

PROFESSIONAL DEVELOPMENT AWARD IN E-LEARNING: PRODUCTION (G79J 16):

Arrangements

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Contents

1	INTRODUCTION	1
2	BACKGROUND TO THE DEVELOPMENT OF THE QUALIFICATIONS	2
3	RATIONALE AND AIMS OF THE QUALIFICATION	6
4	RECOMMENDED CONDITIONS FOR ENTRY TO THE QUALIFICATION	8
5	STRUCTURE OF THE QUALIFICATION	9
	APPENDIX 1: UNIT SPECIFICATIONS	10
	APPENDIX 2: MEMBERSHIP OF STEERING GROUP	67
	APPENDIX 3: SCQF LEVEL DESCRIPTORS	68

1 Introduction

- 1.1.1 This is the Award Arrangements document for the new Diploma in e-Learning: Production which is offered for validation in May 2003. The Unit descriptors are presented in this document from pp 9 - 65.
- 1.1.2 This award is based on work carried out by the Scottish Further Education Unit (SFEU) as part of its Virtual Learning Centre (www.sfeu.ac.uk) provision. The aim of the Virtual Learning Centre is to support staff involved in the delivery of vocational education and training in Scotland. It provides access to an online staff development resource which has been made available to all colleges by the SFEFC.
- 1.1.3 The award is seen as the first part of the development of an Advanced Diploma in e-Learning. This first Diploma is focused on e-Learning production; the Advanced Diploma will be a fuller course covering a professional view of e-Learning production and support.

2 Background to the development of the qualifications

2.1 General background

2.1.1 This is a new programme for SQA and has no predecessors. One of the main goals of this exercise is to provide accreditation for participants on the SFEU Virtual Learning Centre Courses for developers of online learning. The SFEU course titles are:

- ◆ Writing and Developing Online Learning
- ◆ Project Management for Developing Online Learning
- ◆ Developing a Course Website

The Units in this award have titles which are based on the SFEU courses but are more in line with SQA needs.

These programmes have been running in an unaccredited mode for some time. SFEU have provided licences to Scottish colleges for the content, and colleges could use this content to provide the underpinning for this certificate. The qualification is designed to be free standing and can be delivered in any mode. However, the courses at SFEU provide the basis for an online delivery to this qualification.

These courses are aimed at any lecturer or trainer, interested in a variety of topics dealing with developing content to be delivered online. They are aimed at both novice developers and developers with some experience. The materials in these courses are intended to work at a number of different levels and they do not assume a great deal of prior knowledge of working with online materials. Each topic is approached from an introductory level to begin with, with complex ideas or technical subjects being built up to gradually.

2.1.2 The SFEFC has arranged for licences to the SFEU course to be available to all Scottish colleges.

2.2 Demand for internet based learning skills

2.2.1 In this field of endeavour, there is continual change. Standards are evolving, technology is progressing and pedagogy is being better understood. Since the mid 90s, the field of Technology Supported Learning has seen massive change, both in the technology and in the skills required of learning professionals. In particular, the immense importance of the internet to modern learning has been reflected in the new award.

- 2.2.2 At the European Council in Lisbon in March 2000, Heads of State set an ambitious target for Europe to become within ten years “The most competitive and dynamic knowledge based economy in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion”. They also placed education firmly at the top of the political agenda, calling for education and training systems to be adapted to meet this challenge.
http://europa.eu.int/comm/education/e-Learning/sec_2002_236_en.pdf
- 2.2.3 Technology supported learning (e-Learning) helps us to answer this request by fostering the integration of ICT in education, as a lever for change, and by providing an opportunity for increased quality, convenience, diversity and effectiveness.
http://europa.eu.int/comm/education/e-Learning/sec_2002_236_en.pdf
- 2.2.4 The Eurobarometer survey “Benchmarking eEurope : European youth into the digital age”, realised in spring 2001, gives grounds for optimism. Nine out of ten teachers use a computer at home and are convinced that the Internet has already changed or will soon change the way they teach.
http://europa.eu.int/comm/education/e-Learning/sec_2002_236_en.pdf
- 2.2.5 Seven out of ten teachers have an Internet connection at home. These findings demonstrate considerable openness on the part of European teachers to new technologies and to the changes they will induce. However, much needs to be done concerning pedagogical training and research, and work in this sense is being carried out successfully through teacher training schemes in several EU Member States, to analyse and disseminate good practice.
http://europa.eu.int/comm/education/e-Learning/sec_2002_236_en.pdf
- 2.2.6 Although there is a clear demand for e-learning programmes, based on the evidence from Europe and the access to the SFEU programme, there is no provision at level 7/8 within the SQA portfolio. This programme and the advanced diploma will fill this gap.

2.3 Steering group

- 2.3.1 The development of the awards was undertaken by members of a Steering Group which was formed specifically to deal with these qualifications. Members of the Steering Group were:

John Gordon, Consultant, thethinkexchange
Bobby Elliot, SQA
John Edmonstone
Jean Henderson, SFEU
Gerry Graham, LTScotland

2.4 Consultation

- 2.4.1 Extensive consultation was carried out at all stages of the award. This consultation was required to progress the project at SFEU. It is now three months since the SFEU released the online course, 'Writing and Developing Online Learning' and every FE college in Scotland has been able to access this resource.
- 2.4.2 Through introductory workshops and regular contacts with colleges SFEU has been getting a good deal of informal feedback on the course, which has been very positive. College staff have welcomed the new resource and found it simple to work with.
- 2.4.3 However, SFEU have now set up an ongoing survey to gain more formal feedback on the response of college staff to the course. This survey is set up at: www.sfeu.ac.uk/vlc/test/coursesurvey.htm
- 2.4.4 The consultation confirmed the considerable demand for the proposed awards, their relevance to the e-Learning community and the attractiveness of the awards to candidates.

2.5 Links to professional body qualifications

- 2.5.1 There is as yet no formal professional body for this domain. However, contact has been made with the European Institute for e-Learning, and the Steering Group will be represented at various events over the coming months.
- 2.5.2 The Steering Group has made contact with the University sector and it is hoped that SQA may become involved in partnerships being established, and that this programme could relate to the programmes being developed under the Chartered Teacher Initiative.
- 2.5.3 The Steering Group has made contact with the European Institute for e-Learning, (www.eife-l.org) and has joined up in its discussions leading to a European Standards Mapping for e-Learning. A member of the steering group attended the 3^{ième} Symposium international sur les Industries de la Connaissance, and presented at a round table on La qualité de la formation: une exception européenne? Discussions took place to ensure compatibility between a future SQA Advanced Diploma and the Eife-l work on e-Learning competences.

2.6 The Scottish Credit and Qualifications Framework (SCQF)

- 2.6.1 Due cognisance has been taken of the requirements of the Scottish Credit and Qualifications Framework (SCQF) in the design of these awards. All new Units have been allocated to SCQF level 8. This means that the Diploma award will be broadly equivalent to the third year level of demand of a Scottish degree.
- 2.6.2 Details of the SCQF Level Descriptors at levels 6, 7, 8 and 9 are given in Appendix 3. These Level Descriptors clearly indicate the cognitive skills to be demonstrated at each level.

3 Rationale and aims of the qualification

3.1 Rationale

- 3.1.1. The award is designed for those who will design and implement content, and manage the development of content in online learning environments.
- 3.1.2 The award is ideally suited for delivery by open and distance learning methods, provided that adequate preparations are made. Additional planning and resources will be needed for candidate support, assessment and re-assessment. In respect of the latter, a combination of new and traditional authentication tools and techniques may have to be devised. Quality assurance procedures must also be sufficiently robust to support open and distance learning. Further advice and guidance is available in the SQA publication *Assessment and Quality Assurance for Open and Distance Learning* (A1030, February 2001).
- 3.1.3 In designing the award, the Steering Group has been fully aware of the need for qualifications which will allow articulation to other post experience and post graduate courses while at the same time containing relevant technical and transferable skills which will enable immediate entry to employment. The Steering Group believes that an appropriate balance between ‘academic’ and ‘vocational’ (ie between knowledge and its practical application) has been achieved.
- 3.1.4 The Diploma in e-Learning: Production will enable progression to the SQA Advanced Diploma in e-Learning.

3.2 General aims

- 3.2.1 This award has a range of broad aims which are generally applicable to all equivalent Higher Education qualifications. Some of these general aims are to:
- ◆ develop the candidate’s knowledge and skills such as planning, analysing and synthesising
 - ◆ develop employment skills and enhance candidates’ employment prospects.
 - ◆ enable progression within the Scottish Credit and Qualifications Framework
 - ◆ develop study and research skills
 - ◆ develop transferable skills including Core Skills
 - ◆ provide academic stimulus and challenge, and foster an enjoyment of the subject

3.3 Specific aims

The specific aims of the award are to:

- ◆ enable the candidate to demonstrate that she/he can plan, design and develop online learning materials
- ◆ give candidates the skills, knowledge and confidence necessary to develop their own course websites
- ◆ give candidates the skills, knowledge and confidence necessary to project manage the development of online learning

4 Recommended conditions for entry to the qualification

- 4.1.1 As with all SQA qualifications, access will be at the discretion of the centre and the following recommendations are for guidance only.
- 4.1.2 Different combinations of relevant National Qualifications, Vocational Qualifications and equivalent qualifications from other awarding bodies may also be acceptable.
- 4.1.3 It would be advisable for candidates to have some prior knowledge of computing or information technology although formal qualifications may not be necessary if suitable experience had been gained informally or through work experience. Centres may wish to give consideration to inferred or actual evidence of candidates' Core Skills.
- 4.1.4 Mature candidates with suitable work experience may be accepted for entry provided the enrolling centre believes that the candidate is likely to benefit from undertaking the award.

4.2 Overall Assessment Guidance

- 4.2.1 In general, in order to mitigate against over assessment and to allow for online delivery, it is recommended that assessment be, in the main, in the form of project or case study work supplemented in certain cases with objective tests.
- 4.2.2 New assessments should be used for re-assessment purposes, even in the case of a project or case study.
- 4.2.3 In order to pass a Unit, the candidate must pass all assessment elements.

