Level 2 Award/Certificate for Digital Home Technology Integrators (7575-01)

Qualification handbook for centres

500/6541/5
Award for Home Audio/Video Integrators
Award for Home Security and Surveillance Integrators
Award for Home Networking Integrators
and
500/6502/6
Certificate for Home Technology Integrators

City & Guilds

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Level 2 Award/Certificate for Digital Home Technology Integrators (7575-01)

Qualification handbook for centres

Contents

1 Introduction to the qualifications

This document contains the information that centres need to offer the following qualifications:

Qualification title and level	City & Guilds qualification number	Qualification accreditation number	Last registration date	Last certification date
Level 2 Award for Security and Surveillance Integrators	7575-01	500/6541/5	28/02/2015	28/02/2017
Level 2 Award for Audio/Video Networking Integrators	7575-01	500/6541/5	28/02/2015	28/02/2017
Level 2 Award for Networking, Telephony and Voice over Internet Protocol (VoIP) Integrators	7575-01	500/6541/5	28/02/2015	28/02/2017
Level 2 Certificate for Digital Home Technology Integrators	7575-01	500/6502/6	28/02/2015	28/02/2017

This qualification is aimed at those that want to learn how to install and integrate customers' digital equipment in the home. It can also be used to accredit knowledge for those candidates working in the industry who would like to get their existing knowledge accredited. It will benefit them if they already work in IT system support, Electronic Engineering and Telecommunications.

The syllabus covers how to configure, integrate and troubleshoot the technology that allows us to remotely switch on lights, turn heating or air conditioning on or monitor what's happening in the home. It allows learners to be able to connect this technology and the equipment that makes it happen and also covers the basic design concepts of electronic and digital home systems.

The qualification can be used as Specialist Learning for the 14-19 IT Diploma or can contribute to the knowledge requirements of a Technical Certificate for an apprenticeship programme.

Specialist Learning (SL) offers young people the opportunity to study a particular topic in more depth or broaden their studies through complementary learning. This qualification has been approved as SL by e-skills UK, SSC/DDP and OfQual for the Foundation/Higher/Advanced Diploma in ICT. It has been designed to:

- complement principal learning within the Foundation/Higher/Advanced Diploma in ICT
- provide a broad background understanding of the ICT sector and an introduction to the practical skills and knowledge required
- provide an awareness of the range of jobs and work settings in the ICT sector
- enable learners to make an informed assessment of their own aptitude for work in this sector and to make informed decisions about careers
- encourage learners to reach a level of knowledge and skills that will facilitate progress into further vocational learning or to potential employment in the sector
- introduce learners to the discipline of the working environment and to encourage mature attitudes to the community in general
- encourage learners to value continued learning and remain in the learning process
- allow learners to learn, develop and practise selected skills required for progression in the sector

- provide opportunities for progression to the Foundation/Higher/Advanced Diploma in ICT and other related qualifications in the sector.

1.1 Qualification structure

To achieve the Level 2 Award for Digital Home Technology Integrators, learners must achieve a total of 11 credits, 7 credits from the mandatory unit and 4 credits from the available optional units.

- **Award for Security and Surveillance Integrators (11 credits)**
  Customer Service for Digital Home Technology Integrators (7 credits)
  Security and Surveillance (4 credits)

- **Award for Audio/Video and Networking Integrators (11 credits)**
  Customer service for Digital Home Technology Integrators (7 credits)
  Audio, Video and Networking (4 credits)

- **Award for Networking, Telephony and VoIP Integrator (11 credits)**
  Customer service for Digital Home Technology Integrators (7 Credits)
  Networking, Telephony and Voice over Internet Protocol (VoIP) (4 credits)

Candidates can achieve the Level 2 Certificate for Digital Home Technology Integrators in 2 different ways, whichever route they choose, learners must achieve 7 credits from the mandatory unit, they can then go on to achieve the qualification either by taking the synoptic assignment prepared by City & Guilds or by adding the individual awards and thereby covering all of the areas. Candidates who take the synoptic assignments and mandatory unit will have 16 credits, if they take the three smaller awards they will amass 19 credits in total.

