



## Higher National Unit specification

### General information for centres

**Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

**Unit code:** F22R 34

**Unit purpose:** This Unit is designed for the continuing professional development (CPD) of teachers. It will enable candidates to develop the skills and knowledge required to select, adapt and create e-learning resources and to integrate the use of ICT in the delivery of learning, teaching and assessment. By enhancing learning, teaching and assessment processes with ICT, candidates will meet the needs of learners who expect to use these skills as part of their learning experience.

This Unit can only be offered in a centre recognised as suitable by the Further Education Professional Development Forum.

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

- 1 Evaluate and select a range of ICT resources that promote learning and teaching.
- 2 Integrate ICT effectively in planning and preparing the learning experience.
- 3 Manage and review the learning experience.

**Credit points and level:** 1.5 HN credits at SCQF level 7: (12 SCQF credit points at SCQF level 7\*)

*\*SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

**Recommended prior knowledge and skills:** Access to this Unit is at the discretion of the centre. However, candidates would normally be expected to have completed a Teaching Qualification in Further Education TQ(FE) or a Professional Development Award for teaching in further education and to have competence in information technology at SCQF level 5.

**Core Skills:** There are opportunities to develop the Core Skills of Information Technology and Problem Solving at SCQF level 6 in this Unit, although there is no automatic certification of Core Skills or Core Skills components.

## **General information for centres (cont)**

**Context for delivery:** The principal context for delivery will be the teaching and learning environment.

**Assessment:** This Unit will be assessed by written/oral and performance evidence. The candidate is required to select and develop e-learning resources and materials, produce, manage and review a learning, teaching and assessment plan in which the use of ICT is integrated and support learning and learners using e-communication tools. There must be arrangements in place to ensure the authenticity of the work produced.

## **Higher National Unit specification: statement of standards**

**Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

**Unit code:** F22R 34

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

The Unit will be assessed holistically by combining Outcomes 1, 2 and 3 for assessment purposes. Evidence Requirements and Assessment Guidelines for the Unit appear after Outcome 3.

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**

Evaluate and select a range of ICT resources to promote learning and teaching

#### **Knowledge and/or Skills**

- ◆ The value ICT can bring to the learning experience
- ◆ Barriers to using ICT in the learning environment
- ◆ Role of learning technology in the learning environment
- ◆ Range of available learning technologies
- ◆ Sources of electronic learning and teaching resources
- ◆ Evaluation of appropriate electronic resources to extend and enhance learning
- ◆ Selection of appropriate electronic resources to extend and enhance learning
- ◆ College policies and procedures in relation to the use of ICT
- ◆ Legal considerations of using electronic content, including Copyright and IPR

### **Outcome 2**

Integrate ICT effectively in planning and preparing the learning experience

#### **Knowledge and/or Skills**

- ◆ The use of diagnostic and skill assessment tools
- ◆ The use of assistive technologies to support learning, teaching and assessment
- ◆ The use of ICT in the learning process
- ◆ Evaluation of learners' ICT skills
- ◆ Types of learning resources that can be developed using simple tools and techniques
- ◆ The use of e-assessment
- ◆ Ways of integrating ICT into learning, teaching and assessment strategies

## **Higher National Unit specification: statement of standards (cont)**

**Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

### **Outcome 3**

Manage and review the learning experience

#### **Knowledge and/or Skills**

- ◆ Implement a learning and teaching plan, in which the use of ICT is integrated, to promote effective learning
- ◆ Facilitate learning, teaching and assessment activities using a range of ICT resources
- ◆ Use ICT appropriately to assess learner achievement and provide feedback to the learner
- ◆ Use e-communication tools to support learning and learners
- ◆ Relevant legislation, standards and guidelines
- ◆ Methods of evaluating the quality of the learning experience
- ◆ The reflective practitioner

#### **Evidence Requirements for the Unit**

Candidates will provide performance (product) evidence in the form of:

- (a) a learning, teaching and assessment plan for at least 20 hours of learning with a minimum of three detailed and consecutive lesson plans. The lesson plans must specify appropriate organisational details, resources and learning materials. The Unit/programme specification should be appended to the plans.

