation to future employment, master's graduates will be expected to possess the skills needed to exercise independent learning and to develop new skills to a high level. The full qualification descriptor is provided in Appendix 2a and 2b.

Higher education providers may offer a master's degree with the specific intention of:

- enabling students to focus on a particular aspect of a broader subject area in which they have prior knowledge or experience, whether through previous study or employment (see 'specialised/advanced study' master's in Appendix 1); and/or
- enabling students to focus on a particular subject area or field of study in greater depth than they encountered during the course of previous study or experience (see 'specialised/advanced study' master's in Appendix 1); and/or
- enabling students to learn how to conduct research, often linked to a
 particular discipline or field of study. Programmes will often include a greater
 emphasis on the delivery of structured learning as opposed to independent
 study than those which are dedicated to the actual undertaking of research
 (see 'specialised/advanced study' master's in Appendix 1); and/or
- enabling students to undertake a research project on a topic within the area of interest that makes up the majority of the overall assessment (see 'research' master's in Appendix 1); and/or
- enabling students to specialise or to become more highly specialised in an area of employment or practice related to a particular profession (see 'professional/practice' master's in Appendix 1).

1.3 Content

The content of a master's degree in terms of the areas of knowledge and understanding, expertise and skills that the student will acquire will be defined as appropriate by the provider. Often master's degrees do not fall within traditional discipline boundaries that are recognisable at previous academic levels of study; they may also be highly specialised and near the boundaries of current knowledge. Hence this document does not attempt to set out a framework for degree content. Some subject communities have developed subject benchmark statements for master's awards in particular areas which may offer guidance around programme content (for a list of available statements, see footnote 2 in the Preface).

The content of a programme will be appropriate to the intended purpose of the award, reflecting the traditions and needs of the discipline or field of study, or the profession or both. In some cases, the content of the degree will be agreed with an employer, either in part or in full. Other programmes, which are externally recognised, validated or accredited by a professional, statutory or regulatory body (PSRB) will be designed in accordance with the requirements of the body that

recognises or accredits the award. These bodies tend to be active in subject areas linked to particular professions or areas of professional practice, for example accountancy and finance, law, health and social care, science, engineering and construction (see also section 1.7).

1.4 Structure and delivery

Master's degrees may be delivered via a full or part-time mode of study and may include greater or lesser amounts of distance learning. In terms of duration, many are offered on the basis of one year of full-time study or the equivalent for part-time. However, programmes may be shorter or longer, with the MPhil usually taking up to two years full-time.

Master's degrees may be modular, and may incorporate progression through postgraduate certificate and diploma. In such cases providers will wish to ensure that integration and synthesis across the programme lead to intended learning outcomes beyond those of its constituent parts. Some may also be delivered partly, and sometimes fully, through an employment setting. The mode of delivery will in all cases be clear for applicants and agreed by providers. It will be offered in the context of an integrated strategy of teaching, learning and assessment that enables the student to demonstrate the intended learning outcomes appropriate to the programme's overall aims.

Integrated master's awards, which are common in science, mathematics and engineering subjects, are delivered through a programme of study that includes a three-year bachelor's degree with honours, so that after a single four-year programme of study a student graduates with a master's degree. If a work placement is included, the time taken to complete the programme may be extended.

There are also examples of master's degrees that are delivered through an integrated programme of study that includes a three-year doctoral degree. In such cases a student graduates with a PhD after a single, four-year programme of study.

1.5 Volume of learning and credit

This document is concerned with the defining characteristics of master's degrees. While the nature of a master's degree is not determined by the volume of credit associated with it, the allocation of credit provides information about the amount of learning and the academic demands of that learning. As such it may assist in decisions about academic progression between programmes or from one academic level to another.

In 2008, QAA published a credit framework for England, the *Higher education credit* framework for England: guidance on higher education credit arrangements in England, which gives typical minimum credit allocations associated with different types of academic qualifications. The guidance states that a master's degree will have a typical minimum of 180 credits of which at least 150 will be at master's level. For an integrated master's, a credit allocation of 480 with at least 120 at master's level is given. No credit values are given for an MPhil or MLitt conducted primarily via research, but taught components of research master's degrees may attract credit. An MPhil delivered primarily via structured learning ('taught') will have a typical minimum credit value of 360, of which 240 will be at master's level.

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⁴ Five years in Scotland.

In Wales, the minimum volume of credit for a master's award is similarly 180 with at least 150 at the level of a master's degree. For the integrated master's degree, a minimum of 480 credits with 120 at level of a master's degree is again identified (*Credit and Qualifications Framework for Wales*, 2004).

