

# Unit 2: Uses of Information Technology

Learning hours: 60

NQF level 2: BTEC First

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## Description of unit

The aim of the unit is to provide learners with an overview of information and communication technology, general and specialist software applications used in business organisations and the importance of legislation and maintaining security.

Learners will have the opportunity to understand the significance of information technology and the benefits of using computers. An evaluation of the various types of application software such as word processing, graphics, databases, spreadsheets, graphics, desktop publishers and communications systems including use of the internet and email will be included. Finally learners will discuss issues relating to data protection, software piracy, and maintaining security requirements.

This unit presents opportunities to demonstrate key skills in communication and information technology.

<b>This is an internally assessed unit.</b>
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## Summary of learning outcomes

To achieve this unit a learner must:

- 1 Describe the **development of information and communication technology**
- 2 Use a range of **general and specialist software applications**
- 3 Present information on **legislation, health and safety, and security**
- 4 Evaluate the **uses of software applications**.

# Content

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## 1 Development of information and communication technology

*Development:* history and development of computers, use of ICT in industry and commerce today

*Contribution:* benefits of ICT to industry and commerce, effect on working patterns

## 2 General and specialist software applications

*General:* variety of software applications including word processing, desktop publishing, database, spreadsheet, graphics, internet, email

*Specialist:* familiar with the uses of a variety of packages such as CAD, CAM, design packages (eg Landscape Gardening), financial, project planning, diaries; practical use of one or more of these types of package

## 3 Legislation, health and safety, and security

*Legislation:* health and safety — display screen equipment, data protection, software piracy and hacking, copyright laws and misuse

*Security:* backups, user identities, passwords, virus checkers, encryption, physical security

## 4 Uses of software applications

*General:* used for applications development, numerical modelling, presentation of information, communication

*Specialist:* uses in engineering, design fields (eg landscape gardening, kitchen design, electrical wiring, etc), accountancy, publishing, project planning, etc

## Assessment guidance

### This unit is internally assessed

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all of the learning outcomes for the unit. The criteria for a pass grade describe the level of achievement required to pass this unit.

<b>Grading criteria</b>		
<b>To achieve a pass grade the evidence must show that the learner is able to:</b>	<b>To achieve a merit grade the evidence must show that the learner is able to:</b>	<b>To achieve a distinction grade the evidence must show that the learner is able to:</b>
<ul style="list-style-type: none"> <li>describe briefly the history of information and communication technology. Include some examples of the way it is used in industry and commerce today</li> <li>use a variety of general applications software to create output which demonstrates your ability to enter, edit, delete, sort, search and format data; produce graphs, charts and other images</li> <li>use one specialist application package to create output which shows that you have used the package correctly</li> <li>describe the basic provisions of the Data Protection Act</li> <li>describe some examples of security procedures designed to prevent illegal access to software applications.</li> </ul>	<ul style="list-style-type: none"> <li>understand how the history and development of ICT has affected the development of industry and commerce. Make reference to some specific examples which have affected developments in recent years</li> <li>use a general application package and a specialist application package to solve a similar problem and compare the differences between the two</li> <li>understand the use to which three different types of specialist application software are put and the reasons why they are appropriate</li> <li>describe in detail two pieces of legislation relevant to the use of ICT and four examples of security procedures which may be applied to prevent illegal access to software or data.</li> </ul>	<ul style="list-style-type: none"> <li>describe in detail how the development of ICT has had a major effect of the development of industry and commerce. Include specific examples in you work</li> <li>use an appropriate variety of software applications to solve a number of simple general and specialist problems</li> <li>provide an extensive evaluation of six software applications including both general and specialist applications. Include comments on ease of use and main application area in industry and commerce. Use technical language correctly in this evaluation</li> <li>a clear understanding of the implications of legislation and data security to the use of ICT in industry and commerce.</li> </ul>

## Essential information for teachers

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### Delivery strategies

It is intended that this will be a mainly practical unit. Whilst there are criteria which demand descriptions and ‘clear understanding’ there is no set method prescribed for these to be produced. It would, for instance, be acceptable for the evidence on legislation and data security to be produced as a presentation using software such as PowerPoint, which in turn could be evaluated as one of the software packages.

