

Higher National Unit Specification

General information for centres

Unit title: e-commerce: Introduction

Unit code: DV6F 34

Unit purpose: This Unit is about providing an understanding of the fundamentals of e-commerce. The Unit introduces how traditional business activities can be conducted on the Internet, and provides an appreciation of the main considerations of on-line trading. This Unit is designed to provide candidates with the knowledge and/or skills of key processes involved in on-line commercial activities and the associated security and associated legal implications.

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

- 1 Describe the main areas that a business operates on the Internet.
- 2 Explain the various technologies and technical controls associated with e-commerce.
- 3 Describe the implications for e-commerce businesses of Information Technology legislation.

Credit points and level: 1 HN Credit at SCQF level 7: (8 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 will be at the discretion of the centre, however, it would be beneficial to have some basic computer skills including Internet browsing skills, business and marketing knowledge or commercial/industrial experience.

Core Skills: There are no opportunities to develop Core Skills in this Unit.

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: Outcome 1 will be assessed by a number of extended response questions testing knowledge and/or skills carried out in closed-book conditions conducted under supervised conditions. Outcome 2 will be assessed by a series of multiple-choice questions presented in supervised conditions, within the specified time, and is closed-book. For Outcome 3, a candidate must produce a report of approximately 1,000 words, which may be based on a project, case study or scenario, and is open-book.

For Outcome 1 and Outcome 2, the questions must change on **each** assessment occasion.

General information for centres (cont)

Assessors must assure themselves of the authenticity of each candidate's submission. A candidate is encouraged to use the Internet in any research, etc, however, the evidence produced must be the candidate's own written words.

Some of the assessment may be carried out using e-assessment. This may take the form of e-testing (for knowledge and understanding and/or e-portfolios (for practical abilities)). There is no requirement to seek prior approval if you wish to use e-assessment for either of these purposes so long as the normal standards for validity and reliability are observed. Please see the following SQA publications for further information on e-assessment: (1) "SQA Guidelines on Online Assessment for Further Education" (March 2003) and (2) "Assessment & Quality Assurance in Open & Distance Learning" (Feb. 2001).

If a centre is presenting Outcome 1 and/or 2 on-line the following assessment methods, where appropriate, may be selected:

- ◆ multiple-choice
- ◆ drag and drop
- ◆ multiple response
- ◆ mix and match
- ◆ a combination of the above

It is expected that the questions will be of the multi-choice variety. Centres may consider the use of alternative question types, particularly if using Computer Assisted Assessment approaches. However, care should be taken that the questions are valid and at an appropriate level. The use of simple true/false question responses is unlikely to achieve this.

Higher National Unit specification: statement of standards

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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

Describe the main areas that a business operates on the Internet

Knowledge and/or skills

- ◆ Types of e-commerce relationships
- ◆ Comparison of electronic business models
- ◆ Influence of the Internet on commerce

Evidence Requirements

To achieve the Evidence Requirements for this Outcome, a candidate is required to submit evidence to show that he/she can, with reference to a specific business provide an accurate and clear explanation of the list above. Evidence for this Outcome will be collected in response to a set of 10 extended response questions covering a representative sample of the items listed in the Knowledge and Skills area. A candidate will need evidence to demonstrate their knowledge and/or skills by showing that they can:

- ◆ Indicate and describe e-commerce relationships existing in business, ie
 - business to business
 - business to customer
 - customer to customer
 - customer to business
- ◆ Describe the fundamental commercial transactions which occur in a business. The method of doing business by which a company can sustain itself, ie
 - brokerage
 - advertising
 - infomediary
 - subscription
 - utility
 - merchant
 - manufacturer (Direct)
 - affiliate
 - community

Higher National Unit specification: statement of standards (cont)

Unit title: e-commerce: Introduction

- ◆ describe different factors that make a product successful on-line, and what benefits for the company may gain by being having a presence on-line

The questions must change on each assessment occasion.

Assessment is closed-book and must be conducted under supervised conditions. Assessors must assure themselves of the authenticity of each candidate's submission.

