

# SQA Advanced Unit Specification

## General information

<b>Unit title:</b>	E-Commerce Solutions
<b>Unit code:</b>	J5FE 48
<b>Superclass:</b>	CB
<b>Publication date:</b>	October 2021
<b>Source:</b>	Scottish Qualifications Authority
<b>Version:</b>	02 (February 2022)

## Unit purpose

The purpose of the unit is to provide the learner with an understanding of e-commerce solutions to support business. The learner will also acquire the skills to implement and evaluate an e-commerce solution for a business.

It is primarily intended for learners who expect to work in a web development and design role, but is also relevant to all those on any programme of study who require a deeper or more practical understanding of e-commerce solutions.

This unit is intended to give learners the knowledge and skills required to select, install, configure and manage an e-commerce solution to support a business. On completion of the unit, learners will have acquired the knowledge and skills to support e-commerce solutions within a business environment and may progress onto further study in web design and development.

## Outcomes

On successful completion of the unit, the learner will be able to:

- 1 demonstrate an understanding of the fundamentals of e-commerce solutions.
- 2 demonstrate an understanding of business requirements of e-commerce.
- 3 implement an e-commerce solution.

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### Credit points and level

1 SQA unit credit at SCQF level 8: (8 SCQF credit points at SCQF level 8).

### Recommended entry to the unit

While entry is at the discretion of the centre, learners would benefit from knowledge and fundamental skills of web design and development, as well as the basic concept of networking and software installation.

Recommended units for prior knowledge and skills include:

HT22 47	<i>Internet: Introducing e-commerce</i>
HR8N 47	<i>Website Design: Planning and Design</i>
HR8V 47	<i>Website Design: Development Technologies</i>
HT05 47	<i>Web Development Essential Content</i>
HR7M 47	<i>Web Development Fundamentals</i>

### Core Skills

Achievement of this unit gives automatic certification of the following:

◆ Complete Core Skill      Problem Solving at SCQF level 6

◆

There are also opportunities to develop aspects of Core Skills which are highlighted in the **support notes** section of this unit specification.

### 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.

### Equality and inclusion

This unit specification has been designed to ensure that there are no unnecessary barriers to learning or assessment. The individual needs of learners should be taken into account when planning learning experiences, selecting assessment methods, or considering alternative evidence.

Further advice can be found on our website [www.sqa.org.uk/assessmentarrangements](http://www.sqa.org.uk/assessmentarrangements).

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### Statement of standards

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Acceptable performance in this unit will be the satisfactory achievement of the standards set out in this part of the unit specification. All sections of the statement of standards are mandatory and cannot be altered without reference to SQA.

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. Learners 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 an understanding of the fundamentals of e-commerce solutions.

##### Knowledge and/or skills

- ◆ categories of e-commerce solutions
- ◆ components of an e-commerce solution
- ◆ open/closed source and cloud based e-commerce solutions

#### Outcome 2

Demonstrate an understanding of business requirements of e-commerce.

##### Knowledge and/or skills

- ◆ e-commerce business strategies
- ◆ suitable domain registration and web hosting companies
- ◆ e-business operational requirements

#### Outcome 3

Implement an e-commerce solution.

##### Knowledge and/or skills

- ◆ web server platform or host
- ◆ e-commerce solution
- ◆ configuration and administration of features within an e-commerce solution
- ◆ analytical reporting and stress testing

#### Evidence requirements for this unit

Learners will need to provide evidence to demonstrate their knowledge and/or skills across all outcomes.

The evidence for this unit may be written or oral or a combination of these. Evidence may be captured, stored and presented in a range of media (including audio and video) and formats

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(analogue and digital). Particular consideration should be given to digital formats and the use of multimedia.

The evidence requirements for this unit will take two forms:

- 1 evidence of cognitive competence (knowledge and understanding) for Outcomes 1 and 2.
- 2 evidence of practical competence (practical abilities) for Outcome 3.