5 Structure of the Qualification

Diploma in e-Learning: Production

Total credit value of the award: 6 credits

5.1 Mandatory Units

5.1.1 A total of 6 credits must be gained by achieving the following mandatory Units.

Unit No	Title	Level	Credit
DE0X 35	e-Learning: Production: Writing and Developing Online Learning Materials	8	2
DE10 35	e-Learning: Production: Developing a Website for e-Learning	8	2
DE0Y 35	e-Learning: Production: Project Management of e-Learning Content Production	8	1
DE0F 35	e-Learning: Production: Integrative Project	8	1

Table A — All Units must be undertaken (6 Credits)

5.2 Optional Units

5.2.1 No optional Units are available.

Appendix 1: Unit Specifications

Higher National Unit Specification



General information for centres

Unit title: e-Learning: Production: Writing and Developing Materials

Unit code: DE0X 35

Unit purpose:

This Unit is designed to enable the candidate to demonstrate that she/he can write and develop online e-Learning support materials. It is intended as a Unit within a Professional Development Award for practising tutors, trainers, teachers and lecturers. It is intended that the Unit will demonstrate writing and developing online learning materials with relatively simple resources.

On completion of the Unit the Candidate should be able to:

1. analyse learner needs and styles and develop a range of online teaching/learning strategies based on traditional strategies.
2. plan and design an online learning and assessment application.
3. design and author online learning materials using world wide web based tools.
4. write and develop online learning materials within the legal and standards contexts of online learning.

Credit value: 2 HN Credits at SCQF level 8: (16 SCQF credit points at SCQF level 8)

SCQF (the Scottish Credit and Qualifications Framework) brings Scottish qualifications into a single framework of 12 levels ranging from SQA Access 1 to doctorates. The SCQF includes degrees; HNC/Ds; SQA National Qualifications; and SVQs. Each SQA Unit is allocated a number of SCQF credit points at a specific level. 1 SCQF point = 10 hours of learning. HN candidates are normally expected to input a further number of hours, matched to the credit value of the Unit, of non-contact time or candidate-led effort to consolidate and reinforce learning.

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. It would be beneficial if candidates had some general communication and practical computing skills such as might be demonstrated by the achievement of Core Skills Units in Communication and Using Information Technology at Intermediate 2. Candidates should have experience of design and delivery of learning in a traditional context. Candidates should have been involved in resource-based learning.

Higher National Unit specification: statement of standards (cont)

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: This Unit is included in the framework of the PDA Diploma in e-Learning: Production. It is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

Assessment: Assessment will be by means of a case study and an objective test covering all the outcomes.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

Unit code: DE0X 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Analyse learner needs and styles and develop a range of online teaching/learning strategies based on traditional strategies.

Knowledge and/or skills

- ◆ Theories of student learning styles
- ◆ Range of teaching/learning strategies for online learning
- ◆ Development of online teaching/learning strategies based on traditional strategies
- ◆ Student learning needs
- ◆ Context of use

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify four of the main learning style theories
- ◆ identify the characteristics demanded of learners by online learning
- ◆ show how online learning may be tailored to learner styles
- ◆ identify the range of teaching/learning strategies available to the tutor
- ◆ list the characteristics of these teaching/learning strategies and their suitability for different groups of learners
- ◆ adapt appropriate teaching/learning strategies from a traditional environment to an online environment.

The assessment for this Outcome will be combined with Outcomes 2, 3 and 4 as part of a holistic assessment for the Unit, details of which are given under Outcome 4 below.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

Outcome 2

Plan and design an online learning and assessment application.

Knowledge and/or skills

- ◆ the range of approaches to learning design
- ◆ pedagogy and learning design
- ◆ the types and functions of assessment which can be used with online learning.
- ◆ how to select from the range of tools available for creating assessments, and their characteristics and benefits
- ◆ how to access these tools
- ◆ how to match tools to assessment needs

Evidence Requirements

Candidates will need evidence to demonstrate their skills and/or knowledge by showing that they can:

- ◆ identify a range of approaches to learning design
- ◆ use a range of approaches to learning design
- ◆ discuss the importance of structure and style in creating a meaningful learning experience
- ◆ discuss the concept of learning objects
- ◆ apply contextualised and non-contextualised learning objects
- ◆ apply the concept of learning objects to learning design
- ◆ apply the functions of assessment and testing in online learning
- ◆ identify the range of tests and assessment types that can be used online
- ◆ discuss the advantages and difficulties of online testing and assessment
- ◆ discuss the structure and pacing of online assessment

The assessment for this Outcome will be combined with Outcomes 1, 3 and 4 as part of a holistic assessment for the Unit, details of which are given under Outcome 4 below.

Higher National Unit specification: statement of standards

Unit title: e-Learning: Production: Writing and Developing Materials

Outcome 3

Design and author online learning materials using world wide web based tools.

Knowledge and/or skills

- ◆ interactivity
- ◆ how to select world wide web tools and techniques for constructing an online resource
- ◆ how to select and use interactive elements for constructing an online resource
- ◆ how to determine and set properties of interface objects
- ◆ design issues and principles in the creation of an online resource
- ◆ world wide web based authoring tools

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ define the concept of ‘interactivity’ and identify where it is required in an online course
- ◆ discuss the importance of accessibility and consistency
- ◆ select from a range of tools available for interactive online learning
- ◆ use a selection of tools
- ◆ select a tool for interactivity on the basis of learning theory and other factors
- ◆ incorporate appropriate interactivity and multimedia components
- ◆ select test strategy and evaluate materials

The assessment for this Outcome will be combined with Outcomes 1, 2 and 4 as part of a holistic assessment for the Unit, details of which are given under Outcome 4 below.

Higher National Unit specification: statement of standards

Unit title: e-Learning: Production: Writing and Developing Materials

Outcome 4

Write and develop online learning materials within the legal and standards contexts of online learning.

Knowledge and/or skills

- ◆ the fundamentals of copyright law, as it applies to the creation of online learning materials
- ◆ the principles of accessibility laws in the UK as they apply to online learning materials
- ◆ how to write quality metadata descriptions of online learning materials to promote discovery and re-use
- ◆ the current standards landscape as it applies to learning technologies
- ◆ how to source copyright-free resources for use in developing online materials
- ◆ how to distribute copyright-free resources

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ identify the basic principles of copyright law as it applies to producing online learning materials
- ◆ create copyright-free resources for use in online learning
- ◆ identify sources of copyright-free resource materials for use in online learning
- ◆ identify the main areas of concern to designers and builders of online learning in the areas of accessibility, metadata and standards
- ◆ identify the role of standards setting bodies in the development of accessibility, metadata and content related standards and specifications
- ◆ discuss the principles behind content-related standards and specifications
- ◆ identify a range of key points of concern for designers which relate to the areas of accessibility, metadata and content related specifications and standards
- ◆ make simple learning design decisions in the areas of specifications and standards

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

The evidence required must be provided by a short closed book objective test and a case study as defined below. The objective test will be in the form of multiple choice questions (mcqs). The questions set must be designed to span the evidence items required, with all knowledge/skills being sampled.

The case study must allow the candidate to exhibit mastery of the outcomes within a holistic assessment of the Unit. The learning components from the case study must be compliant with the Institute of IT Training Standards for e-Learning materials:

<http://www.iitt.org.uk/public/standards/e-Learningmatsstand.asp#technical>

The Objective Test Instrument of Assessment

The objective test instrument of assessment consists of a written examination of one hour. The score given will reflect the candidate's achievement on the first assessment event. A candidate may wish to retake the assessment but this should be based on a significantly different examination. The examination should be unseen and the assessment should be conducted in controlled and invigilated conditions. The candidate will be expected to answer examination questions without the aid of reference and/or source materials.

The examination should be designed to assess the candidate's critical knowledge and understanding of the topics relating to the specific aims of the Unit which this assessment is designed to cover. However, the overall total mark for the examination is 100, the cut-off score being 50.

The objective test must consist of thirty multiple choice questions, each with four alternative answers (A-D). The questions will be worth three marks each with the penalty for a wrong answer being -1.

The questions should cover all of the outcomes, with them being spread as follows:

Outcome	Section 1	
	Questions	Marks
1	7	21
2	8	24
3	12	36
4	3	9
Totals	30	90

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

The Case Study

The candidate's knowledge and/or skills will be demonstrated by analysis of an appropriate extended case study that provides the opportunity to cover all items in the Evidence Requirements shown in the outcomes.

The extended case study should be given to candidates as soon as possible after the start of the Unit to allow time for the assimilation of information by candidates. Lecturers should feel free to answer questions or clarify any misunderstandings that candidates may have relating to the case study. Lecturers should encourage discussion of the case study in relation to the main areas of study throughout the Unit.

The candidate should be given a date for completion of the case study. However, the instructions for the assessment task should be distributed to allow the candidate sufficient time to assimilate the details and carry out the assessment task. During the time between the distribution of the assessment task instructions and the completion date, assessors may answer questions, provide clarification, guidance and reasonable assistance. The assessment task should be marked as soon as possible after the completion date.

The case study should be developed independently, not working as part of a group. If candidates wish to work as a group, the exercise should be broken in such a manner that each member of the group can submit an independent case study. It is up to centres to take reasonable steps to ensure that the project is the work of the candidate. For example, centres may wish to question candidates informally at various stages on their knowledge and understanding of the study on which they have embarked. Centres should ensure that where research, etc is carried out in other establishments or under the supervision of others that the candidate does not receive undue assistance.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

Instructions for designing the assessment task

The assessment task is a case study. The assessment task must require the candidate to:

- ◆ analyse the task and decide on a course of action for undertaking the study
- ◆ plan and organise work and carry it through to completion
- ◆ reflect on what has been done and draw conclusions for the future

This project involves the candidate in producing an original piece of online learning.

