

Unit Title:	Hardware installation
OCR unit number:	10
Unit reference number:	T/601/9545
Level:	3
Credit value:	7
Guided learning hours:	50

Unit aim

The aim of this unit is that learners will:

- Understand the hardware components and functionality of an ICT system
- Be able to develop and justify a plan of the installation
- Be able to carry out the installation of hardware components
- Be able to evaluate the installation of the hardware

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
<p>The Learner will:</p> <p>1 Understand the hardware components and functionality of an ICT system</p>	<p>The Learner can:</p> <p>1.1 Explain the components of an ICT system</p> <p>1.2 Explain the functions of hardware</p> <p>1.3 Describe the types and purposes of software</p>	<ul style="list-style-type: none"> • the components of an ICT system to include: <ul style="list-style-type: none"> - input - processing - output - storage - feedback • the functions of hardware devices used for: <ul style="list-style-type: none"> - input - processing - output - storage - communication • the functions of software to include: <ul style="list-style-type: none"> - operating systems - utility software - application software

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
<p>2 Be able to develop and justify a plan of the installation</p>	<p>2.1 Select and compare the hardware components to be installed with similar products.</p> <p>2.2 Clarify and summarise the constraints affecting the installation</p> <p>2.3 Plan the installation of different types of hardware components</p> <p>2.4 Justify the choices made for the installation</p>	<ul style="list-style-type: none"> • how to select and critically compare the hardware components to be installed, to include: <ul style="list-style-type: none"> - the function of the new hardware - the reason for the installation of the hardware - the need to integrate the hardware component(s) - justification of the choices made with reference to the user requirements • the constraints affecting the installation, to include: <ul style="list-style-type: none"> - user requirements - costs - compatibility with existing installation - timescale for the installation - availability of resources such as hardware, time, skills • how to plan the installations, to include the reasons for: <ul style="list-style-type: none"> - carrying out the installation - the location of the installation - estimations of the timescales - allocation of tasks as necessary - health and safety considerations - while preparing for the installation - during the installation - after the installation

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
		<ul style="list-style-type: none"> • how to select, produce and prepare documentation for recording the progress of the installation • how to select, use and justify appropriate sources of information relating to the installation • how to justify the choices made for the installation • candidates must understand the importance of quality control and the process of record keeping
<p>3 Be able to carry out the installation of hardware components</p>	<p>3.1 Using the plan, carry out the required installations</p> <p>3.2 Apply quality control during the installations</p> <p>3.3 Use monitoring and measuring devices to monitor the hardware</p> <p>3.4 Provide evidence of quality control applied at all stages of the installation</p>	<ul style="list-style-type: none"> • how to inspect the hardware to be installed for damage • follow the plan to carry out the installations • how to keep records of the progress of the installations to include: <ul style="list-style-type: none"> - preparation of the hardware to be installed - the installations of the hardware - testing of the installations • how to apply quality control during: <ul style="list-style-type: none"> - the installation of components - first power up - handover to client - user testing • how to use the results of monitoring and measuring in the installation process, to include: <ul style="list-style-type: none"> - monitoring and measuring the installation - taking any corrective actions as a result of monitoring

Learning Outcomes	Assessment Criteria	Knowledge, understanding and skills
4 Be able to evaluate the installation of the hardware	4.1 Evaluate the use of equipment to monitor the environment or the device(s) for parameters 4.2 Review the installation	<ul style="list-style-type: none"> • how to use the results from the use of monitoring and measuring equipment: <ul style="list-style-type: none"> - to interpret the results - to summarise the results - to draw conclusions about the installation • how to review installation using: <ul style="list-style-type: none"> - the results of testing - user feedback

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.