Assessment guidelines

There is an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Outcome 2

Explain the various technologies and technical controls associated with e-commerce

Knowledge and/or skills

- ◆ Monitoring and maintain a site
- ◆ Selecting an Internet Server Provider
- ◆ Payment handling and security issues
- ◆ Authentication and authorisation

Evidence requirements

To achieve the Evidence Requirements for this Outcome the candidate will need to demonstrate their knowledge and/or skills by answering a representative sample using 20 multiple-choice questions covering the following:

- ◆ Explain the importance and appreciate the impact of site monitoring and maintenance
- ◆ Explain the role of Internet Server Providers, ie the following facilities available
 - Internet connections
 - Connection Speed
 - Facilities on offer by ISP
- ◆ Describe electronic payment systems used and the key security features on the Internet:

Payment Handling

- ◆ Credit/Debit Card payment
- ◆ Automated clearing house

Security Issues

- ◆ Encryption : symmetric, public key
- ◆ Protocols: Transmission Control Protocol/Internet Protocol (TCP/IP) Secure Socket Layer (SSL), Transport Layer Security (TLS), Secure HTTP (S-HTTP)
- ◆ Joint Electronic Payment Initiative

Higher National Unit specification: statement of standards (cont)

Unit title: e-commerce: Introduction

- ◆ Consider the role of authorisation and authentication of security issues
 - User IDs and Passwords
 - Digital certificate
 - Certificate authority

The questions must change on each assessment occasion.

Assessment must be undertaken in supervised conditions and is closed book. A candidate should complete this assessment within one hour. Candidates must not bring to the assessment event any notes, textbooks, handouts or other material. Candidates must answer at least 60% of the questions correctly.

Assessment guidelines

There is an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

If a centre is presenting this assessment on-line the following assessment methods, where appropriate, may be selected:

- ◆ multiple-choice
- ◆ drag and drop
- ◆ multiple response
- ◆ mix and match
- ◆ a combination of the above

Outcome 3

Describe the implications for e-commerce businesses of information technology legislation

Knowledge and/or skills

- ◆ Explanation of contracts in electronic commerce
- ◆ Explanation of data protection requirements for a business
- ◆ Legal aspects of electronic commerce directive
- ◆ Description of the Consumer Protection (Distance Selling) Regulations

Evidence requirements

Evidence for the knowledge and/or skills in this Outcome will cover all of the Knowledge and Skills bullet points. The evidence presented for this assessment will be in the form of a report of approximately 1,000 words which **may** be based on a project, case study or scenario.

Higher National Unit specification: statement of standards (cont)

Unit title: e-commerce: Introduction

The candidate's response can be judged to be satisfactory where the evidence provided is sufficient to meet the requirements for each item by showing that the candidate can:

- ◆ Describe the current legislation pertaining to contracts in ecommerce.
- ◆ Explain the impact of Consumer Protection and Data Protection legislation on a business.
- ◆ Explain the purpose of the electronic commerce directive and identify key features of electronic commerce regulations.
- ◆ Businesses who conduct business on-line should also be aware of the requirements placed on them by the Consumer Protection (Distance Selling) Regulations. These requirements should be explained and the key features of the regulations identified. Exceptions to the regulations should be included.

All evidence must relate to the legislation and regulations in force at the time at which evidence is generated.

Assessment is open-book. Assessors must assure themselves of the authenticity of each candidate's submission.

Assessment guidelines

There may be an opportunity for a candidate to be assessed on-line subject to meeting the prescribed assessment conditions.

Administrative Information

Unit code: DV6F 34
Unit title: e-commerce: Introduction
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Version	Description of change	Date

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Higher National Unit specification: support notes

Unit title: e-commerce: Introduction

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 is about providing the candidate with a broad knowledge of the concepts of electronic commerce. The unit introduces key features of e-commerce, examining how a business can operate on the Internet successfully.

Candidates will be encouraged to use the Internet as the primary reference source; knowledge of the key topics could be tested at appropriate stages with short response questions, true or false, or multiple choice. This should not be regarded as a formative assessment but used to provide the candidate with an indicator of progress.

Current terminology should be introduced as appropriate.

Guidance on the delivery and assessment of this Unit

Outcome 1

Candidates should be able to describe relationships that exist in business eg Business to Business where one business provides a product or service to the other through the means of ecommerce, Business to Customer in which companies use the Internet to provide a product or service to the customer, Customer to Customer, interaction between customers for instance, sites that are usually some form of an auction site. The customer lists items for sale with a commercial auction site. Other customers access the site and place bids on the items. Customer to Business which is a growing arena where the customer requests a specific service from the business. Candidates should also be able to describe the manner in which a business operates on the Internet and generates revenue.