Certificate in Digital Home Technology Integration (7575-01) – 16 or19 credits
Customer Service for Digital Home Integrators – 7 credits **plus**
1. Digital Home Integrator – 9 credits **or**
   or
2. Security and Surveillance (4 credits) **and**
   Audio, Video and Networking (4 credits) **and**
   Networking, Telephony and VoIP Integrator (4 credits)

The diagram below illustrates the unit titles, the credit value of each unit and any excluded combination of units.

Unit accreditation number	City & Guilds unit number	Unit title	Mandatory/ optional for full qualification	Credit value	Excluded combination of units (if any)
D/502/4499	Unit 001	Customer Support Provision for Digital Home Technology Integrators	Mandatory	7	
L/502/4045	Unit 002	City & Guilds Digital Home Technology Integrator	Optional	9	

Unit accreditation number	City & Guilds unit number	Unit title	Mandatory/ optional for full qualification	Credit value	Excluded combination of units (if any)
J/502/4500	Unit 004	Networking, telephony and VoIP for the Digital Home Technology Integrator	Optional	4	
K/502/4506	Unit 005	Control and Security for the Digital Home Technology Integrator	Optional	4	
M/502/4507	Unit 006	Audio/video and networking for the Digital Home Technology Integrator	Optional	4	

Learners can specialise in one area to gain an award, or broaden their knowledge by taking additional units, alternatively, they can follow the synoptic syllabus to complete the certificate.

1.2   Opportunities for progression

On completion of these qualification candidates may progress into employment or to the following City & Guilds qualifications:

- Level 3 Diploma in ICT Professional Competence (7540-03)
- Diploma in ICT Systems and Principles (7540-12)
- Diploma in ICT Systems Support (7266-26)

1.3   Qualification support materials

City & Guilds also provides the following publications and resources specifically for these qualifications:

Description	How to access
Assignment guide for assessors	**www.cityandguilds.com**
Assignment guide for candidates	**www.cityandguilds.com**
Centre and Learner information sheets	**www.cityandguilds.com**
Fast track approval form	**www.cityandguilds.com**
Qualification handbook	**www.cityandguilds.com**
Guidance for centres offering the qualification as 14-19 Specialist Learning for the IT Diploma	**www.cityandguilds.com**
Guidance for employers offering a work placement for learners on the 14-19 Diploma in IT	**www.cityandguilds.com**

2 Centre requirements

This section outlines the approval processes for Centres to offer these qualifications and any resources that Centres will need in place to offer the qualifications including qualification-specific requirements for Centre staff.

Centres already offering City & Guilds qualifications in this subject area

Centres approved to offer the qualification Level 2 Diploma for Home Technology Integrators (7266-28) and have been active during the academic year 2008/2009 may apply for approval for the new Level 2 Award/Certificate for Digital Home Technology Integrators (7575-01) using the fast track approval form, available from the City & Guilds website.

Centres may apply to offer the new qualifications using the fast track form

- providing there have been no changes to the way the qualifications are delivered, and
- if they meet all of the approval criteria specified in the fast track form guidance notes.

Fast track approval is available for 12 months from the launch of the qualification. After this time, the qualification is subject to the **standard** Qualification Approval Process. It is the centre's responsibility to check that fast track approval is still current at the time of application.

Existing centres wishing to offer this qualification must use the **standard** Qualification Approval Process.

2.1 Resource requirements

Physical resources and site agreements

The equipment, systems and machinery must meet industrial standards and be capable of being used under normal working conditions.

Human resources

Staff delivering these qualifications must be able to demonstrate that they meet the following occupational expertise requirements. They should:

- be technically competent in the areas for which they are delivering training and/or have experience of providing training. This knowledge must be at least to the same level as the training being delivered
- have recent relevant experience in the specific area they will be assessing
- be occupationally knowledgeable in the areas for which they are delivering training. This knowledge must be at least to the same level as the training being delivered
- have credible experience of providing training.

Centre staff may undertake more than one role, eg tutor and assessor or internal verifier, but must never internally verify their own assessments.

Assessors and internal verifiers

While the Assessor/Verifier (A/V) units are valued as qualifications for centre staff, they are not currently a requirement for the qualifications.

Continuing professional development (CPD)

Centres are expected to support their staff in ensuring that their knowledge remains current of the occupational area and of best practice in delivery, mentoring, training, assessment and verification, and that it takes account of any national or legislative developments.