For Outcomes 1 and 2, learners will be required to demonstrate that they will be able to:

- ◆ describe e-commerce solutions such as B2B business to business, C2C customer to customer and B2C business to customer models.
- ◆ identify components of an e-commerce solution including shopping carts, payment gateways, merchant accounts, types of server side scripting languages, back end databases, administration front end and customer front end interfaces.
- ◆ evaluate open/closed source and cloud based e-commerce solutions in terms of advantages and disadvantages of each.
- ◆ describe e-commerce business strategies including interface design, marketing, security and risk analysis.
- ◆ identify suitable domain registration and web hosting companies.
- ◆ evaluate e-business operational requirements including return policies, legal, security, taxes, shipping and terms and conditions.
- ◆ identify a suitable web server platform or host either locally or online.

Outcome 3 requires learners to demonstrate the setup and configuration of an e-commerce solution. The learner should be presented with a scenario that involves a small to medium sized company researching for and devising a strategy for moving services online. It is intended that the work is carried out individually although groups of two to three may also be appropriate.

Evidence of practical competence is required to cover:

- ◆ implement an e-commerce solution either locally or online
- ◆ configure and administer a suitable range of features within an e-commerce solution such as items, categories, home page, payment types, languages, discounts and terms and conditions
- ◆ evaluate analytical reporting and stress testing using either 3rd party software or integrated services

Evidence for practical competence may be produced over an extended period of time under open-book conditions; but where it is generated without supervision some means of authentication must be carried out.

The Guidelines on approaches to assessment (see the support notes section of this specification) provides specific examples of instruments of assessment.

### Support notes

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Unit support notes are offered as guidance and 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 intended to give learners the knowledge and skills required to select, install, configure and manage an e-commerce solution to support a business. It is primarily intended for learners who expect to work in a web development and design role, but is also relevant to all those on any programme of study who require a deeper or more practical understanding of e-commerce solutions. Learners will acquire the knowledge and skills to support e-commerce solutions within a business environment or progress onto further study in web development and design through awarding bodies such as CIW e-commerce specialist and EC-council e-business certifications.

**Outcome 1** introduces the fundamentals of e-commerce solutions. It is intended that learners gain the knowledge and skills to identify and evaluate a cost effective e-commerce solution for a small to medium size company, including various alternatives such as open/closed source and cloud based solutions.

**Outcome 2** builds on the business case for an e-commerce solution focusing on developing a strategy for marketing, hosting, design and operational requirements of an e-commerce solution in terms of risk analysis, legal requirements and security.

**Outcome 3** prepares the learners with the skills to implement an e-commerce solution. Including hosting, configuration, administration and evaluating performance through analytical reporting and stress testing.

It is intended in this unit that learners develop skills to become self-directed learners preparing them for further study with HE.

#### **Guidance on approaches to the delivery of this unit**

It is intended that the delivery follows the progression of the outcomes building upon prior knowledge and skills throughout. Where possible, learners should be encouraged to use online tools for research, collaboration and development. It is intended that in all cases the learning should be based on real world case studies and examples.

For Outcome 1 learners should be guided to conduct targeted research on the fundamentals of an e-commerce solution. This can be delivered using individual or small group research exercises such as presentations, mind maps, online collating tools, or general research on the topic to meet the criteria listed for Outcome 1.

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For Outcome 2 it is suggested that learners are encouraged to form a strategic plan using methods such as diagrams, tables and checklists.

Outcome 3 can be hosted locally using web server platforms such as Microsoft IIS, Apache or EasyPHP. Alternatively an e-commerce package may be hosted remotely on an external web host or an online cloud based solution may be used.

### Guidance on approaches to assessment of this unit

Evidence can be generated using different types of assessment. The following are suggestions only. There may be other methods that would be more suitable to learners.

Various methods of assessment can be used to generate evidence, for example: Powerpoint™ presentations, poster presentation, video diary, videoed seminars, e-portfolio or podcasts, but where possible a holistic approach should be used. The following are suggestions only. There may be other methods that would be more suitable to learners.