Candidates should also be aware of the influences that the Internet has on commerce, different factors that need to be taken into consideration and describe what benefits would there be for the company to be on-line.

Outcome 2

To introduce the environment in which e-commerce takes place, the main technologies for supporting e-commerce, and how these technologies fit together.

Candidates should take into consideration criteria by which an ecommerce website could be evaluated, and the importance of maintenance. Discussions could take place on Monitoring a site for instance entry points the customers arrived at a site, feedback from customers, monitoring words used when searching the site, Checking for broken links, Compare to other comparable sites as web browsers and web design evolve. It is also good to introduce usability at this stage.

Higher National Unit specification: support notes (cont)

Unit title: e-commerce: Introduction

Candidates should be able to explain various technologies and technical controls associated with ecommerce. When selecting an Internet provider, there are a few primary questions that candidates should consider: What kinds of Internet connections can I get? How fast are they? Is service available in my area? How much will it all cost? An ISP is a commercial organisation with a permanent connection to the Internet that sells connections to subscribers.

Discussion on electronic payment which is any kind of non-cash payment that doesn't involve a paper check. Methods of electronic payments include credit cards, debit cards and the ACH (Automated Clearing House) network. The ACH system comprises direct deposit, direct debit and electronic checks (e-checks).

They should be able to describe different electronic payment systems that are available for businesses, and describe key features of security systems for instance outline the benefits of encryption, compare encryption methods, including public and private keys. Candidates should be aware of standards such as Secure Socket Layer (SSL) and Transport Layer Security (TLS). Discussion should take place on the differences with SSL and TLS. Consideration should be given to Joint Electronic Payment Initiative (JEPI) and why CommerceNet and W3C Consortium have introduced an Internet payment negotiation protocol.

Candidates should be able to describe Authentication which is the process of confirming a user's identity. Authorisation determines what services and access a user has authorisation for and the types of digital certificates that e-commerce and e-business professionals should be aware of and the role that certification authorities have.

Outcome 3

Candidates should be aware of the implications that may affect a business operating on the Internet. Candidates should understand the current legislation pertaining to contracts in ecommerce, and any issues that may arise for businesses should be taken into consideration.

Candidates should be aware of Electronic commerce (EC Directive) Regulations 2002 and why it was introduced.

Discussion on the impact of customer protection on a business, and what the rights a customer would have under this legislation. Distance Selling regulations give protection to customers who shop by phone, mail order, via the Internet or digital TV, candidates should be able to describe how this may enhance customers confidence of shopping on-line, by given protection on-line, and what the protection that includes. Candidates should also be able to describe the impact of customer protection on a business.

Opportunities for developing Core Skills

There are no opportunities to develop Core Skills in this Unit.

Higher National Unit specification: support notes (cont)

Unit title: e-commerce: Introduction

Open learning

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* (SQA, February Publication code A1030).

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. For information on these, please refer to the SQA document *Guidance on Alternative Assessment Arrangements for Candidates with Disabilities and/or Additional Support Needs*, which is available on SQA's website: www.sqa.org.uk.

General information for candidates

Unit title: e-commerce: Introduction

This Unit is about providing a solid understanding of the fundamentals in e-commerce. In particular conducting business communication and transactions over networks and through the use of computers.

To begin with you will look at the types of business relationships that exist on the Internet for instance:

- ◆ Business to Business
- ◆ Business to Customer
- ◆ Customer to Business
- ◆ Customer to Customer

All these types of relationships can generate revenue on the Internet for a business and you will look at different ways this is achieved by looking at types of business models. In the most basic sense, a business model is the method of doing business by which a company can sustain itself that is, generate revenue. It is important that you can identify what benefits a company existing on-line will gain and what factors will make a product sell successfully.

Next you will look at, the decision whether a business decides that it is beneficial to operate on-line, what environment and technologies are available to support ecommerce and how it all fits together. This will include the facilities offered by Internet Server Providers and hosting options available, also payment methods available on line and security issues that need to be considered, the methods and benefits of encryption and the use of digital certificates.

Finally, you will look at the legal considerations and implication for ecommerce businesses.

On completion of the unit you should understand the basic concepts of electronic commerce, understanding how traditional business activities can be conducted on the Internet, and identify key issues that affect small business who carry out their business on-line.