In Scotland, the Scottish Credit and Qualifications Framework (2001) also identifies a minimum of 180 credits for a master's, of which at least 150 should be at master's level. The integrated master's has a higher overall volume of credit than do similar awards in the rest of the UK, which reflects the longer, four-year bachelor's with honours degree in Scotland. In Scotland, the integrated master's typically attracts 600 credits, of which at least 120 should be at master's level.

Readers should refer to the credit frameworks for the different parts of the UK referenced in the text for further details about the role of credit and its use in recording student achievement.

1.6 Teaching, learning and assessment

Teaching and learning

Master's degrees may be delivered through a variety of methods of learning and most will combine different methods. Traditionally, providers have distinguished between master's degrees that are awarded on the basis of an independent, though supervised, research project undertaken by the student and those for which structured learning contributes the majority of the material to be assessed. However, any master's degree may draw upon a combination of methods of delivery as appropriate to the programme's overall aims.

There are also master's degrees aimed at initial or continuing professional development, which will involve a majority of learning that takes place in a professional or practice environment. Some such programmes may be designed and delivered through a partnership arrangement between a higher education provider and an employer. Authoritative and established guidance on the principles of good practice in this area is provided in sections of the *Code of practice* on collaborate provision and work-based learning (*Code of practice for the assurance of academic quality and standards in higher education: Section 2: Collaborative provision and flexible and distributed learning (including e-learning) (September 2004) and Section 9: Work-based and placement-learning (September 2007*)).⁵

All master's programmes will normally be supported by an integrated teaching, learning and assessment strategy that demonstrates the appropriateness of the learning, teaching and assessment methods used in relation to the intended learning outcomes being developed.

The particular teaching and learning methods to be used will be identified in individual programme documentation, such as a programme specification (see Preface for a note on the use of programme specifications). The most appropriate method or combination of methods will be a matter for individual providers to decide. Methods might include all or any of the following, selected as appropriate to the discipline or field of study and the programme's aims, mode of delivery and typical entrants:

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⁵ Both available from: www.qaa.ac.uk/academicinfrastructure/codeOfPractice

- lectures
- tutorials
- seminars
- practical work, for example in a laboratory, workshop or studio
- the use of textbooks, journal papers, electronic databases and other self-study materials
- project work
- practice sessions and learning through case studies
- work-based learning.

Further guidance on methods of teaching and learning may be found in the QAA subject benchmark statements for particular disciplines; although most are aimed at bachelor's degrees with honours, the guidance on teaching and learning may also be helpful to those dealing with master's degrees.

Assessment

Appropriate and effective assessment will enable the student to demonstrate the outcomes of learning intended for the programme. Assessment methods may be based on any or all of the following:

- essay assignments and other types of coursework
- practical reports or portfolios
- a dissertation or other output from research/project work, which may include artefacts, performances or compositions
- written examinations
- problem-solving exercises
- oral presentations
- posters
- placement reports.

Programmes may assess not only academic skills but also other skills and competencies including, where relevant, the requirements of any body that recognises or accredits the award.

Particularly for a modular master's programme that uses credit accumulation, providers will wish to ensure that suitable methods are used to assess the intended learning outcomes not only of the constituent parts but also of their integration and synthesis across the programme.

The Code of practice, published by QAA, includes a section dedicated to student assessment that includes guidance on established practice (Code of practice for the assurance of academic quality and standards in higher education: Section 6: Assessment of students (September 2006)).

1.7 Relationship to further study or employment

As outlined in section 1.2 above, master's degrees vary in their purpose or intention, which will include their intended relationship to further study and/or employment.

Some master's degrees are explicitly linked to further study through entry to a doctoral qualification. Upon passing the master's degree, a student progresses automatically into a doctorate.

In other cases, the degree will equip successful graduates with the potential to be able to enrol for doctoral study, but entry will not be guaranteed. Progression to doctoral study in such cases will depend on formal entry requirements and the judgement of relevant institutional staff.

Other types of master's degrees aim to prepare students for entry to a particular field of employment, practice or profession, or for progression or transfer within it. In these cases a PSRB external to the institution may accredit the programme (see also section 1.3). Graduates of such programmes may be eligible for a particular professional status or may be permitted to enter a further period of practice, study or examination leading to the profession.

Although many programmes will be designed for a specific purpose, such as those linked to a doctorate or those that are related to a particular profession, in many cases graduates will be equipped to function in a variety of contexts, both work and study-related. The general capabilities and transferable skills expected of a master's graduate are identified in the qualification descriptor (see Appendix 2a and 2b). A more detailed specification of the knowledge, understanding, expertise and skills expected to be developed through the programme of study will be identified in individual programme documentation. Many of these skills will be generic, while others will be specific to the subject or profession.