2.2   Candidate entry requirements

Candidates should not be entered for a qualification of the same type, content and level as that of a qualification they already hold.

There are no formal entry requirements for candidates undertaking these qualifications. However, centres must ensure that candidates have the potential and opportunity to successfully achieve the qualification.

Age restrictions

There are no age limits attached to candidates taking the qualifications unless this is a legal requirement of the process or the environment.

3 Course design and delivery

3.1 Initial assessment and induction

Centres will need to make an initial assessment of each candidate prior to the start of their programme to ensure they are entered for an appropriate type and level of qualification.

The initial assessment should identify:
- any specific training needs the candidate has, and the support and guidance they may require when working towards their qualifications. This is sometimes referred to as diagnostic testing.
- any units the candidate has already completed, or credit they have accumulated which is relevant to the qualification[s] they are about to begin.

City & Guilds recommends that centres provide an induction programme to ensure the candidate fully understands the requirements of the qualifications they will work towards, their responsibilities as a candidate, and the responsibilities of the centre. It may be helpful to record the information on a learning contract.

3.2 Recommended delivery strategies

Centre staff should familiarise themselves with the structure, content and assessment requirements of the qualifications before designing a course programme.

Centres may design course programmes of study in any way which:
- best meets the needs and capabilities of their candidates
- satisfies the requirements of the qualifications.

When designing and delivering the course programme, centres might wish to incorporate other teaching and learning that is not assessed as part of the qualifications. This might include the following:
- literacy, language and/or numeracy
- personal learning and thinking
- personal and social development
- employability

Where applicable, this could involve enabling the candidate to access relevant qualifications covering these skills.

For further information to assist with the planning and development of the programme, all of the units are assessed by assignment, marked by the centre according to externally set criteria provided by City & Guilds.

4 Assessment

4.1 Summary of assessment methods

Candidates will be required to complete an assignment for each unit.

City & Guilds provides the Assignments which are downloadable from the website at **www.cityandguilds.com**

Time constraints

The following time constraints must be applied to the assessment of these qualifications:

- It is anticipated that an assignment should take no longer to complete than the time allocated in each assignment. Centre staff should guide candidates to ensure excessive evidence gathering is avoided. Centres finding that assignments are taking longer, should contact the external verifier for guidance
- All assignments must be completed and assessed within the candidate's period of registration. Centres should advise candidates of any internal timescales for the completion and marking of individual assignments.

4.2 Assignments

The assignments for these qualifications are available to download from the City & Guilds website at **www.cityandguilds.com**.

5 Units

Availability of units

The learning outcomes for each unit are included in separate documents, available to download from the City & Guilds website at **www.cityandguilds.com**. .

Structure of units

The units in these qualifications are written in a standard format and comprise the following:
- City & Guilds reference number
- unit accreditation number
- title
- level
- credit value
- unit aim
- relationship to NOS, other qualifications and frameworks
- information on assessment
- learning outcomes which are comprised of a number of assessment criteria
- notes for guidance.

Summary of units

City & Guilds unit number	Title	QCF unit number	Credits
001	Customer Support Provision for the Digital Home Technology Integrator	D/502/4499	7
002	Digital Home Technology Integrator	L/502/4045	9
004	Networking, telephony and VoIP for the Digital Home Technology Integrator	J/502/4500	4
005	Control and security systems for the Digital Home Technology Integrator	K/502/4506	4
006	Audio/video installation for the Digital Home Technology Integrator	M/502/4507	4
901	Claim unit for Level 2 Award for Home Audio/Video Integrators	n/a	11
902	Claim unit for Level 2 Award for Home Security and Surveillance Integrators	n/a	11
903	Claim unit for Level 2 Award for Home Networking Integrators	n/a	11
904	Claim unit for Level 2 Certificate for Home Technology Integrators (synoptic assignment)	n/a	16
906	Claim unit for Level 2 Certificate for Home Technology Integrators (3 small awards)	n/a	19

Glossary of terms used in the units

The following key words and terms are used in the units.