The candidate will be required to:

- ◆ demonstrate the skills necessary to design learning support material in accordance with a learning style
- ◆ demonstrate skills in using a specified toolset
- ◆ demonstrate implementation of an online learning sequence in accordance with standards and law

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

The candidate must produce a report as described below:

Section Title	Quality Metric
Introduction and Brief	The brief will be included in the report with an introduction by the candidate discussing the brief. This will be a few paragraphs long.
User Needs for the Application	This will be a detailed report on user needs detailing human and machine environment factors. Typically two pages long.
Design for the Application	This will consist of storyboards, structure diagrams or other constructs appropriate to the brief to the appropriate design standard.
Sample components for the application	Representing at least 10 minutes of learning. Compliant to the IITT standards: (http://www.iitt.org.uk/public/standards/e-Learningmatsstand.asp#technical) In accordance with the National Learning Network Guidance: (http://www.nln.ac.uk/Techguidelines.pdf)
Evaluation of the Sample	The sample components should be tested with users, perhaps drawn from the course participants. The evaluation should consist of about two pages.
Further Work	A single page of comment on how the complete package production would be approached.

Assessment guidelines

Centres should be aware of the IITT standards (www.iitt.org.uk). It may also help if they are aware of the various guidelines from the National Learning Network (www.nln.ac.uk), further sources of information can be found from the Centre for Educational Technology Interoperability Standards (www.cetis.ac.uk).

The sample components should represent about 10 minutes of learning. This will be a value judgement and is given as a guide to the amount of content produced. There will of course be trade-off between complexity and length.

Administrative Information

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Unit title:	e-Learning: Production: Writing and Developing Materials
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Higher National Unit specification: support notes

Unit title: e-Learning: Production: Writing and Developing Materials

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this Unit

The Unit is primarily intended for lecturing, teaching or training practitioners who wish to use or are using online learning in their day to day work. The Unit is primarily intended to prepare candidates to undertake the development of online learning materials.

The Unit adopts a structured approach to the development process from analysis through design and implementation to ensure that the selection and deployment of learning objects matches learning resource requirements, context of use, learning theory being utilised and user requirements within the skills capability of the developer. The Unit prepares the candidate to work in a legal manner, aware of International Standards and Specifications. It prepares candidates for this role by providing them with the underpinning knowledge needed to carry out this type of development effectively.

Candidates will be expected to exercise a significant degree of autonomy in carrying out the tasks required for the Unit.

There is no prescription regarding hardware and software facilities. However, the relevant facilities should be available to the candidate throughout the duration of the Unit. In some instances, candidates may decide to create online learning components themselves, using appropriate software. Candidates may also gain significant skills in the use of application packages.

Outcome 1

This will consist of setting the scene for online learning by reviewing theories of student learning styles. For example, the centre may wish to present such theories as Bandler and Grinder, Honey and Mumford, Kolb, Gardner, Rose and Nicholl, or Myers-Briggs. The outcome will also consist of investigating learner requirements and identifying the context of use.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

The client is the individual or organisation who put forward the proposal for the application. The users are those who will make use of the final product. The context of use would include the users, delivery medium, purpose and likely location of the package, eg:

- ◆ A basic numeracy package at Intermediate 1, delivered on the World Wide Web, or a school learning environment. The package is designed for use by school children in the classroom or for revision at home, but it may also be of use to adults who wish to improve their numeracy skills at home, at work or in libraries or study centres.

Candidates will be required to be familiar with the processes of research in order to investigate task and user requirements.

Candidates will be required to develop appropriate teaching/learning strategies for a range of situations, for example, learning in the context of a Modern Apprenticeship, or online learning in the delivery of an HND in Spanish.

It would be expected that at this stage of the programme, the candidate would be preparing story boards or user and content specifications for their case study.

Outcome 2

A learning application will normally relate to some topic and could have several media elements associated with it, eg a few paragraphs of text, some photographs and a sound file, and a navigation capability.

The design specification may be presented in graphical form, eg using structure charts and/or storyboards and should show the overall structure of the sequence and the navigational techniques used to access learning objects. Candidates should be encouraged to use their creative skills in designing and prototyping a learning application.

The candidate will specify the appropriate tools to be used in the construction of their online learning application.

The application will include several components. These could be used as pre- and post-test components to measure that learning takes place. Alternatively, they could be used as summative or formative assessments for global navigation through the learning application. The candidate should develop a plan for an online learning application.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

Outcome 3

Candidates should be encouraged to develop online learning components by integrating a variety of media elements, including text graphics (drawings, diagrams and photographs) audio (sampled or midi), video and simulations or interactions. Meticulous attention should be paid to the copyright status of media elements. Candidates should be encouraged to generate their own media elements or make use of public domain or licensed resources, such as clip-art collections. Where this is not possible, permission should be sought from copyright holders.

In many cases media elements will require to be imported, eg by digitising video or sampling sound. Media elements may also require manipulation, eg resizing or cropping of images, compression of sound files etc. Candidates will need to know how to determine and set the properties of interface objects, such as buttons and handle simple keyboard and mouse events (eg press of alpha, numeric or function keys, left and right mouse clicks, mouse movement).

Candidates should be able to discuss interactivity in online learning. They should be introduced to simulation engines as well as movie generators. Candidates should implement a prototype for their case study showing global and local navigation, interactivity, interoperability and assessment. Where an MLE is being used to render an online application, the appropriate interoperability criteria should be established.

Each candidate will need evidence to show that he/he can, with reference to their case study, select an appropriate test strategy, ensure that the application operates as specified, check the usability of the application, evaluate the extent to which the application meets client and user requirements, revise the application as required.

Testing will provide an opportunity for candidates to demonstrate their skills in solving non-routine problems. Possible strategies would include top-down testing, starting with a skeleton which includes the main navigational paths and gradually adding additional components, testing each as it is added, or bottom-up testing, constructing and testing components in isolation then bringing them together to create the final learning application.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Writing and Developing Materials

Outcome 4

Centres should make use of information sources such as the Copyright Licensing Authority (<http://www.cla.co.uk/>) to present an up-to-date view on copyright law as it applies to the creation of online learning. Candidates should be aware of copyright free licensing such as the GNU licence. (<http://www.fsf.org/>). Centres may be interested in presenting ideas from the open source community.

Each candidate should be aware of the specification-standards cycle used to develop international standards, and centres should present the current status of standards and specifications in e-Learning.

www.imslobal.org

www.cetis.ac.uk

Before publishing their case study to web or to an MLE or VLE, candidates should normally be required to submit a copyright waiver, a privacy statement, and a statement of accessibility. Candidates should research the main standards and specification issues of copyright, accessibility, metadata and content development.

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award that is primarily designed to provide candidates with technical or professional knowledge and skills related to the development of online learning. The Unit is highly practical in nature, so formal delivery should be kept to a minimum, with candidates being encouraged to gain as much practical experience as possible and explore the features of hardware and software.

Assessment will be by an objective test and a case study. Candidates who are in employment may be able to identify a suitable project at their centre, for example, developing an online course for their centre's portfolio, or a training package for a new business or procedure.

New assessments should be used for re-assessment purposes.

Centres should be aware of the IITT standards (www.iitt.org.uk). It may also help if they are aware of the various guidelines from the National Learning Network (www.nln.ac.uk). Further sources of information can be found from the Centre for Educational Technology Interoperability Standards (www.cetis.ac.uk).

The sample components should represent about 10 minutes of learning. This will be a value judgement and is given as a guide to the amount of content produced. There will of course be trade-off between complexity and length.

Open learning

This Unit is ideal for delivery by e-Learning techniques. In particular, centres may wish to consider the Scottish Further Education Unit (SFEU) course on Web Development (www.sfeu.ac.uk) as providing guidance on the knowledge underpinning for this Unit.

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes. For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (A1030, February 2001).

It is recommended that if online learning is used for this Unit, the activities can be spread as follows:

Component	Hours	Percentage
Online Study	40	50
Case Study	20	25
Assessment preparation	5	6.25
Discussion Group Activity	10	12.5
Research	5	6.25
Total	80	100

Special needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (AA0645/3, December 2001).

General information for candidates

Unit title: e-Learning: Production: Writing and Developing Materials

The Unit is about the skills and techniques required to undertake the development of an online learning application. It has four main areas, each of which is the subject of a separate Outcome.

To begin with you will analyse a problem description to identify task and user requirements and context of use (Outcome 1).

You will then specify the learning objects and interaction requirements for an online learning application (Outcome 2).

Following this you will design and prototype the overall structure of the online learning application and the navigation techniques used to access learning objects (Outcome 3).

You will then develop or obtain the media elements used to present each learning object. After this you will implement an online learning application based on a design specification (Outcome 4).

Overall, you will be expected to use the knowledge and skills from the Unit to enable you to develop online learning applications.

Assessment will be by means of a case study and an objective test covering all the outcomes.

In order to complete this Unit successfully, you will be required to achieve a satisfactory level of performance (50%) in all assessed work.

Higher National Unit Specification

General information for centres

Unit title: e-Learning: Production: Website Development

Unit code: DE10 35

Unit purpose:

This Unit is designed to enable the candidate to demonstrate that she/he has the skills, knowledge and confidence necessary to develop a course website. It is intended as a Unit within a Professional Development Award for practising tutors, trainers, teachers and lecturers.

On completion of the Unit the candidate should be able to:

1. plan and design a course website
2. author and publish web pages for a course website
3. devise strategies for maintaining learner interest in a website
4. discuss legislative issues concerned with course website management

Credit value: 2 HN Credits at SCQF level 8: (16 SCQF credit points at SCQF level 8)

SCQF (the Scottish Credit and Qualifications Framework) brings Scottish qualifications into a single framework of 12 levels ranging from SQA Access 1 to doctorates. The SCQF includes degrees; HNC/Ds; SQA National Qualifications; and SVQs. Each SQA Unit is allocated a number of SCQF credit points at a specific level. 1 SCQF point = 10 hours of learning. HN candidates are normally expected to input a further number of hours, matched to the credit value of the Unit, of non-contact time or candidate-led effort to consolidate and reinforce learning.