Overall, the lesson plans must include a minimum of:

- two electronic learning resources, which have been evaluated and selected by the candidate
- two interactive learning resources/materials, which have been developed by the candidate using simple tools and techniques
- two e-assessments, formative or summative
- the use of a minimum of three types of appropriate learning technology for delivering learning

The candidate must use at least 2 different software applications to develop the learning resources, materials or e-assessments.

- (b) records of using at least 2 communication tools to support learning and learners

Candidates will provide written/oral evidence in the form of a report or commentary of about 1,000 words, excluding appendices, which must include:

- a profile for the group of learners and their learning needs
- justification of their selection and use of electronic learning resources, including consideration of copyright checks
- evaluation of how the integration of ICT in the planned learning, teaching and assessment activities met learning objectives and the learners' needs, with recommendations for changes, if necessary

## **Higher National Unit specification: statement of standards (cont)**

## **Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

- identification of appropriate ways of enhancing their practice and an action plan for their development needs

The commentary may be in audio, video or note format and should be agreed with the assessor. The written/oral evidence may also be derived from a professional discussion.

Evidence must be generated in the workplace.

### **Assessment Guidelines**

The learning, teaching and assessment plan and lesson plans that are provided may have been designed for an existing programme. The candidate is required to demonstrate the use of ICT to support learning and teaching in the lesson plans.

The application software may be used for producing either interactive learning resources/materials or e-assessments. Formative or summative e-assessments may be selected from existing COLA and SOLAR materials.

Communication tools that candidates may use include e-mail, discussion groups, video conferencing, Web 2.0 technologies, podcasting, vodcasting. Records of using them may be in the form of hard copies or screen captures.

Observation may be used for the evaluation of the candidate's ability to deliver a planned lesson integrating ICT in learning, teaching and assessment activities and should then be recorded on a checklist. Feedback from learners would be an alternative source of data, which could be used for collecting information on the candidate's performance.

The candidate should keep a log book/diary or ePortfolio to facilitate professional critical reflection. The length of report/commentary should be within  $\pm 10\%$  of 1000 words.

## Administrative Information

**Unit code:** F22R 34

**Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

**Superclass category:** GE

**Original date of publication:** August 2007

**Version:** 01

### History of changes:

Version	Description of change	Date

**Source:** SQA

© Scottish Qualifications Authority 2007

This publication may be reproduced in whole or in part for educational purposes provided that no profit is derived from reproduction and that, if reproduced in part, the source is acknowledged.

SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of Higher National qualifications.

Additional copies of this Unit specification can be purchased from the Scottish Qualifications Authority. Please contact the Customer Contact Centre for further details, telephone 0845 279 1000.

## Higher National Unit specification: support notes

### Unit title: Using Information and Communications Technology (ICT) for Learning and Teaching

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 60 hours.

### Guidance on the content and context for this Unit

The content of this Unit is based on 'The Professional Standards for Continuing Professional Development (CPD)', published by the Scottish Executive in June 2006, specifically the Standard for 'The Use of Information and Communications Technology (ICT) for Learning and Teaching', (<http://www.fepdfscotland.co.uk/professionalstandards.htm>).

It is designed for candidates who have responsibility for planning, preparing and delivering programmes to learners with a range of learning needs and it will enable them to develop the skills and knowledge required to select, adapt and create e-learning resources and integrate the use of ICT in learning, teaching and assessment. It will provide an opportunity for continuing professional development and confidence building in using ICT for learning and teaching for candidates who already possess a recognised teaching qualification or Professional Development Award in teaching in further education and basic ICT skills.

The principal context will be the learning and teaching environment. The candidate should have access to a workplace where evidence to meet the Outcomes can be generated. The Professional Development Award in Online Learning at SCQF level 8 would be a more appropriate qualification for candidates who deliver learning primarily in an online learning environment.