Term	Definition
PC	Personal Computer
DHCP	Dynamic Host Configuration Protocol
ASCII	American Standard Code for Information Interchange
ATSC	Advanced Televisions Standards Committee
BC	Bare Copper
BNC	British Naval Connector
CAT5	Category 5
CATV	Community Antenna TV/Cable Television
CCS	Copper Clad Steel
COAX	Coaxial
CRT	Cathode Ray Tube
dB	Decibel
DD	Dolby Digital™
DDEX	Digital Data Exchange
DLP	Digital Light Processing™
DNS	Domain Name Service
DRM	Digital Rights Management
DSL	Digital Subscriber Link
DTS	Digital Theatre Sound
DTSES	Digital Theatre Sound – Extended Surround
DVB-S	Digital Video Broadcasting - Satellite
DVB-T	Digital Video Broadcasting Terrestrial
DVD	Digital Versatile Disc
DVDA	Digital Versatile Disc Audio
DVI	Digital Visual Interface
DVR	Digital Video Recorder
HDMI	High Definition Multimedia Interface ™
HVAC	Heating Ventilation Air Conditioning
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
IR	Infrared
LAN	Local Area Network
LCD	Liquid Crystal Display
LCoS	Liquid Crystal on Silicon
LNB	Low Noise Block Down Converter
MAC	Medium Access Control
MP3	Motion Picture Standards Group Layer 3
MRAV	MultiRoom Audio/Video
NAS	Network Attached Storage
NTSC	National Televisions Standards Committee

Term	Definition
PAL	Phase Alternative Line
PBX	Private Branch Exchange
PDA	Personal Digital Assistant
PLC	Powerline carrier
PoE	Power over Ethernet
POTS	Plain Old Telephone Service
QAM	Quadrature Amplitude Modulation
QoS	Quality of Service
QS	Quad Shield
RCA	The Radio Corporation of America™
REN	Ringer Equivalence Number
RF	Radio Frequency
RGB	Red Green Blue
SACD	Super Audio Compact Disc
SIA	Security Industry Association
SSID	Security Set Identifier
STP	Shielded Twisted Pair
TCP/IP	Transmission Control Protocol/Internet Protocol
UDP	Universal Datagram Protocol
UPB	Universal Powerline Bus
UPS	Uninterruptible Power Supply
UTP	Unshielded Twisted Pair
VoIP	Voice over Internet Protocol
VSB	Vestigial Side Band
WEP	Wired Equivalent Privacy
WPA	WiFi Protected Access
WPA2	WiFi Protected Access 2

6   Relationships to other qualifications

Links to other qualifications and frameworks

City & Guilds has identified the connections to previous qualifications. This mapping is provided as guidance and suggests areas of overlap and commonality between the qualifications. It does not imply that candidates completing units in one qualification are automatically covering all of the content of the qualifications listed in the mapping.

Centres are responsible for checking the different requirements of all qualifications they are delivering and ensuring that candidates meet requirements of all units/qualifications. For example, units within a QCF qualification may be similar in content to units in the NQF qualification which the candidate may have already undertaken and this may present opportunities for APL.

These qualifications have connections to the:
- Level 2 Certificate in ICT Systems and Principles (7540-12)
- Level 2 Diploma in ICT Professional Competence (7540-13)
- Level 2 Diploma for Digital Home Technology Integrators (7266-28)

NQF units		QCF units	
Unit Number/Title		Unit Number/Title	
J/500/7132	Customer Support Provision	D/502/4499	Customer Support Provision for the Digital Home Technology Integrator
D/500/5824	CompTIA Digital Home Technology Integrator (DHTI+)	L/502/4045	Digital Home Technology Integrator
n/a		J/502/4500	Networking, telephony and VoIP for the Digital Home Technology Integrator
n/a		K/502/4506	Control and security systems for the Digital Home Technology Integrator
n/a		M/502/4507	Audio/video installation for the Digital Home Technology Integrator

Literacy, language, numeracy and ICT skills development

These qualifications include opportunities to develop and practise many of the skills and techniques required for success in the following qualifications:

- Functional Skills (England) – see **www.cityandguilds.com/functionalskills**
- Essential Skills (Northern Ireland) – see **www.cityandguilds.com/essentialskillsni**
- Essential Skills Wales (from September 2010).

There might also be opportunities to develop skills if candidates are completing any Key Skills alongside these qualifications.