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. It would be beneficial if candidates had some general communication and practical computing skills such as might be demonstrated by the achievement of Core Skills Units in Communication and Using Information Technology at Intermediate 2. Candidates should have experience of design and delivery of learning in a traditional context. Candidates should have been involved in resource based learning.

Higher National Unit specification: statement of standards (cont)

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: This Unit is included in the framework of a PDA Diploma in e-Learning. It is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: Assessment will be by means of a case study and an objective test covering all of the outcomes.

The case study is in the form of a design for a learning website along with some sample pages, or in the form of a case study of an existing website.

Higher National Unit specification: statement of standards

Unit title: e-Learning: Production: Website Development

Unit code: DE10 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Plan and design a course website.

Knowledge and/or skills

- ◆ how to construct a project brief
- ◆ definition of user needs
- ◆ understand the issues associated with web page design
- ◆ how to identify content for a student website
- ◆ understand the principles of good design, including style and voice
- ◆ page elements and colour balance

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ generate key ideas for a course website
- ◆ generate a project brief for a course website
- ◆ describe the target audience for a course website (mcq)
- ◆ discuss the key areas of consideration in planning a course website — content, target audience, design concept (mcq)
- ◆ storyboard a website
- ◆ organise the collection of content (mcq)
- ◆ select and organise graphics
- ◆ set a style and voice for a website
- ◆ appreciate the need for matching design to audience and purpose (mcq)
- ◆ discuss the elements of good web page design (mcq)

The type of evidence required will be provided by a closed book objective test and a case study, as defined in the Evidence Requirements for Outcome 4.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

Outcome 2

Author and publish web pages for a course website.

Knowledge and/or skills

- ◆ generate pages for a student website
- ◆ understand the rules for organising, generating and editing content
- ◆ author web pages
- ◆ identify and select software required
- ◆ plan and organise content for a website
- ◆ ensure that website pages match learner needs
- ◆ identify and select website configuration
- ◆ publish web pages

Evidence Requirements

Candidates will need evidence to demonstrate their skills and/or knowledge by showing that they can:

- ◆ generate html pages
- ◆ layout pages for a student website
- ◆ define the role of editor
- ◆ select appropriate web authoring software (mcq)
- ◆ organise and edit web page production (mcq)
- ◆ publish web pages
- ◆ choose appropriate server options (mcq)
- ◆ be aware of potential difficulties in publishing pages to a website (mcq)

The type of evidence required will be provided by a closed book objective test and a case study, as defined in the Evidence Requirements for Outcome 4.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

Outcome 3

Devise strategies for maintaining learner interest in a website.

Knowledge and/or skills

- ◆ how to make websites more attractive to their users
- ◆ how to keep users involved.
- ◆ techniques for keeping websites fresh
- ◆ strategies for achieving learners' engagement

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ discuss the need for holding learners' attention
- ◆ discuss the need for effectiveness and efficiency in learners' engagement with a website.
- ◆ choose an appropriate strategy to achieve learner interest and engagement with website (mcq)
- ◆ evaluate the 'success' of existing material to meet the needs of the learning situation
- ◆ discuss a range of strategies for achieving 'sticky' websites (mcq)
- ◆ source new and interesting content for a website (mcq)
- ◆ manage the introduction of new website material (mcq)
- ◆ carry out traffic evaluation

The type of evidence required will be provided by a closed book objective test and a case study, as defined in the Evidence Requirements for Outcome 4.

Outcome 4

Discuss legislative issues concerned with course website management.

Knowledge and/or skills

- ◆ legislation on copyright and accessibility as it affects website design and construction
- ◆ how to design websites within the constraints of compliance with legislation and good practice

Higher National Unit specification: statement of standards (cont)

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ describe the main areas of website content to which copyright law applies (mcq)
- ◆ ensure that content is copyright free (mcq)
- ◆ discuss disability legislation and the types of accessibility covered by this (mcq)
- ◆ discuss the main ways in which disability legislation affects website design (mcq)
- ◆ produce pages which are bobby compliant:
<http://bobby.watchfire.com/bobby/html/en/index.jsp>
- ◆ use accessibility compliance services

The type of evidence required will be provided by a closed book objective test and a case study, as defined below.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

The Objective Test Instrument of Assessment

The test will be in the form of multiple choice questions (mcq). The questions set should be designed to test the list of Evidence Requirements with (mcq) written after each of the outcomes.

The objective test instrument of assessment consists of a written examination of one hour. The score given will reflect the candidate's achievement on the first assessment event. A candidate may wish to retake the assessment but this should be based on a significantly different examination. The examination should be unseen and the assessment should be conducted in controlled and invigilated conditions. The candidate will be expected to answer examination questions without the aid of reference and/or source materials.

The examination should be designed to assess the candidate's critical knowledge and understanding of the topics relating to the specific aims of this Unit.

The overall total mark for the examination is 100, the cut-off score being 50.

The examination must consist of four sections corresponding to each of the four outcomes, with an additional problem section covering all outcomes. Each section will consist of five multiple choice questions, each with four alternative answers (A-D). The questions will be worth four marks each, with the penalty for a wrong answer being -1.

The Case Study

The case study must allow the candidate to exhibit mastery of each outcome within a holistic assessment of the Unit. Any web pages produced in the study must be usable in a learning situation and must comply with appropriate standards such as National Learning Network Guidelines (www.nln.ac.uk), Institute for IT Training (www.iitt.org.uk), Bobby (<http://bobby.watchfire.com/>). Any analysis of a website must be at a professional level using appropriate standards such as IITT Website Usability standards, Bobby, W3C or other such standards.

The candidate's knowledge and/or skills will be demonstrated by analysis of an appropriate extended case study that provides the opportunity to cover all items in the Evidence Requirements shown in each outcome.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

The extended case study must be given to candidates as soon as possible after the start of the Unit to allow time for the assimilation of information by candidates. Lecturers should feel free to answer questions or clarify any misunderstandings relating to the case study that candidates may have. Lecturers should encourage discussion of the case study in relation to the main areas of study throughout the Unit.

The candidate must be given a date for completion of the case study. However, the instructions for the assessment task should be distributed to allow the candidate sufficient time to assimilate the details and carry out the assessment task. During the time between the distribution of the assessment task instructions and the completion date, assessors may answer questions, provide clarification, guidance and reasonable assistance. The assessment task should be marked as soon as possible after the completion date.

The case study must be developed independently, not working as part of a group. If candidates wish to work as a group, the exercise should be broken in such a manner that each member of the group can submit an independent case study. It is up to centres to take reasonable steps to ensure that the case study is the work of the candidate. For example, centres may wish to question candidates informally at various stages on their knowledge and understanding of the study on which they have embarked. Centres should ensure that where research, etc is carried out in other establishments or under the supervision of others that the candidate does not receive undue assistance.

Instructions for designing the case study

There are two options for the case study.

Option 1

The case study will consist of a design for a course website for a particular course. The case study must require the candidate to:

- ◆ analyse the task and decide on a course of action for undertaking the study
- ◆ plan and organise work and carry it through to completion
- ◆ reflect on what has been done and draw conclusions for the future

The case study will involve the candidate in using relevant material from their own experience, reading or from course work and in preparing a short presentation that addresses the success or otherwise of the selected course website, making recommendations for future website developments.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

The candidate will be required to produce a report as described below:

Section Title	Quality Metric
Introduction and Project Brief	The brief will be included in the report with an introduction by the candidate discussing the brief. This will be a few paragraphs long.
Description of intended target group	This will be a description of intended audience and user environment. Typically this will be about two pages of typescript.
Plan of website architecture	Using structure diagrams, typically half a page long.
Storyboard	Story board for website. Typically a few pages long.
Outline of production and editing processes	Description of process to produce site, one page long, with diagram, showing team functionality.
Intended publishing strategy — server choice etc.	System diagram and perhaps half a page of text.
Strategies for encouraging ‘stickyness’	This would probably be about 300 words long.
Some sample pages	This would cover about five minutes of reading time — which comply with accessibility and copyright requirements
Evaluation	The site should be evaluated by users and also tested against standards. The site should be evaluated by Bobby http://bobby.watchfire.com/ and be compliant with the IITT standards for websites: www.iitt.org.uk . Other standards such as W3C can be used.

Option 2

The case study will be an investigation of a current course website for a particular course. The analysis of the website must be at a professional level using appropriate standards such as IITT Website Usability standards, Bobby, W3C or other such standards. In this case the candidate will be required to produce a report with the following elements:

Section Title	Quality Metric
Introduction and overview of site	This would be a single page report indicating the purpose of the site.
Intended user groups	A single page describing user indicating level of educational attainment, reading capability, and so on.
Compliance with accessibility	The site should be analysed to evaluate its compliance with accessibility standards.
Navigation strategy	A short report detailing navigation strategy and criticising the efficiency of the site.
Appropriateness of content	A report of about a page detailing the content against user needs.
General usability of site	A report measuring the site against the IITT standards.
Strategy for development	A short one page report indicating how the site can be developed, extended or improved.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Website Development

Assessment guidelines

The assessment for this Outcome will be combined with Outcomes 1, 2 and 3 as part of a holistic assessment instrument for the Unit, details of which are given above. The assessment is in 2 parts, the first being an objective test, the second being a report discussing a case study based on work done for the Unit, or drawing on personal experience. Objective Tests should be closed book. Candidates must pass both elements.

Centres should be aware of the IITT standards (www.iitt.org.uk). It may also help if they are aware of the various guidelines from the National Learning Network (www.nln.ac.uk), further sources of information can be found from the Centre for Educational Technology Interoperability Standards (www.cetis.ac.uk).

The sample components should represent about five minutes of learning. This will be a value judgement and is given as a guide to the amount of content produced. There will of course be trade-off between complexity and length.