When learners are required to prepare and present a presentation and demonstrate the setup and configuration of an e-commerce solution, they should be presented with a real world scenario that involves a small to medium sized company researching for and devising a strategy for moving services online. It is intended that the work is carried out individually, although groups of two to three may also be appropriate. The prepared presentation should cover each of the points below:

- ◆ an introduction and outline to the e-commerce solution
- ◆ description of e-commerce solutions such as B2B business to business, C2C customer to customer and B2C business to customer models (conceptual model)
- ◆ identification of components of an e-commerce solution including shopping carts, payment gateways, merchant accounts, types of server side scripting languages, back end databases, administration front end and customer front end interfaces (including images, diagrams and samples)
- ◆ evaluation of open/closed source and cloud based e-commerce solutions in terms of advantages and disadvantages of each
- ◆ description of e-commerce business chosen strategies including interface design, marketing, security and risk analysis (can include checklists, diagrams and images)
- ◆ identification of a suitable domain registration and web hosting company
- ◆ evaluation of e-business operational requirements including return policies, legal, security, taxes, shipping and terms and conditions
- ◆ identification of a suitable web server platform or host either locally or online for prototype testing
- ◆ evaluation of analytical reporting and stress testing using either 3rd party software or integrated services
- ◆ reflective summary of any problems encountered and knowledge the learner has gained

And the demonstration should cover:

- ◆ implementation of a prototype e-commerce solution either locally or online
- ◆ the configuration and administration of a suitable range of features within an e-commerce solution such as, items, categories, home page, payment types, languages, discounts and terms and conditions

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Where insufficient evidence has been produced to meet the criteria above learners should be given one additional attempt at re-assessment.

### Opportunities for e-assessment

E-assessment may be appropriate for some assessments in this unit. By e-assessment, we mean assessment which is supported by Information and Communication Technology, such as e-testing or the use of e-portfolios or social software. Centres wishing to use e-assessment must ensure that the national standard is applied to all learner evidence and that conditions of assessment — as specified in the evidence requirements — are met, regardless of the mode of gathering evidence. The most up-to-date guidance on the use of e-assessment to support SQA's qualifications is available at: [www.sqa.org.uk/e-assessment](http://www.sqa.org.uk/e-assessment).

### Opportunities for developing Core and other essential skills

This unit has the Core Skill of Problem Solving embedded in it, so when learners achieve this unit their Core Skills profile will be updated to show that they have achieved Problem Solving at SCQF level 6.

This unit helps learners develop the Core Skills in *Communication* by presenting their evidence to an audience. The unit also gives learners the opportunity to enhance their *Information and Communication Technology (ICT)* and *Problem Solving* skills within a complex setup environment.

## History of changes to unit

Version	Description of change	Date
02	<b>Embedded Core Skills info added:</b> The complete core skills Problem Solving at SCQF Level 6.	09/02/22

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SQA acknowledges the valuable contribution that Scotland's colleges have made to the development of SQA Advanced Qualifications.

### Further information

Call SQA's Customer Contact Centre on 44 (0) 141 500 5030 or 0345 279 1000.  
Alternatively, complete our [Centre Feedback Form](#).

### General information for learners

**Unit title:** E-Commerce Solutions

This section will help you to decide whether this is the unit for you by explaining: what the unit is about; what you should know or be able to do before you start; what you will need to do during the unit; and opportunities for further learning and employment.

This unit is intended to give you the knowledge and skills required to select, install, configure and manage an e-commerce solution to support a business. A range of topics are covered in this unit, such as:

- ◆ e-commerce solutions and components
- ◆ open/closed source and cloud based e-commerce solutions
- ◆ e-commerce business strategies
- ◆ domain registration and web hosting companies
- ◆ e-business operational requirements
- ◆ web server platform or host
- ◆ analytical reporting and stress testing

You will acquire the knowledge and skills to support e-commerce solutions within a business environment and may progress onto further study in web development and design through awarding bodies such as CIW e-commerce specialist and EC-council e-business certifications.

It is primarily intended for learners who expect to work in a web development and design role, but is also relevant to all those on any programme of study who require a deeper or more practical understanding of e-commerce solutions.

At the end of the unit, you may be required to prepare and present a presentation and demonstrate the work you have carried out.

This unit will help you develop the Core Skills in *Communication* by presenting your evidence to an audience. The unit also gives you the opportunity to enhance your *Information and Communication Technology (ICT)* and *Problem Solving* skills within a complex setup environment.

This unit has the Core Skill of Problem Solving embedded in it, so when you achieve this unit your Core Skills profile will be updated to show that you have achieved Problem Solving at SCQF level 6.