Unit number/ and title	Communication	Application of Number	Information and Communication Technology
001	C2.2, C2.3		IT2.1
002	C2.2, C2.3		IT2.1
003	C2.2, C2.3		IT2.1
004	C2.2, C2.3		IT2.1
005	C2.2, C2.3		IT2.1
006	C2.2, C2.3		IT2.1

Wider Key Skills – signposted evidence opportunities

The 'signposts' below identify the **potential** for 'wider' Key Skills portfolio evidence gathering that can be naturally incorporated into the completion of each unit. Any Key Skills evidence will need to be separately assessed and must meet the relevant standard.

Unit number/ and title	Problem Solving	Improving Own Learning and Performance	Working With Others
001	PS2.1, PS2.2	LP2	WWO2
002	PS2.1, PS2.2	LP2	WWO2
003	PS2.1, PS2.2	LP2	WWO2
004	PS2.1, PS2.2	LP2	WWO2
005	PS2.1, PS2.2	LP2	WWO2
006	PS2.1, PS2.2	LP2	WWO2

Sources of general information

The following documents contain essential information for centres delivering City & Guilds qualifications. They should be referred to in conjunction with this handbook. To download the documents and to find other useful documents, go to the **Centres and Training Providers homepage** on **www.cityandguilds.com**.

Providing City & Guilds qualifications – a guide to centre and qualification approval contains detailed information about the processes which must be followed and requirements which must be met for a centre to achieve 'approved centre' status, or to offer a particular qualification. Specifically, the document includes sections on:
- The centre and qualification approval process and forms
- Assessment, verification and examination roles at the centre
- Registration and certification of candidates
- Non-compliance
- Complaints and appeals
- Equal opportunities
- Data protection
- Frequently asked questions.

Ensuring quality contains updates and good practice exemplars for City & Guilds assessment and policy issues. Specifically, the document contains information on:
- Management systems
- Maintaining records
- Assessment
- Internal verification and quality assurance
- External verification.

Access to Assessment & Qualifications provides full details of the arrangements that may be made to facilitate access to assessments and qualifications for candidates who are eligible for adjustments in assessment.

The **centre homepage** section of the City & Guilds website also contains useful information such on such things as:
- ***Walled Garden***
  Find out how to register and certificate candidates on line
- ***Qualifications and Credit Framework (QCF)***
  Contains general guidance about the QCF and how qualifications will change, as well as information on the IT systems needed and FAQs
- ***Events***
  Contains dates and information on the latest Centre events
- ***Online assessment***
  Contains information on how to register for GOLA assessments.

Useful contacts

Type	Contact	Query
UK learners	T: +44 (0)20 7294 2800 E: learnersupport@cityandguilds.com	• General qualification information
International learners	T: +44 (0)20 7294 2885 F: +44 (0)20 7294 2413 E: intcg@cityandguilds.com	• General qualification information
Centres	T: +44 (0)20 7294 2787 F: +44 (0)20 7294 2413 E: centresupport@cityandguilds.com	• Exam entries • Registrations/enrolment • Certificates • Invoices • Missing or late exam materials • Nominal roll reports • Results
Single subject qualifications	T: +44 (0)20 7294 8080 F: +44 (0)20 7294 2413 F: +44 (0)20 7294 2404 (BB forms) E: singlesubjects@cityandguilds.com	• Exam entries • Results • Certification • Missing or late exam materials • Incorrect exam papers • Forms request (BB, results entry) • Exam date and time change
International awards	T: +44 (0)20 7294 2885 F: +44 (0)20 7294 2413 E: intops@cityandguilds.com	• Results • Entries • Enrolments • Invoices • Missing or late exam materials • Nominal roll reports
Walled Garden	T: +44 (0)20 7294 2840 F: +44 (0)20 7294 2405 E: walledgarden@cityandguilds.com	• Re-issue of password or username • Technical problems • Entries • Results • GOLA • Navigation • User/menu option problems
Employer	T: +44 (0)121 503 8993 E: business_unit@cityandguilds.com	• Employer solutions • Mapping • Accreditation • Development Skills • Consultancy

Publications	T: +44 (0)20 7294 2850	• Logbooks
	F: +44 (0)20 7294 3387	• Centre documents
		• Forms
		• Free literature

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