The following list of topics gives a suggested content for a taught programme. The list is neither prescriptive nor exhaustive and should be used as a guide only.

#### Outcome 1

- ◆ contribution ICT can make to learning
- ◆ awareness of the importance of learning technologies (ICT) for teachers and learners
- ◆ the range of own organisation's services
- ◆ the organisation's resource constraints
- ◆ how ICT can be used to assist the implementation of equal opportunities, inclusion and widening participation
- ◆ the range of enabling technologies available to meet diverse learning needs.
- ◆ reasonable adjustments to enable learning
- ◆ ICT tools to increase accessibility
- ◆ the range of opportunities available for using ICT to support individual learners
- ◆ the place of ICT tools in identifying learner needs and preferred learning styles
- ◆ the range of tools available for learning needs analysis and style identification
- ◆ information literacy skills required by learners
- ◆ the range of ICT materials from different sources
- ◆ how to identify the benefits of ICT materials and sources of information and advice
- ◆ use of internet resources to support learning and teaching

## Higher National Unit specification: support notes (cont)

### Unit title: Using Information and Communications Technology (ICT) for Learning and Teaching

- ◆ search engines
- ◆ useful educational portals/websites for e-learning resources eg INTUTE, NLN, Ferl, JISC collections, Learning and Teaching Scotland, JORUM, COLEG
- ◆ resources for different learning strategies; lecture/exposition; research/investigation; stimulus; group discussion/team work/working with others/collaborative; discovery/enquiry; demonstration/exhibition/illustration
- ◆ evaluating e-resources: origin; authority; reliability; validity; usability; accessibility; quality; currency
- ◆ principles of universal design: alternate formats, and assistive technologies
- ◆ differences between copyright and IPR
- ◆ the need to comply with copyright and licensing agreements for different ICT materials
- ◆ the organisation's policy and procedures for obtaining, customising and using ICT materials
- ◆ how to find copyright free resources
- ◆ organisation's policy regarding the confidentiality of data, relevant data protection legislation and how to ensure these are rigorously applied
- ◆ the organisation's ethical code and/or equal opportunities policies to ensure the suitability of ICT materials obtained

### Outcome 2

- ◆ stages of integration of learning technology within learning and teaching: initiation; analysis and evaluation; selection of learning technologies; integration; implementation; monitor and adapt integration
- ◆ learning technologies used within the learning environment eg interactive (electronic) whiteboards; data projectors; computers and computer software applications; video; video conferencing, networks and communication systems; scanners; digital camera, VLE, podcasting, vodcasting, mobile technologies
- ◆ the facilities available in the organisation to support the use of ICT
- ◆ the ICT materials and resources available
- ◆ tools and techniques for customising ICT materials
- ◆ the principles of universality of design: creating materials and experiences that will be accessible to the widest range of users
- ◆ appropriate and effective use of universal design concept, alternate formats, and assistive technologies
- ◆ identification of appropriate opportunities/strategies for incorporating ICT into curriculum or subject areas
- ◆ how to establish which learning objectives can be supported through ICT
- ◆ issues to take into account when planning to use delivery technologies in teaching and learning
- ◆ ways of learning through ICT and appropriate learning strategies
- ◆ use of ICT to address diverse learners' needs and different learning styles
- ◆ requirements and best practice for successful ICT integration
- ◆ advantages and disadvantages of using ICT
- ◆ benefits of successful ICT integration
- ◆ ways in which facilities of computer application software can be applied to teaching and learning, eg MS Word, MS PowerPoint

