Unit Title:	**Computer forensics**
OCR unit number:	8
Unit reference number:	Y/602/0607
Level:	3
Credit value:	8
Guided learning hours:	60

Unit aim

The aim of this unit is that learners will:

- Know the principles of digital storage devices
- Know the physical and logical topologies and systems relevant to computer networks
- Understand how to use software tools to investigate digital storage devices
- Be able to carry out imaging of a storage device

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
The Learner will: 1 Know the principles of digital storage devices	**The Learner can:** 1.1 Identify a range of different digital storage devices that are available within information systems 1.2 For each device, describe; • the purpose for which it can be used • the formats and operating systems available to use • how data is stored	• the different types of storage devices such as: - hard drives - USB - SD cards - micro cards • what type of formats and operating systems can be used • how data is stored on a chosen device
2 Know the physical and logical topologies and systems relevant to computer networks	2.1 Describe and differentiate between common physical network topologies 2.2 Describe a range of different methods used to secure a computer network to include: • security - user accounts - passwords • methods used for data storage and extraction	• the following network topologies: - ring - mesh - star - fully connected - line - tree - bus • the characteristics and advantages/disadvantages of each in relation to: - network security - computer forensics

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
	2.3 Describe the importance of binary, hexadecimal and IP addressing 2.4 Describe how these methods of addressing are used	• the importance of hexadecimal, binary and IP addressing to computer forensics • what happens to data when file extensions are changed e.g. when a digital image is changed from one format to another, or when an image has been super imposed over another image
3 Understand how to use software tools to investigate digital storage devices	3.1 Compare and contrast a range of different software tools used to carry out computer forensics 3.2 Identify software tools and describe how they are used for investigating a range of different storage devices 3.3 Identify software tools and describe how they are used for investigating: • operating systems • software applications • files	• differentiate between application packages that are commonly used in computers forensics • how to select appropriate investigation tools to investigate a range of storage devices • how to investigate storage devices to identify evidence • how to identify what software packages are available to deliver such tools, for example, Encase, Linen
4 Be able to carry out imaging of a storage device	4.1 Describe how different Computer Forensics Software packages ensure that data integrity is maintained 4.2 Describe how to image the contents of a range of different storage devices 4.3 Accurately carry out the imaging of a suspect's storage device 4.4 Carry out the imaging process of a storage device under investigation	• how the integrity of the data is maintained by a range of Computer Forensic Software packages • a range should be a minimum of 3 • how to accurately carry out the imaging of a suspect's storage device

Assessment

The qualification has been designed to develop knowledge, understanding and skills in the full range of functions involved in the planning and control, hardware, software and systems installation, software solutions and the production of customer support materials. It also provides opportunities for learners to study towards system and network management, to specialise in one or more specific programming languages in addition to being able to take units that are vendor specific.

Each unit within the specification is designed around the principle that candidates will build a portfolio of evidence relating to progression towards meeting the unit assessment objectives. The unit assessment objectives reflect the demands of the learning outcomes for each unit.

In order for candidates to be able to effectively progress towards meeting the requirements of each assessment objective, tutors must make sure that the supporting knowledge, understanding and skills requirements for each objective are fully addressed. The identified knowledge, understanding and skills are not exhaustive and may be expanded upon or tailored to particular contexts to which the unit is being taught and the assessment objective applied.

We recommend that teaching and development of subject content and associated skills be referenced to real vocational situations, through the utilisation of appropriate industrial contact, vocationally experienced delivery personnel, and real life case studies.

All the learning outcomes and assessment criteria must be clearly evidenced in the submitted work, which is externally moderated by OCR.

Results will be Pass or Fail.

Guidance on assessment

Candidates do not have to achieve units in any particular order and tutors should tailor learning programmes to meet individual candidate needs. It is recommended that, wherever possible, centres adopt a holistic approach to the delivery of the qualification and identify opportunities to link the units.

Centres are free to deliver this qualification using any mode of delivery that meets the needs of their candidates. Whatever mode of delivery is used, centres must ensure that learners have appropriate access to appropriate resources and consider the candidates' complete learning experience when designing learning programmes. This is particularly important in relation to candidates studying part time alongside real work commitments where candidates may bring with them a wealth of experience that should be utilised to maximum effect by tutors and assessors.

It is difficult to give a detailed answer to how much evidence is required as it depends on the type of evidence collected and the judgement of assessors. The main principles, however, are as follows: for a candidate to be judged competent in a unit, the evidence presented must satisfy:

- all the items listed, in the section 'Learning Outcomes'
- all the areas in the section 'Assessment Criteria'

Questioning the candidate is normally an ongoing part of the assessment process, and is necessary to:

- test a candidate's knowledge of facts and procedures
- check if a candidate understands principles and theories *and*
- collect information on the type and purpose of the processes a candidate has gone through
- candidate responses must be recorded

The quality and breadth of evidence provided should determine whether an assessor is confident that a candidate is competent or not. Assessors must be convinced that candidates working on their own can work independently to the required standard.

Additional information

For further information regarding administration for this qualification, please refer to the OCR document '*Admin Guide: Vocational Qualifications'* on the OCR website www.ocr.org.uk .