2 Naming of awards

The description of broad types of master's degrees given in Appendix 1 includes an indication of degree titles (for example MSc, MA, MPhil). However, in the absence of nationally agreed definitions of types, the title of an award may not define its characteristics. Guidance for institutions on the naming of awards may be found in the FHEQ (2008) and *The framework for qualifications of higher education institutions in Scotland (January 2001).*

3 The impact of the Bologna Process

The UK is a participating country in the 'Bologna Process' which aims to develop the European Higher Education Area to facilitate the mobility staff and students of higher education between member states and to establish comparability and compatibility of higher education systems across Europe.

Mutual understanding and recognition of academic qualifications are an important overall part of the Bologna Process. The aim is that each participating country's national qualification framework will be self-certified against the overarching *Framework for Qualifications of The European Higher Education Area*⁶ (FQ-EHEA) (2005) by 2012. The self-certification process is intended to demonstrate compatibility between national qualification frameworks and the overarching European framework. The FQ-EHEA identifies qualifications at three stages, termed 'cycles' and includes descriptors for each end-of-cycle qualification: bachelors (first cycle), master's (second cycle) and doctorate (third cycle). The FHEQ and *The framework for qualifications of higher education institutions in Scotland (January 2001)* have been verified as compatible with the FQ-EHEA.

The European Credit Transfer System (ECTS), developed by the European Commission, is a system for the use of academic credit aimed at facilitating student

⁶ Available at: www.bologna-bergen2005.no/Docs/00-Main doc/050218 QF EHEA.pdf

mobility in Europe. The FQ-EHEA identifies typical ECTS credit values associated with qualifications at each cycle. Master's awards typically have 90 - 120 ECTS credits (180 – 240 CATS⁷), with a minimum of 60 credits (120 CATS) at the level of the second cycle. In some Bologna Process participating countries, but not in the UK, ECTS credit values for qualifications, including master's awards, are specified by law.

4 Code of practice: Postgraduate research programmes

For master's degrees that fulfil the definition of a postgraduate research qualification given in Section 1 of the Code of practice published by QAA (Code of practice for the assurance of academic quality and standards in higher education: Section 1: Postgraduate research programmes (September 2004), there are expectations relating to established practice of the management of such programmes. The Code of practice defines a research qualification as:

...the PhD (including the New Route PhD and PhDs awarded on the basis of published work), all forms of taught or professional doctorate, and research master's degrees where the research component (including a requirement to produce original work), is larger than the taught component when measured by student effort.

Given that this definition includes such a broad range of qualifications, not all parts of this section of the *Code of practice* will apply equally to all types of research programme. However, the section was developed to give institutions clear guidance on the expectations of the funding councils, research councils and QAA in respect of the management of all research programmes, and so should be consulted by providers of relevant master's programmes.

5 Other qualifications at master's level: postgraduate certificates and diplomas

This document refers specifically to master's degrees. Postgraduate certificates and postgraduate diplomas are located at the same academic level as master's degrees in national qualification frameworks (FHEQ, 2008, and *The framework for qualifications of higher education institutions in Scotland (January 2001)*). While having some outcomes that correspond to those of the qualification descriptor for a master's degree, postgraduate certificates and diplomas may not meet the full range of outcomes for a master's degree on account of a lower overall volume of learning (and credit) associated with the award. These types of qualification are often used as part of professional and continuing professional development. Although postgraduate certificates and diplomas are not the specific focus of this document, those responsible for, or interested in, them may find some of the information and guidance presented here of use. Further information on the nature of these qualifications, and their relationship to master's degrees, may be found in the FHEQ (2008) and *The framework for qualifications of higher education institutions in Scotland (January 2001)*.

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⁷ Credit Accumulation and Transfer System, which is used in many higher education institutions in the UK.

Appendix 1: General description of the characteristics of master's degrees considered to fall into one of three categories: I research, II specialised/advanced study, or III professional/practice

I Research master's

Includes: the MPhil

Programme characteristics

Programmes in this category often have the following characteristics:

- they are typically of one to two years' duration, with two years being most common (based on a full-time mode of study)
- the student normally conducts a research project through independent study
- they may include a smaller 'taught' element, for example, research methods modules, which may or may not be credit-bearing
- they normally fulfil the definition of research degrees given in Section 1 of the Code of practice, published by QAA, on postgraduate research programmes, that is, 'research master's degrees where the research component (including a requirement to produce original work) is larger than the taught component when measured by student effort'
- assessment in these programmes is often specific to the individual and is likely to be via oral examination that involves discussion/defence of a thesis, dissertation or other output such as an artefact, performance or musical composition. Where credit-bearing 'taught' modules are part of a research master's degree, the assessment of those components is usually separate from the overall assessment.