Administrative Information

Unit code:	DE10 35
Unit title:	e-Learning: Production: Website Development
Superclass category:	CE
Date of publication:	September 2003
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Higher National Unit specification: support notes

Unit title: e-Learning: Production: Website Development

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 80 hours.

Guidance on the content and context for this Unit

The Unit is primarily intended for lecturing, teaching or training practitioners who have a current involvement in developing online content; or, who would like to develop online content. The Unit is primarily intended to prepare candidates to undertake the development of a course website.

It would be possible to present this Unit with relatively simple resources. It may be that centres have access to commercial software for authoring and graphics. However, quizzes can be developed using freely available software packages, and other software is either free or included with basic operating systems. Sound recordings can be made with the free audio software, and videos made using basic level digital equipment.

The aim of this Unit is to give candidates the skills, knowledge and confidence necessary to develop a website for e-Learning.

The Unit adopts a structured approach to the development process from planning and designing through to authoring and maintenance to ensure that the selection and deployment of content matches learning requirements and context of use, that the website is well designed and will be well used by the client group. The Unit prepares the candidate to work in a legal manner, and to develop websites which recognise accessibility and other requirements. It prepares candidates for this role by providing them with the underpinning knowledge needed to carry out this type of development effectively.

Candidates will be expected to exercise a significant degree of autonomy in carrying out the tasks required for the Unit.

There is no prescription regarding hardware and software facilities. However, the relevant facilities should be available to the candidate throughout the duration of the Unit. Candidates may also gain significant skills in the use of application packages, such as HTML Generators or specific authoring packages, these are not directly assessable.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Website Development

Outcome 1

This will consist of planning and designing a course website. The candidate should be encouraged to think about the issues involved in planning a course website, to consider how to construct a project brief, and look at the list of topics which need to be considered for inclusion on a course website. This will require investigating the user needs of the audience for the website. The audience will typically consist of learners, tutors, casual users and perhaps others. The candidate should be introduced to what key areas should be included for consideration in planning a course website. These would include content, target audience and design concept. Also technological issues should be introduced such as infrastructure for the site, authoring tools and methodologies and so on.

The candidate should be introduced to the ideas of content acquisition, collation and editing. They should appreciate the importance of style and voice in the website deployment.

The candidate will look at the issues that are associated with designing web pages - such as choice of page elements, colour balance, and how to make a user-friendly web page. They should be given some guidance on the principles of good design and relating design choices to user needs. The candidate should be introduced to the concept of usability.

Hardware and software facilities include those required to develop the content and those required to publish it. Candidates will be required to be familiar with the processes of research in order to investigate task and user requirements.

Learning Object approach — keeping a degree of independence between course resources to promote reuse.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Website Development

Outcome 2

The candidate will be introduced to the technical aspects of producing web pages, including the various options for deployment of a site. This would cover choosing an Internet Service Provider (ISP) and what server options are available for a particular application. This could cover elements of hosting, or homesteading. The candidate should be able to select appropriate software for uploading the website and be able to use this software. The candidate should research the potential difficulties in publishing web pages.

The candidate could research what software would be available to them in a particular situation for the development of web pages, selecting appropriate software to meet their specific brief. The concepts involved in planning and organising the production of a website would be covered.

It is probable that a significant methodology for the planning of a website will be storyboarding.

Outcome 3

This will look at how to make websites more attractive to their users and better capable of keeping users involved. The focus will be on techniques for keeping websites fresh, and usable. The centre should focus on a discussion of concepts such as stickiness, and maintainability. Review techniques and traffic evaluation should be discussed, as should the use of the site to develop a community of users who use the site for communication.

This will introduce the use of cookies, javascript and templates for ease of updating of sections of the site.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Website Development

Outcome 4

This outcome will discuss legislative issues concerned with course website management. It will look at how to ensure that the website is compliant with relevant legislation on copyright and accessibility. The focus will be on advising how to identify and avoid the main pitfalls. The candidate should use the internet to research copyright and other problems associated with publishing on the web.

This will also consider issues with regard to accessibility from the point of view of good practice and the new disability legislation.

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a Group Award that is primarily designed to provide candidates with technical or professional knowledge and skills related to the development of online learning. The Unit is highly practical in nature, so formal delivery should be kept to a minimum, with candidates being encouraged to gain as much practical experience as possible and explore the features of hardware and software.

Assessment will be by an objective test and a case study. Candidates who are in employment may be able to identify a suitable project at their centre, for example, developing an online course for their centre's portfolio, or a training package for a new business or procedure.

New assessments should be used for re-assessment purposes.

Higher National Unit specification: support notes (cont)

Unit title: e-Learning: Production: Website Development

Centres should be aware of the IITT standards (www.iitt.org.uk). It may also help if they are aware of the various guidelines from the National Learning Network (www.nln.ac.uk), further sources of information can be found from the Centre for Educational Technology Interoperability Standards (www.cetis.ac.uk).

The sample components should represent about 10 minutes of learning. This will be a value judgement and is given as a guide to the amount of content produced. There will of course be trade-off between complexity and length.

Open learning

This Unit is ideal for delivery by e-Learning techniques. In particular, centres may wish to consider the Scottish Further Education Unit (SFEU) course on Developing a Course Website (www.sfeu.ac.uk) as providing guidance on the Knowledge underpinning for this Unit.

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes. For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (A1030, February 2001).

It is recommended that if online learning is used for this Unit, the activities can be spread as follows:

Component	Hours	Percentage
Online Study	40	50
Case Study	20	25
Assessment preparation	5	6.25
Discussion Group Activity	10	12.5
Research	5	6.25
Total	80	100

Special needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (AA0645/3, December 2001).

General information for candidates

Unit title: e-Learning: Production: Website Development

This Unit is aimed at any lecturer or trainer who is interested in developing a course website. That doesn't mean that you have to be doing these things already. The Unit is developed from an introductory level, with complex ideas or technical subjects being approached gradually.

The Unit can be approached using relatively simple resources. At the present time it is possible to carry out most of the learning using free or non-commercial software. Perhaps it would be better to use commercial quality software for authoring or graphics, but even here, it is possible to use low-cost solutions. For example, quizzes can be developed using freely available software packages. Similarly, sound recordings can be made with the free Windows audio software, and videos made using basic level digital equipment.

The Unit is about the skills and techniques required to develop your own course website. It has four main areas each of which is subject to a separate outcome. To begin with (Outcome 1) you will develop the skills and knowledge to plan and design a course website. You will then (Outcome 2) develop techniques for authoring and publishing web pages for a website which you may have designed. Once a course website is published it is necessary to maintain it. You will then (Outcome 3) devise strategies for maintaining learner interest in a course website. All of this work has to be carried out in the context of various legislative issues (Outcome 4)

Overall, you will be expected to use the knowledge and skills from the Unit to enable you to develop a course website.

Assessment will be by means of a case study and an objective test covering all the outcomes.

In order to complete this Unit successfully, you will be required to achieve a satisfactory level of performance in all assessed work.

Higher National Unit Specification

General information for centres



Unit title: e-Learning: Production: Project Management for Content Production

Unit code: DE0Y 35

Unit Purpose: This Unit is designed to develop a broad general knowledge and understanding of the theoretical concepts and principles of project management of e-Learning content production. The Unit develops general principles of project management in the context of the development of online learning, and provides the candidate with the broad background knowledge of project management required for working in a project team.

The Unit is intended as a Unit within a Professional Development Award for practising tutors, trainers, teachers and lecturers. It is intended that the Unit will demonstrate how much can be done with relatively simple resources.

On completion of the Unit the Candidate should be able to:

1. Establish organisational and individual factors influencing project team selection.
2. Plan project development work.
3. Schedule development work in the context of a quality system to a project brief.
4. Manage, develop and modify learning design and production, in the context of evolving international standards.

Credit value: 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8)

SCQF (the Scottish Credit and Qualifications Framework) brings Scottish qualifications into a single framework of 12 levels ranging from SQA Access 1 to doctorates. The SCQF includes degrees; HNC/Ds; SQA National Qualifications; and SVQs. Each SQA Unit is allocated a number of SCQF credit points at a specific level. 1 SCQF point = 10 hours of learning. HN candidates are normally expected to input a further number of hours, matched to the credit value of the Unit, of non-contact time or candidate-led effort to consolidate and reinforce learning.

Recommended prior knowledge and skills: Access to this Unit will be at the discretion of the Centre. It would be beneficial if candidates had some general communication and practical computing skills such as might be demonstrated by the achievement of Units in Communication and Using Information Technology at

General information for centres (cont)

Unit title: e-Learning: Production: Project Management for Content Production

Unit code: DE0Y 35

Intermediate 2. Candidates should have experience of design and delivery of learning in a traditional context. Candidates should have been involved in resource based learning.

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: This Unit is included in the framework of a PDA Diploma in e-Learning: Production. It is recommended that it should be taught and assessed within the subject area of the Group Award to which it contributes.

Assessment: The Unit must be assessed by two short written assessments for Outcome 1 and one for Outcome 2. Outcome 3 and Outcome 4 will be assessed by issuing the candidate with user requirements details for the development of a project, and the candidate will prepare a schedule of development work for that project, meeting the user's needs and the Evidence Requirements for these Outcomes. The resulting printouts will be representative of the evidence that would be presented to management decision makers in a real life situation.

The two written assessments for Outcome 1 and Outcome 2 will be open book.

Higher National Unit specification: statement of standards

Unit title: e-Learning: Production: Project Management for Content Production

Unit code: DE0Y 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Establish organisational and individual factors influencing project team selection.