## Higher National Unit specification: support notes (cont)

### Unit title: Using Information and Communications Technology (ICT) for Learning and Teaching

- ◆ how to produce interactive e-learning resources including, for example; images, hyperlinks, dynamic indexes, drag & drop activities, multiple choice quizzes using drop down forms
- ◆ use of mind-mapping
- ◆ tools to create electronic quizzes and formative assessment exercises
- ◆ the importance of evaluating the effectiveness of the designed materials in meeting learning objectives for learners with a diverse range of abilities
- ◆ the criteria by which to evaluate the effectiveness of ICT material
- ◆ evaluating e-assessments; reliability; validity; practicability
- ◆ assessment arrangements to meet diverse learning needs: fairness, equality of access, amended formats, language, validity, reliability
- ◆ legal considerations, eg health and safety, disability, discrimination, equality, ICT

### Outcome 3

- ◆ strengths and weaknesses of using ICT
- ◆ limitations of and opportunities for using ICT
- ◆ how to assess whether learners' abilities and learning styles are suited to the use of ICT
- ◆ the range of appropriate strategies and techniques to help learners develop the knowledge and skills they need to use ICT
- ◆ the range of opportunities available for individual learners to develop the knowledge and skills required to use ICT effectively for their own learning
- ◆ the importance of encouraging learners to work autonomously through ICT, and how to do so
- ◆ the types of support individual learners may need to use ICT effectively and how to provide this support
- ◆ the range of opportunities available for using ICT to encourage learners to learn from each other
- ◆ the knowledge and skills learners need to use ICT effectively to learn from each other
- ◆ how to encourage learners to use ICT to communicate with, and learn from, each other
- ◆ effective learning eg independent; personalised; cooperative; social networking
- ◆ e-communication tools, eg e-mail, discussion groups, video conferencing, Web 2.0 technologies, podcasting, vodcasting
- ◆ the role of the tutor when facilitating e-communication
- ◆ ways of seeking, responding to and giving feedback for learning
- ◆ assessment for: achievement; attainment; progress; outcomes
- ◆ use of e-assessment: e-assessment methods; limitations and advantages of using ICT; college policies and procedures; feedback to learners for motivation, diagnostic action
- ◆ alternative assessment opportunities for learners with special assessment requirements
- ◆ relevant legislation, standards and guidelines eg health and safety, disability, discrimination, equality, ICT
- ◆ sources of evidence on which to draw when evaluating own work
- ◆ evaluation of professional practice and development: quality of learning experience; learner achievement; college ICT strategy and systems; information skills and technologies; sharing good practice; professional development planning
- ◆ how to analyse information on learning, teaching and assessment and extract what is relevant to modify future strategies
- ◆ ways of reflecting upon their own teaching experience and the experience of learners

## Higher National Unit specification: support notes (cont)

### Unit title: Using Information and Communications Technology (ICT) for Learning and Teaching

Candidates who do not have an accredited qualification in information technology at SCQF level 5 eg PC Passport (Intermediate 2) or ECDL, should, as a pre-requisite, be able to use the following:

<b>Hardware</b>
Personal Computer/Laptop
Printer
Scanner*
Data Projector
Digital Camera*
Network and Portable Storage Media
<b>Software</b>
Use a word-processing package
Use a spreadsheet package*
Use a presentation package
Use basic file handling techniques (create/open/save/print)
Use appropriate techniques to handle, organise and retrieve files (delete/drag/folders)
Use editing techniques to produce complex information (format/images/tables)
Combine elements from different applications software (copy/paste/insert/import)
Use tools to check entries (spell-check/formulae)
Use the internet to search for electronic resources
Send and receive email

\* recommended but not essential

### Guidance on the delivery and assessment of this Unit

The principal focus of this Unit is on the selection, design, adaptation and creation of e-learning resources and delivery of learning, teaching and assessment using ICT, in the context of continuing professional development. The delivery of the Unit should take account of its practical nature and demonstrate good practice in using ICT to enhance learning. Candidates will require access to a range of learning technologies, hardware and software, with which to develop their skills of using ICT in the context of learning, teaching and assessment. Candidates should be encouraged to share best practice in the delivery of learning and it would be useful to have examples of learning resources demonstrating good practice in applying the universal design concept.