The majority of this unit will therefore be devoted to practical sessions using a range of software applications.

In addition, lecturers will need to focus more formally on topics such as ‘how to evaluate the use of software applications’ and ‘the importance of data security and legislation’.

Output from applications packages will form a major part of the evidence presented, but there is also a major part to be played by witness testimonies (tutor and peer group) and observation sheets.

### Grade descriptions

#### Pass

To achieve a pass the description of the history of ICT should concentrate mostly on modern developments. Developments within the last 10 years or so have been far more wide ranging and have had a much deeper effect, and specific examples are more readily to hand. Evidence for this criterion may be in the form of reports, output for presentations, witness statements, observation records or any other suitable method.

A few examples of the use of ICT today will be included.

Learners should use a variety of general applications packages (at least three examples such as word processors, spreadsheets, databases and general graphics) and produce output which indicates that they can perform each of the operations specified

Any one specialist package may be used (CAD, CAM simulator, accounts package, etc) and again output produced should indicate the work has been correctly undertaken.

Descriptions of the Data Protection Act and security procedures could be done to produce output evidence from, for instance, a word processing package for the general applications criterion.

#### Merit

To achieve a merit the learner must additionally show understanding. One way to show this is to describe a few examples of the effects ICT has had on certain work areas over the last few years.

For the comparison of a general package with a specialist package, learners may use something like a spreadsheet and an accounting package to solve a specific problem (eg a cash flow forecast). Other examples could include a general drawing package and CAD package. Comparisons may be by report, presentation, question and answer, etc.

Learners should understand the use of three specialist software packages for the third criterion, but they do not have to individually use each package. However annotated output which solves a particular problem may provide evidence of understanding should the software be available for learner use.

Any relevant legislation may figure in the fourth criterion, however it would make sense for one to be the Data Protection Act since this is required at pass level. Security procedures may be software, hardware or physical. Learners may use any method, see above, for the description.

### **Distinction**

To achieve a distinction the description of the development of ICT should concentrate on major effects within industry and commerce. Factors such as reductions in staff labour intensive industries or the ability to order materials from anywhere in the world should be major contributors. It is anticipated that at least three major issues will be addressed.

Use of an appropriate ‘number of applications’ can mean any number which adequately demonstrates learner ability. It is envisaged that the learner will use at least three general packages and at least two specialist packages.

Learners must make a good attempt at evaluating six pieces of software and should, at a minimum, comment on user-friendliness and ease of use, and on the main area of use commercially. Learners must use technical language and must use it correctly. Evidence does not have to be a report (see above).

Knowledge of legislation and data security at this level must specifically show an understanding of the implications of what has been described at merit level.

### **Links**

This unit links with *Unit 6: Communications and Organisations*; *Unit 8: Business Applications*; *Unit 9: e-Commerce*; *Unit 10: Financial Modelling* and *Unit 11: Business IT Project*.

### **Resources**

Installed PC based system with a range of general and specialist software applications should be available with internet and email facilities. Word processing, spreadsheet, database, DTP, graphics, presentation, drawing, CAD, garden design, kitchen design, CAM simulation and accounts packages are all suitable for this unit.

## Key skills

Highlighted here are the key skills that have already been identified in the *Description of unit* section. Achievement of key skills is not a requirement of this qualification but it is encouraged. Suggestions of opportunities for the generation of level 2 key skills evidence are given here. Staff should check that learners have produced all the evidence required by part B of the key skills specifications when assessing this evidence. Learners may need to develop additional evidence elsewhere to fully meet the requirements of the key skills specifications.

Communication level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> <li>describing developments of ICT</li> </ul>	C2.1b Give a short talk about a straightforward subject, using an image.  C2.3 Write <b>two</b> different types of documents about straightforward subjects.  One piece of writing should be an extended document and include at least <b>one</b> image.
Information technology level 2	
When learners are:	They should be able to develop the following key skills evidence:
<ul style="list-style-type: none"> <li>using different types of software</li> </ul>	IT2.2 Explore and develop information, and derive new information, for <b>two</b> different purposes.