Knowledge and/or skills

- ◆ Management structures, eg function oriented, project oriented, matrix
- ◆ Factors influencing the selection and effectiveness of team members: roles, skills required, personalities, skills overlap and skills underlap, resource erosion, group dynamics
- ◆ Communication within the project team
- ◆ Influences of different team members and their roles

Evidence Requirements

Candidates will need evidence to demonstrate their knowledge and/or skills by showing that she/he can:

- ◆ describe different management structures and their influence on project development
- ◆ describe different team member roles and their influence on project development
- ◆ describe **three** factors affecting the selection and effectiveness of the project team, and their influence, selected from the seven shown in knowledge and skills, ie roles, skills required, personalities, skills overlap and skills underlap, resource erosion, group dynamics
- ◆ evaluate the influence of the above factors on communication within the project team

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project Management for Content Production

Report Number 1

Evidence for the above will be gathered from candidates in the form of a short written report. The report will be written under examination conditions. This assessment will be closed book, with the candidate having no access to any materials other than the question paper. Annotated diagrams should be used to support the responses where appropriate. The report will be a response to a prepared brief, with the candidate designing an e-Learning Content Production Team. The report will be about one page long with supporting diagrams annexed.

Report Number 2

This assessment will take the form of a report prepared and submitted by teams of candidates and assessed collectively for each team.

Each group will be issued with a Project Brief from a college department requiring the establishment of an e-Learning Development team to undertake a specified project. The task of each team of candidates will be to prepare a report for management recommending a suitable structure and make-up of the project team, with references to any problems that may be encountered.

Each group will then appoint a team leader, and by negotiation, each group will allocate one of the above topics, ie management structures, team structures or factors influencing individuals, to each of the team members who then research the topic and prepare a suitable written response. The response from each individual team member should be a short report of about half a page. When all team members have completed their task, the team leader will recall the team and each member shall brief the other members on information gathered. Under the guidance of the team leader, the team will prepare a short final report recommending the most appropriate management structure and team structure for the project. This should also include references to at least three factors which may influence the individual team members, with recommendations as to how they may be controlled. References should also be made to the impact which the different structures and factors may have on team communications, recommending contingency plans to avoid any communications difficulties.

Evidence for this assessment will be one copy of the completed report from each team.

Higher National Unit specification: statement of standards (cont)

Assessment guidelines

It is recommended that centres take the opportunity to encourage candidates to work together in teams to consider these factors influencing project development work.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project Management for Content Production

Outcome 2

Plan project development work.

Knowledge and/or skills

- ◆ establishing the key phases of project development
- ◆ determining the planning tasks in each phase
- ◆ identifying critical factors in each phase
- ◆ establishing milestones and critical paths in each phase
- ◆ determining the deliverables of each phase
- ◆ determining the resources required for a given project
- ◆ identifying and selecting tools for facilitating project management
- ◆ identifying and managing risk

Evidence Requirements

In order to achieve this Outcome the candidate will produce a project plan. The plan should include the following information: start and finish dates, work hours and times, staff, resources, national and local holidays, pay rates, resource costs.

Assessment guidelines

The assessment should consist of a written exercise in the format detailed within the Evidence Requirements above.

Each stage should contain a minimum of four sub-tasks.

The candidate should continue to use the Project Brief issued for Outcome 1, detailing the need for a project to be undertaken. A further supplement should be issued to the candidate with more specific details of project requirements.

The written evidence may take the form of short responses referencing each of the above points.

A pro forma may be used by the candidate to document the responses.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project Management for Content Production

Outcome 3

Schedule development work in the context of a quality system to a project brief.

Knowledge and/or skills

- ◆ initiating a project schedule
- ◆ determining phase constraints
- ◆ determining Interactive phases and tasks
- ◆ determining resource constraints of each phase
- ◆ determining resource pool
- ◆ assigning resources to tasks
- ◆ identifying resource constraints with the production of various levels of interactivity
- ◆ identifying and applying quality controls
- ◆ determining documentation requirements of project
- ◆ creating base documents for the project including rights documentation
- ◆ generating meaningful annotated reports

Evidence Requirements

The candidate will show that she/he can schedule the development of a given project brief which includes all of the above knowledge and skills topics. Success in this Outcome will be evidenced by the production of appropriate reports as required by the project brief. It may be appropriate for a candidate to use a Project Management Tool. The candidate will produce a project schedule.

The candidate will continue to use the same Project Brief specifications as issued previously.

The candidate will select a project management methodology and software support tool to develop a schedule for this brief. In the absence of software tools, the candidate will use the standard formats from their chosen project management methodology.

Using the project management software, or standard formats, the candidate will then be required to produce evidence to meet the tasks outlined above.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project Management for Content Production

Assessment guidelines

If possible, the candidate should have access to appropriate project management software throughout.

Outcome 4

Manage, develop and modify learning design and production, in the context of evolving international standards

Knowledge and/or skills

- ◆ identifying the main models of learning design
- ◆ factors which affect choice of learning design model
- ◆ identifying the main models of organising online learning production
- ◆ factors which affect choice of production model, including interactivity
- ◆ managing the level of interactivity
- ◆ balancing the requirements of a project with available resources
- ◆ conforming to standards and specifications in Accessibility, Metadata and Content Development

Evidence Requirements

The candidate will develop and modify a prepared project schedule to meet the requirements of a given project brief which includes all of the above knowledge and skills topics. Success in this Outcome will be evidenced by the production of reports as required by the project brief.

Using the project schedule as prepared for Outcome 3, the candidate will be supplied with a supplementary list of requirements for modifications to be made to the schedule. The list of modification requirements must include at least one instance of each of the above knowledge and skills topics.

For example, the candidate may be required to develop a project with a minimum level of interactivity, and may be presented with a differing learning design.

Assessment guidelines

If possible, the candidate should have access to appropriate project management software throughout.

Administrative Information

Unit code:	SS/PMP
Unit title:	e-Learning: Production: Project Management for Content Production
Superclass category:	AG
Date of publication:	September 2003
Version:	01
Source:	SQA

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Higher National Unit specification: support notes

Unit title: e-Learning: Production: Project Management for Content Production

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

The Unit is primarily intended for lecturing, teaching or training practitioners who wish to use or are using online learning in their day-to-day work.

This Unit is primarily intended to provide candidates with the pre-requisite knowledge and skills required to conduct and manage an online learning project. Candidates should gain skills in the use of project management tools and techniques, including software solutions. As a result, candidates should be encouraged to work with project specifications and use these to learn about the various aspects of project management. If necessary the terminology used in the Unit can be adapted to suit the relevant workplace situation. Candidates should be able to progress to courses in Higher Education that contain significant elements on project management. The whole of this Unit should be centred on the notion of working with others and as such team working should be encouraged throughout.

Outcome 1

This outcome looks at the factors which influence project development and progression. Essentially, it sets the scene within which a project development team must operate. Candidates should become familiar with relevant terminology and should make use of this in describing influencing factors. Candidates should be encouraged to consider the reasons why a particular organisational structure has been chosen and why other forms of structure are less appropriate or unsuitable. Candidates should also be introduced to the human, organisational, managerial and other factors that influence the productivity of the team. Factors such as roles, skills required, personalities, skills over and underlap, resource erosion, group dynamics, etc, should be explored to highlight the nature of, and problems associated with, working on projects. Candidates should also consider the impact of these factors on communication within the team.

Higher National Unit specification: support notes

Unit title: e-Learning: Production: Project Management for Content Production

Outcome 2

Outcome 2 looks at the requirements for planning project development work. Candidates should learn about the phases and sub-tasks in the development of a project schedule and the techniques used in scheduling tasks and resources. Candidates should learn about the importance of deliverables in meeting project milestones and their function.

Outcome 3

Outcome 3 is about learning how to prepare a project development schedule. It includes the range of basic project management skills as listed in the knowledge and skills section for this Outcome. It also includes the development of skills in quality control, and documentation. The issue of interactivity is addressed — what it is and why it is a key element of online courses. The consequences of using the tools available to enhance interactivity should be considered and also, how to reconcile these with project constraints such as the available resources.

Outcome 4

Outcome 4 focuses on two linked areas of learning design and learning production. The project manager should be aware of the different possible models which may be followed in each of these areas, and the implications these choices will have for resources.

This outcome also should examine the issues needed to be considered when managing the standards issues which relate to online learning in three key areas — Accessibility, Metadata and Content — and show how to integrate these issues into the project plan.

Guidance on the delivery and assessment of this Unit

This Unit is likely to form part of a group award that is primarily designed to provide candidates with project management knowledge and skills related to the development of online learning applications.

Higher National Unit specification: support notes

Unit title: e-Learning: Production: Project Management for Content Production

Assessment will be by short responses on a case study which could form the basis for a project that will be undertaken as and when appropriate. Candidates who are in employment may be able to identify a suitable project at their centre, for example, developing an online course for their centre's portfolio, or a training package for a new business or procedure.

Open learning

This Unit is ideal for delivery by e-Learning techniques. In particular, centres may wish to consider the Scottish Further Education Unit (SFEU) course on Project Management for Developing Online Learning (www.sfeu.ac.uk) as providing guidance on the Knowledge underpinning for this Unit.

If this Unit is delivered by open or distance learning methods, additional planning and resources may be required for candidate support, assessment and quality assurance. A combination of new and traditional authentication tools may have to be devised for assessment and re-assessment purposes. For further information and advice, please see *Assessment and Quality Assurance for Open and Distance Learning* (A1030, February 2001).

Special needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (AA0645/3, December 2001).

General information for candidates

Unit title: e-Learning: Production: Project Management for Content Production

This Unit is about the skills and techniques required to manage an e-Learning Content Production Project. The Unit develops the skills required for such activity. The Unit has four main areas, each corresponding to a discrete outcome.

In the first area (Outcome 1) the organisational and individual factors influencing team design are considered. You will investigate the different methods of team construction for a particular e-Learning brief. Next, (Outcome 2) you will develop the skills to enable you to construct a project plan. This will involve you in all the key phases of project planning.

You will then (Outcome 3) develop a project schedule in the context of quality systems. This schedule will also be to a specific project brief. Lastly, you will be considering project planning for e-Learning projects in the context of evolving international standards. This will involve you in managing the development and modification of content design and production. (Outcome 4)

Overall, you will be expected to use the knowledge and skills from the Unit to enable you to plan and manage an online learning project.

Assessment will either be by means of short responses to a case study for each of the four Outcomes.