## Higher National Unit specification: support notes (cont)

### Unit title: Using Information and Communications Technology (ICT) for Learning and Teaching

Candidates should generate evidence of achievement from the workplace. Direct observation, oral questioning, written/documentary evidence and professional discussion are appropriate methods of assessment. The candidate should also keep a well-evidenced reflective diary or e-portfolio describing his/her performance. This form of record would need to be substantiated by an authorised source. Candidates should have several opportunities to prepare for the summative assessment.

#### *Opportunities for developing Core Skills*

Underpinning knowledge for the Unit requires an advanced knowledge and understanding of information technology. Candidates will overtake SCQF level 6 Core Skills as they manage electronic learning resources, design interactive learning materials and demonstrate the use of different types of appropriate technology for delivering learning. Candidates should be responsible in their use of equipment and software applications, and be familiar with a range of methods for keeping all data gathered secure and well organised including efficient systems of recording, coding and storing notes and drafts.

All elements of the Core Skill of Problem Solving will be naturally developed and enhanced as candidates develop, implement, monitor and evaluate an effective e assessment programme using appropriate learning technology for a group of learners. Setting learning goals will involve critical thinking and the identification of aims and objectives tailored to learner needs, organisational requirements and suitable technological resources. Categorising and prioritising activities in response to learner needs will involve ensuring effective integration of ICT in planned learning, teaching and assessment activities. Evaluation of the achievement of learning objectives and the meeting of learners' needs, with recommendations for any potential modifications, is formally evidenced.

#### **Open learning**

This Unit would be suited to open, distance and online learning if it was conducted in conditions where arrangements have been put in place to assure the authenticity of the candidate's work: assessments could, for example, be verified by a professional person who can confirm that the candidate's work practice is authentic. Candidates will require access to a range of learning technologies, hardware and software. It is likely that open learning delivery will consist of some initial exposition and briefing sessions, after which candidates will manage their own learning. Despite this, candidates will require support throughout the time they are undertaking this Unit and suitable arrangements should be made to provide this. This could involve meetings with candidates both individually and as a group. For further information and advice please refer to the SQA document *Assessment and Quality Assurance for Open and Distance Learning* which is available on SQA's website: [www.sqa.org.uk](http://www.sqa.org.uk).

#### **Candidates with disabilities and/or additional support needs**

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering alternative Outcomes for Units. Further advice can be found in the SQA document *Guidance on Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs* ([www.sqa.org.uk](http://www.sqa.org.uk)).

## **General information for candidates**

### **Unit title:** Using Information and Communications Technology (ICT) for Learning and Teaching

#### **What this Unit is about**

The content of this Unit is based on 'The Professional Standards for Continuing Professional Development (CPD)', published by the Scottish Executive in June 2006, specifically the Standard for 'The Use of Information and Communications Technology (ICT) for Learning and Teaching', (<http://www.fepdfscotland.co.uk/professionalstandards.htm>).

It is about the knowledge and skills you need to select, adapt and create e-learning resources and deliver learning, teaching and assessment using ICT. It will provide an opportunity for continuing professional development and building confidence in the use and integration of ICT to enhance the learning experience.

#### **What you will learn**

- ◆ How ICT is used for the guidance and support of learners in your own organisation
- ◆ To evaluate and select a range of ICT resources that promotes learning and teaching
- ◆ To integrate ICT effectively in planning and preparing the learning experience
- ◆ To implement the use of ICT to promote effective and independent learning
- ◆ To use ICT to assess learner achievement and provide feedback to the learner
- ◆ To critically evaluate own practice in the use of ICT for learning, teaching and assessment and to identify your professional development needs

#### **On completion of the Unit, you will be able to:**

- 1 Evaluate and select a range of ICT resources to promote learning and teaching.
- 2 Integrate ICT effectively in planning and preparing the learning experience.
- 3 Manage and review the learning experience.