Programme purposes

Programmes in this category may have the following aims:

- to prepare students for the next stage in their careers, whether pursuing further research or entering employment of different kinds
- to enable those undertaking the programme to contribute towards research in the discipline.

Intended entrants

Requirements for entry to a research master's programme (including the circumstances in which accreditation of prior knowledge, understanding and skills may be used) will be defined by the institution. However, programmes in this category often attract:

- entrants with a bachelor's degree with honours in a cognate or closely related subject
- entrants who have acquired experience through work or other means that enables staff responsible for admissions to be confident of the candidate's ability to succeed in the programme.

Relationship to further study or employment

 Graduates of research master's programmes will normally be prepared to enter a variety of types of employment or to continue academic study, for example. for a PhD or professional doctorate.

Characteristics of graduates

Graduates of research master's degrees typically have:

- i) subject-specific attributes
- an in-depth knowledge and understanding of the discipline informed by current scholarship and research, including a critical awareness of current issues and developments in the subject
- the ability to study independently in the subject
- the ability to use a range of techniques and research methods applicable to advanced scholarship in the subject
- ii) generic attributes

a range of generic abilities and skills that includes the ability to:

- use initiative and take responsibility
- solve problems in creative and innovative ways
- make decisions in challenging situations
- continue to learn independently and to develop professionally, including the ability to pursue further research where appropriate
- communicate effectively, with colleagues and a wider audience, in a variety of media.

II Specialised/advanced study master's

Includes: the MSc, MA, MRes and integrated master's

Programme characteristics

Programmes in this category often have the following characteristics:

- they are predominantly composed of structured learning opportunities (are 'taught') although frequently at least a third of the programme is devoted to a research project, leading to a dissertation or the production of other output such as an artefact, performance or musical composition
- they are typically of 9 to 18 months' duration, with 12 months being most common, based on a full-time mode of study
- this category of master's degree includes integrated master's degrees, where
 master's level study is integrated with study at the level of a bachelor's with
 honours degree within a single programme
- this category of master's degrees also includes the MRes, where the student develops the ability to conduct research through a programme of structured learning
 - degrees of this type are normally unclassified, although it may be possible to be awarded a merit, distinction or other grade, with the exception of the integrated master's that is often classified.

Programme purposes

Programmes in this category may have the following aims:

• to prepare students for the next stage in their careers, whether that is further academic or professional study, or entering employment of different kinds.

Intended entrants

Requirements for entry to a research master's programme (including the circumstances in which accreditation of prior knowledge, understanding and skills may be used) will be defined by the institution. However, programmes in this category often attract:

 entrants who have a background in the subject or a cognate subject area, acquired through previous study (a bachelor's with honours degree or equivalent) or experience.

In the case of integrated master's degrees, progression to the final two or three (in Scotland) years of the programme is determined two years before the intended year of completion and often requires higher grades than progression on the bachelor's degree alone.

Relationship to further study or employment

 Graduates of specialised/advanced master's programmes will normally be equipped to enter doctoral study in their discipline or to take up employment in both subject-related and generalist environments.

Characteristics of graduates

Graduates of specialised/advanced master's degrees typically have:

- i) subject-specific attributes
- an in-depth knowledge and understanding of the discipline informed by current scholarship and research, including a critical awareness of current issues and developments in the subject
- the ability to complete a research project in the subject, which may include a critical review of existing literature or other scholarly outputs
- ii) generic attributes

a range of generic abilities and skills that include the ability to:

- use initiative and take responsibility
- solve problems in creative and innovative ways
- make decisions in challenging situations
- continue to learn independently and to develop professionally
- communicate effectively, with colleagues and a wider audience, in a variety of media.

III Professional/practice master's

Includes: the MBA and MEd

Programme characteristics

Degree programmes in this category often have the following characteristics:

- learning tends to be structured and programme structure may be developed in collaboration with the relevant professional, statutory or regulatory body and may include practical elements, such as field-work, placements or other opportunities for work-based learning
- they are typically of 9 to 24 months' duration based on a full-time mode of study
- they may be a pre-requisite for registration or entry to a profession in accordance with the requirements of the professional, statutory or regulatory body that recognises or accredits the award
- other awards, such as Postgraduate certificate and Postgraduate diploma, will
 often be offered alongside professional master's programmes to facilitate
 continuing professional development at different stages of a professional
 career.