In order to complete this Unit successfully, you will be required to achieve a satisfactory level of performance in all assessed work.

Higher National Unit Specification

General information for centres

Unit title: e-Learning: Production: Project

Unit code: DE0F 35

Unit purpose: This Integrative Unit is designed to provide evidence that the candidate has achieved the following aims of the Diploma in e-Learning.

On completion of the Unit, the candidate will be able to:

1. Demonstrate the skills necessary to design online learning content to appropriate standards, in accordance with a recognised methodology and produce an appropriate user validation and evaluation strategy.
2. Demonstrate the skills of using e-Learning toolsets to develop e-Learning Content.
3. Demonstrate clear understanding of the issues of interoperability, and the skills to integrate new content with established learning environments.

Credit value: 1 HN Credit at SCQF level 8: (8 SCQF credit points at SCQF level 8)

SCQF (the Scottish Credit and Qualifications Framework) brings Scottish qualifications into a single framework of 12 levels ranging from SQA Access 1 to doctorates. The SCQF includes degrees; HNC/Ds; SQA National Qualifications; and SVQs. Each SQA Unit is allocated a number of SCQF credit points at a specific level. 1 SCQF point = 10 hours of learning. HN candidates are normally expected to input a further number of hours, matched to the credit value of the Unit, of non-contact time or candidate-led effort to consolidate and reinforce learning.

Recommended prior knowledge and skills: Access to the Unit is at the discretion of the Centre. However, it is recommended that the candidate should have completed or be in the process of completing the following Units relating to these specific aims prior to undertaking this Integrative Unit:

- ◆ HN Unit e-Learning: Production: Writing and Developing Materials
- ◆ HN Unit e-Learning: Production: Project Management for Content Production
- ◆ HN Unit e-Learning: Production: Website Development

General information for centres (cont)

Unit title: e-Learning: Production: Project

Unit code: DE0F 35

Core Skills: There may be opportunities to gather evidence towards Core Skills in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

Context for delivery: If this Unit is delivered as part of a Group Award, it is recommended that it should be taught and assessed within the subject area of the group award to which it contributes.

Assessment: This Unit will be assessed by a single instrument of assessment which will require the candidate to report on his/her own research and practice. Appropriate source evidence should support the report. The 'fleshed-out' Practical Assignment should provide the candidate with the opportunity to produce evidence which demonstrates she/he has met the aims of the Group Award which this Integrative Unit is intended to cover.

Higher National Unit specification: statement of standards

Unit title: e-Learning: Production: Project

Unit code: DE0F 35

The sections of the Unit stating the Outcomes, knowledge and/or skills, and Evidence Requirements are mandatory.

Please refer to *Knowledge and/or skills for the Unit* and *Evidence Requirements for the Unit* after the Outcomes.

Where evidence for Outcomes is assessed on a sample basis, the whole of the content listed in the knowledge and/or skills section must be taught and available for assessment. Candidates should not know in advance the items on which they will be assessed and different items should be sampled on each assessment occasion.

Outcome 1

Demonstrate the skills necessary to design online learning content to appropriate standards, in accordance with a recognised methodology and produce an appropriate user validation and evaluation strategy.

Outcome 2

Demonstrate the skills of using e-Learning toolsets to develop e-Learning content.

Outcome 3

Demonstrate clear understanding of the issues of interoperability, and the skills to integrate new content with established learning environments.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project

Knowledge and/or skills for the Unit

Stage 1: Planning

- ◆ analysing what is involved in the project, ie identification of the factors influencing the project and how they relate to one another
- ◆ developing an approach to deal with the project, ie the candidate may select a new approach to the project or modify an existing approach
- ◆ selecting and justifying the approach, eg resources and time available, comparison with other possible approaches
- ◆ developing a plan to carry out the project based on the analysis undertaken
- ◆ identifying the resources required to carry out the project, eg sources of information, procedures to be followed, people, equipment and other physical resources; resources should be wide ranging and some should be unfamiliar to the candidate
- ◆ obtaining required resources — the candidate may need to do some searching

Stage 2: Developing

- ◆ carrying out the project, meeting the requirements of the plan and managing the project.
- ◆ applying the knowledge and/or skills acquired in HN Units e-Learning Production: Writing and Developing Materials; e-Learning: Production: Project Management for Content Production; e-Learning: Production: Website Development.

Stage 3: Evaluating

- ◆ evaluating the effectiveness of the approach/strategy taken which includes all stages of the activity, ie analysis of the activity, the planning and organisation of the activity and the outcome of the activity.

Evidence Requirements for the Unit

The candidate should be given a date for completion of the practical assignment. However, the instructions for the assessment task should be distributed to allow the candidate sufficient time to assimilate the details and carry out the assessment task. During the time between the distribution of the assessment task instructions and the completion date, assessors may answer questions, provide clarification, guidance and reasonable assistance. The assessment task should be marked as soon as possible after the completion date. The final grading given should reflect the quality of the candidate's evidence at the time of the completion date. Reassessment of this Integrative Assessment should be based on a significantly different assessment task.

Higher National Unit specification: statement of standards (cont)

Unit title: e-Learning: Production: Project

At this level, candidates should work independently, ie without undue assistance from the assessor. It is up to centres to take reasonable steps to ensure that the project is the work of the candidates. For example, centres may wish to question candidates informally at various stages on their knowledge and understanding of the project on which they have embarked. Centres should ensure that where research (etc) is carried out in other establishments or under the supervision of others that the candidate does not receive undue assistance.

Instructions for designing the integrative task

The assessment task is a project to develop online support materials for a specific learner group. The project undertaken by the candidate must be a complex task which involves:

- ◆ clearly defined learner population
- ◆ clearly defined learning aims and objectives
- ◆ an identifiable pedagogy
- ◆ relationships which need to be clarified
- ◆ a context which may be familiar or unfamiliar to the candidate.
- ◆ clearly defined Implementation Environment

The assessment task must require the candidate to:

Plan

- ◆ analyse user needs
- ◆ analyse the task and decide on a course of action for undertaking the project
- ◆ plan and organise work and carry it through to completion
- ◆ reflect on what has been done and draw conclusions for the future
- ◆ produce evidence of meeting the validated aims which this Integrative Assessment has been designed to cover.

Develop

- ◆ a learning application design, produced to the implementation of a relevant learning style
- ◆ an evaluation strategy
- ◆ tested learning objects for a significant subsection of a learning experience developed in accordance with the selected needs of the client user.
- ◆ a report documenting the underpinning processes and procedures
- ◆ a learning Plan and prototype learning log.

General information for centres

Unit title: e-Learning: Production: Project

Evaluate

The evaluation should include:

- ◆ identification of the criteria on which to base the evaluation
- ◆ identification and gathering of appropriate evidence, eg use of qualitative/quantitative methods, comparisons with other systems/products, impact studies, product testing or market research
- ◆ evaluation of the effectiveness of the problem solving activity, explaining the relevance of the evidence — the evaluation should be related to the original analysis of the project
- ◆ reference to any modifications to the approach during the course of the activity or to alternative approaches considered
- ◆ conclusions as to how the process of carrying out the project could be improved, with evidence to support the conclusions drawn
- ◆ recommendations for the future which are relevant to the problem and justify the recommendations

This project requires the candidate to produce an original piece of learnware.

Assessment guidelines for the Unit

It is suggested that the assessment for the Unit should take the form of a report. The candidate's report must be the product of the candidate's own research, practice and reflection. The report must include direct evidence of the candidate's practice in the design, specification, implementation, and evaluation of online learning. The candidate's report should be based on, but not limited to, the teaching/training context(s) in which the candidate has been active.

The requirement for the candidate to undertake his/her own research and reflection does not preclude the sharing of information and discussion among candidates.

Administrative Information

Unit code:	DE0F 35
Unit title:	e-Learning: Production: Project
Superclass category:	GB
Date of publication:	September 2003
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Source:	SQA

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Higher National Unit specification: support notes

Unit title: e-Learning: Production: Project

This part of the Unit specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

Guidance on the content and context for this Unit

This Unit should be undertaken by tutors/trainers experienced in the facilitation of e-Learning. Candidates should be encouraged to reflect on their own experience and training during the Unit.

Guidance on the delivery and assessment of this Unit

It is recommended that the Unit be delivered wholly or in part through online modes of communication. The candidate can use a transcript of online discussion on the topics of this Unit in his/her Unit assessment. Such use would require proper citation.

Open learning

This Unit could be delivered by open learning. It is recommended that the Unit be delivered wholly or in part through online modes of communication. Centres should refer to the SQA publication *Assessment and Quality Assurance of Open and Distance Learning* (A1030, February 2001).

Special needs

This Unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering special alternative Outcomes for Units. For information on these, please refer to the SQA document *Guidance on Special Assessment Arrangements* (AA0645/3, December 2001).

General information for candidates

Unit title: e-Learning: Production: Project

You will explore the main issues that surround the theory and practice of e-Learning. You will develop a project which will allow you to show skills and knowledge in the production of e-Learning content, whether web based or not. You will be able to show that you can provide evidence that you have achieved the following aims of the Unit:

- ◆ demonstrate the skills necessary to design online learning content to appropriate standards, in accordance with a recognised methodology and produce an appropriate user validation and evaluation strategy
- ◆ demonstrate the skills of using e-Learning toolsets to develop e-Learning Content
- ◆ demonstrate clear understanding of the issues of interoperability, and the skills to integrate new content with established learning environments.

This Unit is primarily intended for tutors/trainers experienced in the development of online learning. This Unit is part of the Diploma in e-Learning. You should complete the Units required for the Award before attempting this Unit and relate your work for the other Units in the Award to this Unit.

This Unit is assessed through a report based on a project. The report will be delivered in written form and through oral presentation.

Appendix 2: Membership of Steering Group

The development of the awards was undertaken by members of a Steering Group which was formed specifically to deal with these qualifications. The members of the Steering Group were:

John Gordon, Consultant, thethinkexchange

Bobby Elliot, SQA

John Edmonstone

Jean Henderson, SFEU

Gerry Graham, LTScotland

The work of the steering group was expedited by the use of Smartgroups. (www.smartgroups.com).

Appendix 3: SCQF Level Descriptors

Scottish Credit and Qualifications Framework

The following pages contain the SCQF Level Descriptors from Level 9 down to Level 6. In order to gain a reasonable view of 'levelling', Level 6 and Level 9 descriptors are included to offer an overview of where the 'start' and 'end' points are for Level 7 and Level 8 respectively.

SCQF Level 6 — (Higher, SVQ 3 are examples of qualifications at this level)

NB: The descriptors set out the characteristic generic outcomes of each level. They are intended to provide a general, shared understanding of each level and to allow broad comparisons to be made between qualifications and learning at different levels. They are not intended to give precise nor comprehensive statements and there is no expectation that every qualification or programme should have all of the characteristics. The descriptors have been developed through a series of consultations and are offered as a first working guide and will be revised in the light of feedback on their use.

Knowledge and Understanding	Practice: Applied knowledge and understanding	Generic Cognitive Skills	Communication, ICT and numeracy skills	Autonomy, accountability and working with others
Characteristic outcomes of learning at each level include the ability to:				
Demonstrate and/or work with: <ul style="list-style-type: none"> ◆ generalised knowledge of a subject/discipline ◆ factual and theoretical knowledge ◆ a range of facts, ideas, properties, materials, terminology, practices, techniques about/associated with a subject/discipline Relate the subject/discipline to a range of practical and/or everyday applications.	Apply knowledge and understanding in known, practical contexts. Use some of the basic, routine practices, techniques and/or materials associated with a subject/discipline in routine contexts which may have non-routine elements. Plan how skills will be used to address set situations and/or problems and adapt these as necessary.	Obtain, organise and use factual and theoretical information in problem solving. Make generalisations and predictions. Draw conclusions and suggest solutions.	Use a wide range of skills — for example: <ul style="list-style-type: none"> ◆ <i>produce and respond to detailed and relatively complex written and oral communication in both familiar and unfamiliar contexts</i> ◆ <i>select and use standard applications to process, obtain and combine information</i> ◆ <i>use a wide range of numerical and graphical data in routine contexts which may have non-routine elements</i> 	Take responsibility for the carrying out of a range of activities where the overall goal is clear under non-directive supervision. Take some supervisory responsibility for the work of others and lead established teams in the implementation of routine work. Manage limited resources within defined and supervised areas of work. Take account of roles and responsibilities related to the tasks being carried out and take a significant role in the evaluation of work and the improvement of practices and processes.

SCQF Level 7 — (SHE level 1, Cert HE, HNC, Advanced Higher are examples of qualifications at this level)

NB: The descriptors set out the characteristic generic outcomes of each level. They are intended to provide a general, shared understanding of each level and to allow broad comparisons to be made between qualifications and learning at different levels. They are not intended to give precise nor comprehensive statements and there is no expectation that every qualification or programme should have all of the characteristics. The descriptors have been developed through a series of consultations and are offered as a first working guide and will be revised in the light of feedback on their use.

Knowledge and Understanding	Practice: Applied knowledge and understanding	Generic Cognitive Skills	Communication, ICT and numeracy skills	Autonomy, accountability and working with others
Characteristic outcomes of learning at each level include the ability to:				
<p>Demonstrate and/or work with:</p> <ul style="list-style-type: none"> ◆ a broad knowledge of the subject/discipline in general ◆ knowledge that is embedded in the main theories, concepts and principles ◆ an awareness of the evolving/changing nature of knowledge and understanding ◆ an understanding of the difference between explanations based in evidence and/or research and other forms of explanation and of the importance of this difference 	<p>Use some of the basic and routine professional skills, techniques, practices and/or materials associated with a subject/discipline.</p> <p>Practise these in both routine and non-routine contexts.</p>	<p>Present and evaluate arguments, information and ideas which are routine to the subject/discipline.</p> <p>Use a range of approaches to addressing defined and/or routine problems and issues within familiar contexts.</p>	<p>Use a wide range of routine skills and some advanced skills associated with the subject/discipline — for example:</p> <ul style="list-style-type: none"> ◆ <i>convey complex ideas in well-structured and coherent form</i> ◆ <i>use a range of forms of communication effectively in both familiar and new contexts</i> ◆ <i>use standard applications to process and obtain a variety of information and data</i> ◆ <i>use a range of numerical and graphical skills in combination</i> ◆ <i>use numerical and graphical data to measure progress and achieve goals/targets</i> 	<p>Exercise some initiative and independence in carrying out defined activities at a professional level</p> <p>Take supervision in less familiar areas of work.</p> <p>Take some managerial responsibility for the work of others within a defined and supervised structure.</p> <p>Manage limited resources within defined areas of work.</p> <p>Take the lead in implementing agreed plans in familiar or defined contexts.</p> <p>Take account of own and others' roles and responsibilities in carrying out and evaluating tasks.</p> <p>Work with others in support of current professional practice under guidance.</p>

SCQF Level 8 — (SHE level 2, Dip HE, HND, SVQ 4 are examples of qualifications at this level)

NB: The descriptors set out the characteristic generic outcomes of each level. They are intended to provide a general, shared understanding of each level and to allow broad comparisons to be made between qualifications and learning at different levels. They are not intended to give precise nor comprehensive statements and there is no expectation that every qualification or programme should have all of the characteristics. The descriptors have been developed through a series of consultations and are offered as a first working guide and will be revised in the light of feedback on their use.

Knowledge and Understanding	Practice: Applied knowledge and understanding	Generic Cognitive Skills	Communication, ICT and numeracy skills	Autonomy, accountability and working with others
<p>Characteristic outcomes of learning at each level include the ability to:</p> <ul style="list-style-type: none"> ◆ Demonstrate and/or work with: <ul style="list-style-type: none"> ◆ a broad knowledge of the scope, defining features, and main areas of a subject/discipline ◆ detailed knowledge in some areas ◆ understanding of a limited range of core theories, principles and concepts ◆ limited knowledge and understanding of some major current issues and specialisms ◆ an outline knowledge and understanding of research and equivalent scholarly/academic processes 	<p>Use a range of routine skills, techniques, practices and/or materials associated with a subject/discipline, a few of which are advanced or complex.</p> <p>Carry out routine lines of enquiry, development or investigation into professional level problems and issues.</p> <p>Adapt routine practices within accepted standards.</p>	<p>Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues which are within the common understandings of the subject/discipline.</p> <p>Use a range of approaches to formulate evidence-based solutions/responses to defined and/or routine problems/issues.</p> <p>Critically evaluate evidence-based solutions/responses to defined and/or routine problems/issues.</p>	<p>Use a range of routine skills and some advanced and specialised skills associated with a subject/discipline, for example:</p> <ul style="list-style-type: none"> ◆ convey complex information to a range of audiences and for a range of purposes ◆ use a range of standard applications to process and obtain data ◆ use and evaluate numerical and graphical data to measure progress and achieve goals/targets 	<p>Exercise autonomy and initiative in some activities at a professional level.</p> <p>Take significant managerial or supervisory responsibility for the work of others in defined areas of work.</p> <p>Manage resources within defined areas of work.</p> <p>Take the lead on planning in familiar or defined contexts.</p> <p>Take continuing account of own and others' roles, responsibilities and contributions in carrying out and evaluating tasks.</p> <p>Work in support of current professional practice under guidance.</p> <p>Deal with ethical and professional issues in accordance with current professional and/or ethical codes or practices under guidance.</p>

SCQF Level 9 — (SHE level 3, Ordinary degrees are examples of qualifications at this level)

NB: The descriptors set out the characteristic generic outcomes of each level. They are intended to provide a general, shared understanding of each level and to allow broad comparisons to be made between qualifications and learning at different levels. They are not intended to give precise nor comprehensive statements and there is no expectation that every qualification or programme should have all of the characteristics. The descriptors have been developed through a series of consultations and are offered as a first working guide and will be revised in the light of feedback on their use.

Knowledge and Understanding	Practice: Applied knowledge and understanding	Generic Cognitive Skills	Communication, ICT and numeracy skills	Autonomy, accountability and working with others
Characteristic outcomes of learning at each level include the ability to:				
<p>Demonstrate and/or work with:</p> <ul style="list-style-type: none"> ◆ a broad and integrated knowledge and understanding of the scope, main areas and boundaries of a subject/discipline ◆ a critical understanding of a selection of the principal theories, principles, concepts and terminology ◆ knowledge that is detailed in some areas and/or knowledge of one or more specialisms that are informed by forefront developments 	<p>Use a selection of the principal skills, techniques, practices and/or materials associated with a subject/discipline.</p> <p>Use a few skills, techniques, practices and/or materials that are specialised or advanced.</p> <p>Practise routine methods of enquiry and/or research.</p> <p>Practise in a range of professional level contexts which include a degree of unpredictability.</p>	<p>Undertake critical analysis, evaluation and/or synthesis of ideas, concepts, information and issues.</p> <p>Identify and analyse routine professional problems and issues.</p> <p>Draw on a range of sources in making judgements.</p>	<p>Use a range of routine skills and some advanced and specialised skills in support of established practices in a subject/discipline, for example:</p> <ul style="list-style-type: none"> ◆ <i>make formal and informal presentations on standard/mainstream topics in the subject/discipline to a range of audiences</i> ◆ <i>use a range of IT applications to support and enhance work</i> ◆ <i>interpret, use and evaluate numerical and graphical data to achieve goals/targets</i> 	<p>Exercise autonomy and initiative in some activities at a professional level.</p> <p>Take some responsibility for the work of others and for a range of resources.</p> <p>Practise in ways which take account of own and others' roles and responsibilities.</p> <p>Work under guidance with qualified practitioners.</p> <p>Deal with ethical and professional issues in accordance with current professional and/or ethical codes or practices, seeking guidance where appropriate.</p>