Programme purposes

Programmes in this category may have the following aims:

- to enable graduates to qualify for entry into a progression, subject to any further conditions required by the professional, statutory or regulatory body
- to provide continuing professional development opportunities related to particular professions or employment settings.

Intended entrants

Requirements for entry to a research master's programme (including the circumstances in which accreditation of prior knowledge, understanding and skills may be used) will be defined by the institution and may take account of the relevant professional, statutory or regulatory body's requirements. However, programmes in this category often attract:

 entrants with a bachelor's degree with honours (or equivalent) or experience which may or may not be directly relevant to the particular profession.

Relation to further study or employment

- Graduates of professional/practice master's programmes will normally be equipped to enter a variety of types of employment and in particular will possess the skills and experience necessary for the particular profession.
- Graduates will also normally be equipped to continue academic study at a higher level, for example for a PhD.

Characteristics of graduates

Graduates of professional/practice master's degrees typically have:

- i) subject-specific attributes
- an in-depth knowledge and understanding of their profession, informed by current practice, scholarship and research, including a critical awareness of current issues and developments in the subject and the profession
- the ability to apply research to professional situations, both practical and theoretical
- the ability to use a range of techniques and research methods applicable to their professional activities
- ii) generic attributes

a range of generic abilities and skills that include the ability to:

- use initiative and take responsibility
- solve problems in creative and innovative ways
- make decisions in challenging situations
- continue to learn independently and to develop professionally
- communicate effectively, with colleagues and a wider audience, in a variety of media.

Appendix 2a: Descriptor for a higher education qualification at level 7: master's degree (England, Wales, and Northern Ireland)

(Taken from *The framework for higher education qualifications in England, Wales and Northern Ireland, August 2008*)

Master's degrees are awarded to students who have demonstrated:

- a systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study or area of professional practice
- a comprehensive understanding of techniques applicable to their own research or advanced scholarship
- originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline
- conceptual understanding that enables the student:
 - to evaluate critically current research and advanced scholarship in the discipline
 - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

- deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences
- demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level
- continue to advance their knowledge and understanding, and to develop new skills to a high level.

And holders will have:

- the qualities and transferable skills necessary for employment requiring:
 - the exercise of initiative and personal responsibility
 - decision-making in complex and unpredictable situations
 - the independent learning ability required for continuing professional development.

Appendix 2b: Descriptor for a higher education qualification at level 11: master's degree (Scotland)

(Taken from *The framework for qualifications of higher education institutions in Scotland, (January 2001)*)

General

The Masters degree is available through several different routes: as a programme for graduates or equivalent, through at least one year of full-time postgraduate study or an equivalent period of part-time study; as a programme of typically the equivalent of five years' full-time study that integrates a period of undergraduate study with the Masters degree.

The first of these typically leads to award of Master of Science or Master of Arts, depending on the subject taken, but other titles are also used. Integrated programmes, frequently offered over the equivalent of five years' full-time study, typically lead to a subject-specific qualification title (eg MEng) and are often linked to professional/statutory body recognition.

In the majority of cases, the Masters degree reflects a specialised knowledge and understanding of particular areas, applications or levels of expertise in particular subject or professional areas. In some professional areas, Masters degrees are linked to structures of continuing professional development.

Characteristic outcomes of Masters degrees

- i A systematic understanding of knowledge, and a critical awareness of current problems and/or new insights, much of which is at, or informed by, the forefront of their academic discipline, field of study, or area of professional practice.
- ii A comprehensive understanding of techniques applicable to their own research or advanced scholarship.
- iii Originality in the application of knowledge, together with a practical understanding of how established techniques of research and enquiry are used to create and interpret knowledge in the discipline.
- iv Conceptual understanding that enables the student:
 - to evaluate critically current research and advanced scholarship in the discipline; and
 - to evaluate methodologies and develop critiques of them and, where appropriate, to propose new hypotheses.

Typically, holders of the qualification will be able to:

- a deal with complex issues both systematically and creatively, make sound judgements in the absence of complete data, and communicate their conclusions clearly to specialist and non-specialist audiences;
- b demonstrate self-direction and originality in tackling and solving problems, and act autonomously in planning and implementing tasks at a professional or equivalent level;
- c continue to advance their knowledge and understanding, and develop new skills to a high level;

and will have:

- d the qualities and transferable skills necessary for employment requiring:
 - the exercise of initiative and personal responsibility;
 - decision-making in complex and unpredictable situations; and
 - the independent learning ability required for continuing professional development.

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